SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 270 and 274

[Release Nos. 33–10233; IC–32315; File No. S7–16–15]

RIN 3235–AL61

Investment Company Liquidity Risk Management Programs

AGENCY: Securities and Exchange Commission.

ACTION: Final rule.

SUMMARY: The Securities and Exchange Commission is adopting new rules, a new form and amendments to a rule and forms designed to promote effective liquidity risk management throughout the open-end investment company industry, thereby reducing the risk that funds will be unable to meet their redemption obligations and mitigating dilution of the interests of fund shareholders. The amendments also seek to enhance disclosure regarding fund liquidity and redemption practices. The Commission is adopting new rule 22e–4, which requires each registered open-end management investment company, including open-end exchange-traded funds (''ETFs'') but not including money market funds, to establish a liquidity risk management program. Rule 22e–4 also requires principal underwriters and depositors of unit investment trusts (''UITs'') to engage in a limited liquidity review. The Commission is also adopting amendments to Form N–1A regarding the disclosure of fund policies concerning the redemption of fund shares. The Commission also is adopting new rule 30b1–10 and Form N–LIQUID that generally will require a fund to confidentially notify the Commission when the fund's level of illiquid investments that are assets exceeds 15% of its net assets or when its highly liquid investments that are assets fall below its minimum for more than a specified period of time. The Commission also is adopting certain sections of Forms N–PORT and N–CEN that will require disclosure of certain information regarding the liquidity of a fund's holdings and the fund's liquidity risk management practices.

DATES: *Effective Dates:* This rule is effective January 17, 2017 except for the amendments to Form N–CEN (referenced in 17 CFR 274.101) which are effective June 1, 2018.

Compliance Dates: The applicable compliance dates are discussed in section III.M. of this final rule.

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SUPPLEMENTARY INFORMATION: The Securities and Exchange Commission (the ''Commission'') is adopting new rules 22e–4 [17 CFR 270.22e–4] and 30b1–10 [17 CFR 270.223], under the Investment Company Act of 1940 [15 U.S.C. 80a–1 *et seq.*] (''Investment Company Act'' or ''Act''); new Form–N–LIQUID [referenced in 17 CFR 274.30b1–10] under the Investment Company Act; amendments to Form–N–1A [referenced in 17 CFR 274.11A] under the Investment Company Act and the Securities Act of 1933 (''Securities Act'') [15 U.S.C. 77a *et seq.*]; and adopting sections to Form N–PORT [referenced in 17 CFR 274.150] and Form N–CEN [referenced in 17 CFR 274.101] under the Investment Company Act.[1]

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I. Introduction

Redeemability is a defining feature of open-end investment companies.[2] At the time the Act was adopted, this feature was recognized as unique to open-end investment companies,[3] and the Act's classification of management investment companies as either open-end (''open-end funds'' or ''funds'')[4] or

[1] Unless otherwise noted, all references to statutory sections are to the Investment Company Act, and all references to rules under the Investment Company Act are to Title 17, Part 270 of the Code of Federal Regulations [17 CFR 270].

[2] *See* Investment Trusts and Investment Companies: Letter from the Acting Chairman of the SEC, A Report on Abuses and Deficiencies in the Organization and Operation of Investment Trusts and Investment Companies (1939), at n.206 (''[T]he salient characteristic of the open-end investment company . . . was that the investor was given a right of redemption so that he could liquidate his investment at or about asset value at any time that he was dissatisfied with the management or for any other reason.''). An open-end investment company is required by law to redeem its securities on demand from shareholders at a price approximating their proportionate share of the fund's net asset value (''NAV'') next calculated by the fund after receipt of such redemption request.

[3] *See* Investment Trusts and Investment Companies: Hearings on S. 3580 before a Subcomm. of the Senate Comm. on Banking and Currency, 76th Cong., 3d Sess. (1940) (''1940 Senate Hearings Transcript''), at 453 (Statement of Mahlon E. Traylor) (''Open-end companies are unlike any other type of investment company, principally because of the highly important distinguishing feature that their shareholders can, by contract right, withdraw their proportionate interest at will simply by surrendering their shares to the company for redemption at liquidating value.'').

[4] In-Kind ETFs (as defined below) are included when we refer to ''funds'' or ''open-end funds'' throughout this Release, except in the sections discussing classifying the liquidity of a fund's portfolio positions and the highly liquid investment minimum requirement, from which In-Kind ETFs are excepted. We have done this for conciseness

closed-end, upon which several of the Act's other provisions depend, turns on whether the investment company's shareholders have the right to redeem their shares on demand. When the Investment Company Act was enacted, it was understood that redeemability meant that an open-end fund had to have a liquid portfolio.[5] Since the 1940s, the Commission has stated that open-end funds should maintain highly liquid portfolios and recognized that this may limit their ability to participate in certain transactions in the capital markets.[6] Section 22(e) of the Act enforces the shareholder's right of prompt redemption in open-end funds by compelling such funds to make payment on shareholder redemption requests within seven days of receiving the request. Potential dilution of shareholders' interests in open-end funds also was a significant concern of Congress when drafting the Act and was among the noted abuses that led to the enactment of the Act, as reflected in sections 22(a) and (c).[7]

Although the Investment Company Act provides funds with a seven-day window to pay proceeds upon an investor's redemption, the settlement period for open-end fund redemptions has shortened considerably over the years. There are several reasons for shorter settlement periods, including broker-dealer settlement cycle requirements,[8] evolving industry standards, and technological advances in the settlement infrastructure.[9] In addition, many funds state in their prospectuses that investors can ordinarily expect to receive redemption proceeds in shorter periods than seven days.[10] At the same time, open-end funds have experienced significant growth,[11] markets have grown more complex, and funds pursue more complex investment strategies, including fixed income and alternative investment strategies focused on less liquid asset classes. These trends have made the role of fund liquidity and liquidity management more important than ever in reducing the risk that a fund will be unable to meet its obligations to redeeming shareholders or other obligations under applicable law, while also minimizing the impact of those redemptions on the fund (*i.e.,* mitigating investor dilution). Furthermore, recent events have demonstrated the significant adverse consequences to remaining investors in a fund when it fails to adequately manage liquidity.[12]

We remain committed, as the primary regulator of open-end funds, to designing regulatory programs that respond to the risks associated with the increasingly complex portfolio composition and operations of the asset management industry. In developing the proposed rules, Commission staff engaged with large and small fund complexes to better understand funds' management of liquidity risk. Through these outreach efforts our staff has learned that, while some funds and their managers have developed extensive liquidity risk management programs, others have dedicated significantly fewer resources, attention and focus to managing liquidity risk in a formalized way. We believe that it is in the interest of funds and fund investors to create a regulatory framework that would reduce the risk that a fund will be unable to meet its redemption obligations and minimize dilution of shareholder interests by promoting stronger and more effective liquidity risk management across open-end funds.

We sought to address these goals with the proposal on fund liquidity risk management that we published in late 2015.[13] This proposal would have required funds to: establish liquidity risk management programs, including classifying and monitoring each portfolio asset's level of liquidity and designating a minimum amount of highly liquid investments; provide additional reporting to us; and enhance disclosure to investors regarding the liquidity of fund portfolios and how funds manage liquidity risk and redemption obligations. In order to

and we recognize that these naming conventions differ from the text of rule 22e–4. Additionally, while a money market fund is an open-end management investment company, money market funds are not subject to the rules and amendments we are adopting (except certain amendments to Form N–CEN and Form N–1A) and thus are not included when we refer to ''funds'' or ''open-end funds'' in this Release except where specified.

[5] *See* Investment Trusts and Investment Companies: Hearings on H.R. 10065 before a Subcomm. of the House Comm. on Interstate and Foreign Commerce, 76th Cong., 3d Sess. 112 (1940), at 57 (Statement of Robert E. Healy) (''due to the right of the stockholder to come in and demand a redemption, the [open-end fund] has to keep itself in a very liquid position. That is, it has to be able to turn its securities into money on very short notice.'').

[6] *See* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission (1942), at 76 (''Open-end investment companies, because of their security holders' right to compel redemption of their shares by the company at any time, are compelled to invest their funds predominantly in readily marketable securities. Individual open-end investment companies, therefore, as presently constituted, could participate in the financing of small enterprises and new ventures only to a very limited extent.'').

[7] *See* 1940 Senate Hearings Transcript, *supra* footnote 3, at 37, 137–145 (stating that, among the abuses that served as a backdrop for the Act, were ''practices which resulted in substantial dilution of investors' interests'', including backward pricing by fund insiders to increase investment in the fund and thus enhance management fees, but causing dilution of existing investors in the fund).

[8] Open-end funds that are redeemed through broker-dealers must meet redemption requests within three business days because broker-dealers are subject to rule 15c6–1 under the Securities Exchange Act of 1934 (the ''Exchange Act''), which establishes a three-day (T + 3) settlement period for security trades effected by a broker or a dealer.

[9] Generally, settlement time frames for mutual fund shares have been shortening for decades. *See* Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release, Investment Company Act Release No. 31835 (Sept. 22, 2015) [80 FR 62274 (Oct. 15, 2015)] (''Proposing Release''), at section II.C.2. *See also, e.g.,* T+2 Industry Steering Committee, Shortening the Settlement Cycle: The Move to T+2 (2015), at n.18, *available at http://www.ust2.com/pdfs/ssc.pdf* (''In today's environment . . . open-end mutual funds settle through NSCC generally on a T+1 basis (excluding certain retail trades which typically settle on T+3).''). *See also* Amendment to Securities Transaction Settlement Cycle, Securities Exchange Act Release No. 34–78962 (September 29, 2016) [81 FR 69240 (October 05, 2016)].

[10] *See, e.g.,* Fidelity Commonwealth Trust rule 485(b) Registration Statement (June 29, 2016), *available at https://www.sec.gov/Archives/edgar/data/205323/000137949116004602/filing776.htm* (''Normally, redemptions will be processed by the next business day, but it may take up to seven days to pay the redemption proceeds if making immediate payment would adversely affect the fund.''); PIMCO Funds rule 485(b) Registration Statement (Feb. 26, 2016), *available at https://www.sec.gov/Archives/edgar/data/810893/000119312516481663/d149399d485bpos.htm#chapter_7_3686* (''Redemption proceeds will normally be mailed to the redeeming shareholder within three calendar days . . . [but] may take up to seven days.'').

[11] As of the end of 2015, there were 10,633 open-end funds (excluding money market funds, but including ETFs), as compared to 5,279 at the end of 1996. *See* Investment Company Institute, 2016 Investment Company Fact Book (2016) *(''2016 ICI Fact Book''), available at https://www.ici.org/pdf/2016_factbook.pdf.*

[12] For example, during the pendency of our proposal, the Third Avenue Focused Credit Fund, a non-diversified open-end fund, adopted a plan of liquidation, and requested and obtained exemptive relief to suspend shareholder redemptions, following a period of heavy redemption requests that the fund stated reduced the fund's portfolio liquidity. The Third Avenue Focused Credit Fund has yet to complete the liquidation of fund assets. Additionally, the fund reported that, as a result of the continuous liquidation of securities without reinvestment, the fund became increasingly more concentrated, which negatively impacted performance. *See* Third Avenue Trust and Third Avenue Management LLC, Investment Company Act Release No. 31943 (Dec. 16, 2015) (''Third Avenue Temporary Order''); Third Avenue Focused Credit Fund Semi-Annual Report to Shareholders (April 30, 2016), *available at: http://thirdave.com/wp-content/uploads/2016/06/Q2-2016-TFCIX-Semi-Annual-Report.pdf* (''The Fund is considerably more concentrated than it has ever been. As we have been liquidating securities and not recycling the cash, the top 10 holdings have increased from 32.6% at March 31, 2015 to approximately 67% of the Fund. We are increasingly dependent on the top 10 names to drive performance.''). *See also infra* footnotes 81–84 and accompanying text.

[13] *See* Proposing Release, *supra* footnote 9.

provide funds with an additional tool to mitigate potential dilution and to manage fund liquidity, the proposal included amendments to rule 22c–1 under the Act to permit funds (except money market funds and ETFs) to use ''swing pricing,'' a process of adjusting the NAV of a fund's shares to pass on to purchasing or redeeming shareholders more of the costs associated with their trading activity.[14]

We received more than 70 comment letters on the proposal.[15] The majority of commenters generally supported a requirement that funds adopt a formal, written liquidity risk management program that is risk oriented and principles based, although many provided suggestions and alternatives for us to consider.[16] Many commenters objected to certain aspects of the proposal, particularly the liquidity classification requirement, the three-day liquid asset minimum, and the requirement that funds publicly disclose the liquidity of each portfolio position.[17] Several commenters specifically supported applying the liquidity risk management requirements to all open-end funds, with the exception of money market funds.[18] Others expressed concerns with regard to ETFs, and recommended that the Commission exclude ETFs that primarily satisfy purchase and redemption orders in kind from the liquidity risk management requirements or develop a more tailored liquidity risk management program applicable to ETFs.[19]

Today, after consideration of the many comments we received, we are adopting the proposal with a number of modifications to enhance the effectiveness and workability of the rule's liquidity risk management requirements. The Commission is adopting new rule 22e–4, which will require each fund to adopt and implement a written liquidity risk management program designed to assess and manage the fund's liquidity risk, which will be overseen by the fund's board. As discussed in more detail below, the Commission is modifying from the proposal some of the liquidity risk management program elements, including reducing the liquidity classification categories from six to four, providing tailored program requirements for ETFs, and revising the fund board oversight requirements.

The new rule contains a highly liquid investment minimum requirement, which is similar to the proposed three-day liquid asset minimum. However, instead of barring a fund from purchasing securities other than highly liquid investments if the fund falls below its minimum as proposed for the three-day liquid asset minimum, under the adopted rules, if the fund falls below its highly liquid investment minimum, it would: (1) Report that occurrence to the fund board at its next scheduled meeting; (2) if it is below the minimum for more than a brief period of time, report the occurrence to the board and, on Form N–LIQUID, to the Commission within one business day; and (3) develop and provide to the board a plan for restoring the minimum within a reasonable period of time.

We also are adopting a 15% limitation on funds' purchases of illiquid investments, largely as proposed, but the definition of investments considered illiquid and subject to this 15% limit has been enhanced and substantially harmonized with the classification system we are adopting today. Additionally, the Commission is adopting new reporting Form N–LIQUID, which will require a fund to confidentially notify the Commission within one business day if the fund's illiquid investment holdings exceed 15% of its net assets or if its highly liquid investments fall below its minimum for more than a brief period of time. Furthermore, much as proposed, the Commission is adopting reporting and disclosure requirements under Form N–CEN, Form N–PORT, and Form N–1A regarding liquidity risk and liquidity risk management. In response to commenters' concerns, a number of the additional reporting items on Form N–PORT will be non-public.[20]

Taken together, these reforms are designed to provide investors with increased protection regarding how liquidity in their open-end funds is managed, thereby reducing the risk that funds will be unable to meet redemption or other legal obligations, and mitigating dilution of the interests of fund shareholders. These reforms also are intended to give investors better information to make investment decisions, and to give the Commission better information to conduct comprehensive monitoring and oversight of an ever-evolving fund industry.

II. Background

A. Open-End Funds

As we discussed in the Proposing Release, individual and institutional investors increasingly have come to rely on investments in open-end funds to meet their financial needs and access the capital markets. At the end of 2015, 54.9 million households, or 44.1 percent of all U.S. households owned funds.[21] Funds allow investors to pool their investments with those of other investors so that they may together benefit from fund features such as professional investment management, diversification, and liquidity. Fund shareholders share the gains and losses of the fund, and also share its costs.[22]

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[14] We note that we are adopting swing pricing, and associated changes to Form N–PORT and N–CEN in a companion release. *See* Investment Company Swing Pricing, Investment Company Act Release No. 32316 (Oct. 13, 2016) (''Swing Pricing Adopting Release''). All comments on the proposed swing pricing rules and associated issues are discussed in that release.

[15] The comment letters on the Proposing Release (File No. S7–16–15) are *available at http://www.sec.gov/comments/s7-16-15/s71615.shtml.*

[16] *See, e.g.,* Comment Letter of Investment Company Institute (Jan. 13, 2016) (''ICI Comment Letter I''); Comment Letter of BlackRock Inc. (Jan. 13, 2016) (''BlackRock Comment Letter''); Comment Letter of Charles Schwab Investment Management (Jan. 13, 2016) (''Charles Schwab Comment Letter'').

[17] *See, e.g.,* ICI Comment Letter I (arguing that the six-category asset classification scheme and three-day liquid asset minimum are problematic and encourage a ''one-size-fits-all'' approach rather than a risk-based approach to liquidity management); Charles Schwab Comment Letter (arguing that public disclosure of the liquidity of each portfolio position may confuse and mislead investors).

[18] *See, e.g.,* Comment Letter of HSBC Global Asset Management (Jan. 13, 2016) (''HSBC Comment Letter'') (supporting the exclusion of closed-end funds and money market funds from the liquidity risk management requirements); Charles Schwab Comment Letter (supporting the application of the risk management requirements to ETFs).

[19] *See, e.g.,* ICI Comment Letter I; BlackRock Comment Letter (suggesting that the Commission should develop a separate and comprehensive rule addressing the different types of ETFs and their respective risks). The comments we received addressing exchange-traded managed funds (''ETMFs'') suggested that the Commission treat ETMFs in the same manner as ETFs and did not recommend any further unique treatment of ETMFs. *See* Comment Letter of the American Bar Association (Feb. 11, 2016); Comment Letter of Financial Services Roundtable (Jan. 13, 2016) (''FSR Comment Letter'').

[20] If any provision of these rules, or the application thereof to any person or circumstance, is held to be invalid, such invalidity shall not affect other provisions or application of such provisions to other persons or circumstances that can be given effect without the invalid provision or application.

[21] *See* 2016 ICI Fact Book, *supra* footnote 11, at 12.

[22] There are currently four primary kinds of open-end funds: Money market funds, mutual funds other than money market funds, ETFs, and ETMFs. Money market funds are a special kind of mutual fund that complies with the requirements of rule 2a–7 under the Act. ETFs registered with the Commission are organized either as open-end management investment companies or unit investment trusts. *See* section 4(2) of the Act (defining ''unit investment trust'' as an investment company which (A) is organized under a trust indenture, contract of custodianship or agency, or similar instrument, (B) does not have a board of directors, and (C) issues only redeemable securities, each of which represents an undivided interest in a unit of specified securities, but does not include a voting trust). Most ETFs are organized as open-end management investment companies and, except

As noted above, investors in mutual funds can redeem their shares on each business day and, by law, must receive approximately their *pro rata* share of the fund's net assets (or its cash value) within seven calendar days after receipt of a redemption request.[23] Under the Act's definition of redeemable security, open-end funds have the right to redeem shareholders in cash or in kind (that is, by delivering certain assets from the fund's portfolio, rather than cash, to a redeeming shareholder).[24] However, while funds often reserve the right to redeem in kind for certain redemption requests, the majority of mutual funds redeem only in cash for a variety of reasons, including the limited ability and/or unwillingness of fund shareholders to receive securities rather than cash.[25]

ETFs also offer investors an undivided interest in a pool of assets.[26] ETF shares, similar to listed stocks, are bought and sold throughout the day by investors on an exchange through a broker-dealer.[27] In addition, like mutual funds, ETFs provide redemption rights on a daily basis, but, pursuant to exemptive orders, such redemption rights may be exercised only by certain large market participants—typically broker-dealers—called ''authorized participants.'' [28] When an authorized participant transacts with an ETF to purchase and sell ETF shares, these share transactions are structured in large blocks called ''creation units.'' Most ETFs are structured so that an authorized participant will purchase a creation unit with a ''portfolio deposit,'' which is a basket of assets (and sometimes cash) that generally reflects the composition of the ETF's portfolio.[29] After purchasing a creation unit, an authorized participant may hold the ETF shares or sell (or lend) some or all of them to investors in the secondary market. Similarly, for most ETFs, when an authorized participant wishes to redeem ETF shares, it presents a creation unit of ETF shares to the ETF for redemption and receives in return a ''redemption basket,'' the contents of which are publicly declared by the ETF before the beginning of the trading day.[30]

ETMFs are a hybrid between a traditional mutual fund and an ETF.[31] Like ETFs, ETMFs have shares listed and traded on a national securities exchange; directly issue and redeem shares in creation units only; impose fees on creation units issued and redeemed to authorized participants to offset the related costs to the ETMFs; and primarily utilize in-kind transfers of portfolio deposits in issuing and redeeming creation units. Like mutual funds, ETMFs are bought and sold at prices linked to NAV and seek to maintain the confidentiality of their current portfolio positions.

B. The Role of Liquidity in Open-End Funds

1. Introduction

A hallmark of open-end funds is that they must be able to convert some portion of their portfolio holdings into cash on a frequent basis because they issue redeemable securities, and are required by section 22(e) of the Investment Company Act to make payment to shareholders for securities tendered for redemption within seven days of their tender (although some funds may reserve the right to make redemptions in kind for certain redemption requests). As a practical matter, many investors expect to receive redemption proceeds in fewer than seven days as some mutual funds represent in their prospectuses that they will generally pay redemption proceeds on a next business day basis.[32] Given the statutory and regulatory requirements for meeting redemption requests, as well as any potential liability for representations made to investors regarding payment of redemption proceeds, a mutual fund must adequately manage the liquidity of its portfolio so that redemption requests can be satisfied in a timely manner.

Sufficient liquidity of ETF portfolio positions also is important. Many ETFs typically make in-kind redemptions of creation units, which can mitigate the need for ETFs to maintain cash compared to mutual funds, particularly if the in-kind redemptions are of a representative basket of the ETF's

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where specified, when we refer to ETFs in this Release, we are referring to ETFs that are organized as open-end management investment companies.

[23] *See* section 2(a)(32) of the Act (defining a ''redeemable security'' as any security, other than short-term paper, that entitles its holder to receive approximately his proportionate share of the issuer's current net assets, or the cash equivalent thereof), and section 22(e) of the Act (providing, in part, that no registered investment company shall suspend the right of redemption, or postpone the date of payment upon redemption of any redeemable security in accordance with its terms for more than seven days after tender of the security absent specified unusual circumstances). *See also* rule 22c–1 (requiring that redeemable securities be transacted ''at a price based on the current net asset value of such security which is next computed after receipt of a tender of such security for redemption or of an order to purchase or sell such security'').

[24] Prior to the adoption of the Act, open-end funds largely redeemed fund shares in cash and, as such, a redeemable security was generally understood to mean a security that was redeemable for cash. *See, e.g.,* Investment Trusts and Investment Companies: Senate Report 1775 on S. 4108, 76th Cong., 3d Sess. (1940), at 2 (''[a redeemable security] is, a security which provides that the holder may tender it to the company at any time and *receive a sum of money* approximating the current market value of his proportionate interest in the company's assets.''[emphasis added]). However, section 2(a)(32) has traditionally been interpreted to give funds the option of redeeming their shares in cash or in kind. *See, e.g.,* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission Part I (1939) at 21 (''A company is of the 'open-end' type if a shareholder has the right to require the company to purchase or redeem or cause the purchase or redemption of the shares representing his proportionate interest in the company's properties, or the cash equivalent of such interest.''); *see also* Adoption of (1) Rule 18f–1 Under the Investment Company Act of 1940 to Permit Registered Open-End Investment Companies Which Have the Right to Redeem In Kind to Elect to Make Only Cash Redemptions and (2) Form–N–18F–1, Investment Company Act Release No. 6561 (June 14, 1971) [36 FR 11919 (June 23, 1971)] (''Rule 18f–1 and Form N–18F–1 Adopting Release'') (stating that the definition of ''redeemable security'' in section 2(a)(32) of the Investment Company Act ''has traditionally been interpreted as giving the issuer the option of redeeming its securities in cash or in kind.'').

[25] *See* Comment Letter of Invesco Advisers, Inc. (Jan. 13, 2016) (''Invesco Comment Letter'') (''The primary problem with using redemptions in kind to meet large redemptions is the willingness and ability of the redeeming entity to receive securities instead of cash.''). *See also* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 30551 (June 5, 2013) [78 FR 36834, (June 19, 2013)] (''2013 Money Market Fund Reform Proposing Release''), at n.473 and accompanying text (stating that ''[m]any commenters believed that requiring in-kind redemptions would be technically unworkable due to complex valuation and operational issues that would be imposed on both the fund and on investors receiving portfolio securities.'').

[26] Since 2003, the number of ETFs traded in U.S. markets has increased by more than 2,200 funds, and the assets held by ETFs have increased from $151 billion at the end of 2003 to $2.1 trillion at the end of 2015. *See* 2016 ICI Fact Book, *supra* footnote 11, at 60.

[27] *See* Exchange-Traded Funds, Investment Company Act Release No. 28193 (Mar. 11, 2008) [73 FR 14618 (Mar. 18, 2008)] (''ETF Proposing Release'').

[28] Authorized participants may purchase and redeem ETF shares at the ETF's NAV from the ETF.

[29] The ETF publicly declares the contents of the portfolio deposit before the beginning of the trading day. *See* Request for Comment on Exchange-Traded Products, Securities Exchange Act Release No. 75165 (June 12, 2015) [80 FR 34729 (June 17, 2015)] (''2015 ETP Request for Comment''), at nn.19–20 and accompanying text.

[30] *See* ETF Proposing Release, *supra* footnote 27, at n.24 and accompanying text.

[31] The Commission approved ETMFs in 2014 and the first ETMFs have since been launched. *See* Eaton Vance Management, *et al.,* Investment Company Act Release No. 31333 (Nov. 6, 2014) (notice of application) (''ETMF Notice'') and In the Matter of Eaton Vance Management, *et al.,* Investment Company Act Release No. 31361 (Dec. 2, 2014) (order) (''ETMF Order''). Given the similarities between ETFs and ETMFs and that the new requirements will apply to ETMFs as they do to ETFs, this Release generally includes ETMFs in the term ''ETF'' and separately mentions ETMFs only if appropriate. *See supra* footnote 19.

[32] *See supra* footnote 10; *see also supra* footnote 8 (noting that open-end funds that are redeemed through broker-dealers must meet redemption requests within three business days due to the application of rule 15c6–1 under the Exchange Act).

portfolio assets that do not alter the ETF's liquidity profile. However, transferring illiquid or less liquid instruments to the redeeming authorized participants could result in a liquidity cost to the authorized participants or other market participants, which could increase the cost of their participation and interfere with their role in the ETF arbitrage mechanism, resulting in the ETF trading at increased bid-ask spreads and/or a premium or discount to its NAV and ultimately impacting investors.[33] Declining liquidity in an ETF's basket assets also could affect the ability of an authorized participant or other market participants to readily assemble the basket for purchases of creation units and to sell securities received upon redemption of creation units.

In addition, all ETFs reserve the right to satisfy redemption requests in cash rather than in kind, but the extent to which ETFs satisfy redemption requests in cash varies. While many ETFs redeem in cash only rarely, some ETFs ordinarily redeem authorized participants in cash. ETFs that elect to redeem authorized participants in cash in more than a *de minimis* amount, like mutual funds, would need to ensure that they have adequate portfolio liquidity (in conjunction with any other liquidity sources) to meet shareholder redemptions.

As noted above, ETMFs have features of both mutual funds and ETFs. As ETMFs would redeem their shares on a daily basis from authorized participants, ETMFs would need to hold sufficiently liquid assets to meet such redemptions to the extent that the ETMFs satisfy the redemption requests in cash. As with ETFs, however, the ETMFs' practice of making in-kind redemptions could mitigate the need to maintain cash. Further, as ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because the pricing of the ETMF shares is linked to the fund's NAV (subject to execution costs), the liquidity of an ETMF's portfolio is more relevant to an ETMF's ability to meet redemptions and the amount of execution costs than to an arbitrage function.

2. Statutory and Regulatory Requirements

An open-end fund's failure to maintain sufficiently liquid assets or otherwise manage liquidity implicates multiple provisions of the Act, as well as other federal securities laws and regulations. Section 2(a)(32) of the Act,[34] when read together with sections 4(2) and 5(a),[35] creates an obligation on open-end funds and UITs to provide shareholders with approximately their proportionate share of NAV upon the presentation of a redemption request. Section 22(e) of the Act provides in turn that the right of redemption may not be suspended and payment of redemption proceeds may not be postponed for more than seven days after tender of a redeemable security absent specified unusual circumstances.[36]

For decades, the Commission has recognized that because open-end funds hold themselves out at all times as being prepared to meet these statutory redemption requirements, they have a responsibility to manage the liquidity of their investment portfolios in a manner consistent with those obligations and any other related representations.[37] Thus, long-standing Commission guidelines contain a liquidity standard that generally limits an open-end fund's aggregate holdings of ''illiquid assets'' to no more than 15% of the fund's net assets (the ''15% guideline'').[38] Under the 15% guideline, a portfolio security or other asset is considered illiquid if it cannot be sold or disposed of in the ordinary course of business within seven days at approximately the value at which the fund has valued the investment.[39] The 15% guideline has generally caused funds to limit their exposures to particular types of securities that cannot be sold within seven days and that the Commission and staff have indicated may be illiquid, depending on the facts and circumstances, such as private equity securities and certain other privately placed or restricted securities[40] as well as certain instruments or transactions not maturing in seven days or less, including term repurchase agreements.[41]

[33] A significant amount of illiquid securities in an ETF's portfolio can make arbitrage opportunities more difficult to evaluate because it would be difficult for market makers to price, trade, and hedge their exposure to the ETF. *See infra* footnote 843 and accompanying text. Commenters noted that the effective functioning of this arbitrage mechanism has been pivotal to the operation of ETFs. *See* ICI Comment Letter I.

[34] *See supra* footnote 23.

[35] Section 4(2) of the Act defines a ''unit investment trust'' as an investment company which, among other things, ''issues only redeemable securities.'' Section 5(a) of the Act defines an ''open-end company'' as a ''management company which is offering for sale or has outstanding any redeemable security of which it is the issuer''.

[36] Section 22(e) of the Act permits open-end funds to suspend redemptions and postpone payment for redemptions already tendered for any period during which the New York Stock Exchange (''NYSE'') is closed (other than customary weekend and holiday closings) and in three additional situations if the Commission has made certain determinations. First, a fund may suspend redemptions for any period during which trading on the NYSE is restricted, as determined by the Commission. Second, a fund may suspend redemptions for any period during which an emergency exists, as determined by the Commission, as a result of which it is not reasonably practicable for the fund to: (i) Liquidate its portfolio securities, or (ii) fairly determine the value of its net assets. Third, a fund may suspend redemptions for such other periods as the Commission may by order permit for the protection of fund shareholders. The Commission has rarely issued orders permitting the suspension of redemptions for periods of restricted trading or emergency circumstances but has issued orders ''for such other periods'' under section 22(e)(3) on a few occasions. *See, e.g.,* In the Matter of The Reserve Fund, on behalf of two of its series, the Primary Fund and the U.S. Government Fund, Investment Company Act Release No. 28386 (Sept. 22, 2008) [73 FR 55572 (Sept. 25, 2008)]; In the Matter of Municipal Lease Securities Fund, Inc., Investment Company Act Release No. 17245 (Nov. 29, 1989); Third Avenue Temporary Order, *supra* footnote 12. Money market funds are able to suspend redemptions in certain limited circumstances. *See* rule 22e–3 under the Act; *see also* the Proposing Release, *supra* footnote 9, at n.155.

[37] *See* Statement Regarding ''Restricted Securities'', Investment Company Act Release No. 5847 (Oct. 21, 1969) [35 FR 19989 (Dec. 31, 1970)] (''Restricted Securities Release'') (''Because open-end companies hold themselves out at all times as being prepared to meet redemptions within seven days, it is essential that such companies maintain a portfolio of investments that enable them to fulfill that obligation. This requires a high degree of liquidity in the assets of open-end companies because the extent of redemption demands or other exigencies are not always predictable.''); *see also* Resale of Restricted Securities; Changes to Method of Determining Holding Period of Restricted Securities Under Rules 144 and 145, Investment Company Act Release No. 17452 (Apr. 23, 1990) [55 FR 17933 (Apr. 30, 1990)] (''Rule 144A Release'') (adopting rule 144A under the Securities Act of 1933 (the ''Securities Act'')).

[38] Revisions of Guidelines to Form N–1A, Investment Company Act Release No. 18612 (Mar. 12, 1992) [57 FR 9828 (Mar. 20, 1992)] (''Guidelines Release''), at section III (''If an open-end company holds a material percentage of its assets in securities or other assets for which there is no established market, there may be a question concerning the ability of the fund to make payment within seven days of the date its shares are tendered for redemption. The usual limit on aggregate holdings by an open-end investment company of illiquid assets is 15% of its net assets.''). The Guidelines Release modified prior Commission guidance that set a 10% limit on illiquid assets for open-end funds. *See* Restricted Securities Release, *supra* footnote 37.

[39] Guidelines Release, *supra* footnote 38; *see also* ETF Proposing Release, *supra* footnote 27; Valuation of Debt Instruments and Computation of Current Price Per Share by Certain Open-End Investment Companies (Money Market Funds), Investment Company Act Release No. 13380 (July 11, 1983) [48 FR 32555 (July 18, 1983)] (''Money Market Funds Release''); *see also* Rule 144A Release, *supra* footnote 37.

[40] *See* Restricted Securities Release, *supra* footnote 37. Securities offered pursuant to rule 144A under the Securities Act may be considered liquid under the 15% guideline depending on certain factors. *See* Rule 144A Release, *supra* footnote 37.

[41] *See* Periodic Repurchases by Closed-End Management Investment Companies; Redemptions by Open-End Management Investment Companies

Relatedly, the Commission has recognized that the liquidity management practices of open-end funds implicate certain antifraud provisions of the securities laws.[42] For example, section 34(b) of the Act makes it unlawful for any person to make any untrue statement of a material fact in any document filed with the Commission or transmitted pursuant to the Act, or the keeping of which is required by section 31(a) of the Act, or to omit to state any fact necessary in order to prevent the statements made therein, in light of the circumstances under which they were made, from being materially misleading.[43]

In addition, section 206(4) [44] of the Investment Advisers Act of 1940 (''Advisers Act'') and rule 206(4)–8 thereunder make it unlawful for any adviser to an investment fund to engage in any act, practice, or course of business which is fraudulent, deceptive, or manipulative.[45] Additionally, section 10(b) of the Exchange Act and rule 10b–5 thereunder make it unlawful, among other things, for any person, in connection with the purchase or sale of securities, to employ any device, scheme, or artifice to defraud or to make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made not misleading, or engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any persons. Finally, section 17(a) of the Securities Act similarly makes it unlawful for any person in the offer or sale of any securities or any security-based swap agreement by the use of any means or instruments of transportation or communication in interstate commerce or by use of the mails, directly or indirectly, to employ any device, scheme, or artifice to defraud, to obtain money or property by means of any untrue statement of a material fact or any omission to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, or to engage in any transaction, practice, or course of business which operates or would operate as a fraud or deceit upon the purchaser.[46]

As the Commission has previously noted, an open-end fund ''represents to investors, in its prospectus, that it will, as required by section 22(e) of the Act, redeem its securities at approximate net asset value within seven days after tender.'' [47] Similarly, an open-end fund that is redeemed through broker-dealers generally represents to investors that it will redeem its securities within three days, as required by rule 15c6–1.[48] Failure by a fund to maintain a sufficiently liquid portfolio or to otherwise manage liquidity risk calls into question the fund's ability to fulfill the representations (explicit or implicit) made in its prospectus regarding its ability to meet its redemption obligations, as well as its status as an open-end fund. Such failure thus potentially exposes the fund, the investment adviser that manages the fund, and the persons responsible for the sale of the fund's securities to the possible application of the antifraud

and Registered Separate Accounts at Periodic Intervals or with Extended Payment, Investment Company Act Release No. 18869 (July 28, 1992) [57 FR 34701 (Aug. 6, 1992)] (''Interval Fund Proposing Release''). The Commission has not established a set of required factors that must be considered when assessing the liquidity of these or other types of securities under the 15% guideline. However, in the context of rule 144A securities, the Commission had provided ''examples of factors that would be reasonable for a [fund's] board of directors to take into account'' but which would not necessarily be determinative. *See* Rule 144A Release, *supra* footnote 37. These factors include: The frequency of trades and quotations for the security; the number of dealers willing to purchase or sell the security and the number of other potential purchasers; dealer undertakings to make a market in the security; and the nature of the security and the nature of the marketplace in which it trades, including the time needed to dispose of the security, the method of soliciting offers, and the mechanics of transfer.

[42] *See* Restricted Securities Release, *supra* footnote 37 (''To the extent a material percentage of the assets of an open-end company consist of restricted securities which cannot publicly be sold without registration under the Securities Act, the ability of the company to comply with the provisions of the Investment Company Act relating to redemption, and to fulfill the implicit representations made in its prospectus with respect thereto, may be adversely affected. In any such situation, the investment company concerned and the persons responsible for the sale of its securities should give careful consideration to the possible application of the provisions of section 10(b) of the Exchange Act and Rule 10b–5 thereunder.''); *see also* Money Market Funds Release, *supra* footnote 39 (explaining that because ''most money market funds promise investors that they will receive proceeds much sooner'' than seven days and ''experience a greater and perhaps less predictable volume of redemption transactions than do other investment companies,'' they ''must have sufficient liquidity to meet redemption requests on a more immediate basis''). The Commission has considered the failure to take risk-limiting measures in other contexts to implicate antifraud provisions as well. *See* Adoption of Revisions to Rules Regulating Money Market Funds, Investment Company Act Release No. 18005 (Feb. 20, 1991) (''The Commission believes that there is a significant danger of misleading investors if an investment company holds itself out as a money market fund when it engages in investment strategies not consistent with the risk-limiting conditions of rule 2a–7. It is therefore necessary and appropriate in the public interest and for the protection of investors for the Commission to adopt a new paragraph (b) of rule 2a–7 prohibiting an investment company from holding itself out as a 'money market fund' unless it meets the risk-limited conditions of rule 2a–7.'').

[43] Exercising authority under section 34(b) and sections 9(b), 38(a), and 42 of the Act, the Commission adopted paragraph (b) of rule 2a–7 in 1997, which provides that ''it shall be an untrue statement of a material fact within the meaning of section 34(b) of the Act for a registered investment company . . . to hold itself out to investors as a money market fund or the equivalent of a money market fund'' unless the fund complies with rule 2a–7. Under rule 2a–7, money market funds must maintain sufficient liquidity to meet reasonably foreseeable redemptions, generally must invest at least 10% of their portfolios in assets that can provide daily liquidity and at least 30% of their portfolios in assets that can provide weekly liquidity, and may not acquire any illiquid security if, immediately after the acquisition, the money market fund would have invested more than 5% of its total assets in illiquid securities. Rule 2a–7. Additionally, the Commission adopted amendments to rule 2a–7 in 2014 that, among other things: (i) Give boards of directors of money market funds discretion to impose a liquidity fee or temporarily suspend the right of redemption if a fund's weekly liquidity level falls below the required regulatory threshold; and (ii) require all non-government money market funds to impose a liquidity fee if the fund's weekly liquidity level falls below a designated threshold of 10%, unless the fund's board determines that imposing such a fee is not in the best interests of the fund. *See* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 31166 (July 23, 2014) [79 FR 47736 (Aug. 14, 2014)] (''2014 Money Market Fund Reform Adopting Release'').

[44] Section 206(4) of the Advisers Act grants the Commission authority, by rules and regulations, to define and prescribe means reasonably designed to prevent such acts, practices, and courses of business as are fraudulent, deceptive, or manipulative.

[45] Additionally, section 206(1) of the Advisers Act makes it unlawful for an adviser to employ any device, scheme or artifice to defraud any client or prospective client, and section 206(2) makes it unlawful for an adviser to engage in any transaction, practice or course of business which operates as a fraud or deceit upon any client or prospective client. *See* Prohibition of Fraud by Advisers to Certain Pooled Investment Vehicles, Investment Advisers Act Release No. 2628 (August 3, 2007) [72 FR 44756 (August 9, 2007)], at n.3 and accompanying text.

[46] *See* In the Matter of Evergreen Investment Management Company, LLC and Evergreen Investment Services, Inc., Investment Company Act Release No. 28759 (June 8, 2009) (settled order) (''Evergreen Order'') (settlement of allegations that a mutual fund and its underwriter violated, and its adviser aided and abetted violations of, section 22(c) of the Act and rule 22c–1(a) through purchases and redemptions at materially overstated NAV. The order found that the fund's adviser materially misrepresented the fund's performance and NAV in reviewing and approving the fund's prospectus in violation of section 34(b) of the Act.).

[47] Restricted Securities Release, *supra* footnote 37.

[48] *See also* Proposing Release, *supra* footnote 9, at II.C.2 (''We also have observed that some open-end funds disclose in their prospectuses that they generally will satisfy redemption requests in even shorter periods of time than T + 3, including on a next-business-day basis.''). As the Commission has previously noted, most money market funds disclose that they will pay redemptions even more quickly, often on the same day that the request is received by the fund, and thus ''must have sufficient liquidity to meet redemption requests on a more immediate basis.'' Money Market Funds Release, *supra* footnote 39.

provisions of the securities laws referenced above.[49]

In addition to the foregoing concerns, an insufficiently liquid portfolio implicates provisions of the Act and regulations thereunder concerning fund valuation.[50] A fund's ability to properly value its portfolio securities is important, primarily because, under the Act, fund shareholders are entitled to their proportionate share of the fund's NAV upon redemption. Section 2(a)(41) of the Act and rule 2a–4 thereunder provide that in determining NAV, funds must value ''securities for which market quotations are readily available'' at current market value, and must value all other securities and assets at ''fair value as determined in good faith by the board of directors.'' Illiquid or less liquid assets are less likely to have readily available market quotations, and thus are more likely to require a fair value determination. Determining the fair value of illiquid or less liquid assets consistent with section 2(a)(41) and rule 2a–4 can pose a number of challenges, some of which the Commission has previously described in the context of the acquisition of restricted securities,[51] and improper valuation of such assets could result in liability under the antifraud provisions.[52] The difficulties valuing illiquid or less liquid securities also implicate section 22(c) and rule 22c–1, which requires the use of the next-determined NAV for pricing purchases and redemptions. Transactions in such securities are more likely to be effected at prices that differ from fair value and, therefore, may result in increasing risk of investor dilution.[53]

A separate and independent issue arising from the failure to maintain a sufficiently liquid portfolio is the risk of shareholder dilution associated with improper fund pricing. Thus, section 22(a),[54] when read together with section 22(c),[55] gives the Commission broad powers to regulate the pricing of redeemable securities for the purpose of eliminating or reducing so far as reasonably practicable any dilution of the value of the outstanding fund shares. In its 1969 guidance on restricted securities, the Commission observed that a fund with significant holdings of restricted securities may have to engage in private sales on short notice to meet redemption obligations, which could result in the fund ''receiving less than its carrying value of the restricted securities.''[56] That, in turn, would ''result in a preference in favor of the redeeming shareholders and a diminution of the NAV per share of shareholders who have not redeemed,'' further highlighting the need for funds to maintain ''a high degree of liquidity'' given the unpredictability of redemption demands or other exigencies.[57] Similarly, here, as a general matter, to the extent a fund's portfolio is made up of a large amount of illiquid or less liquid securities, the fund may face difficulties meeting shareholder redemption requests while at the same time protecting the value of the shares of existing shareholders from dilution. Limited liquidity may hinder the portfolio manager's ability to defensively reposition the fund in anticipation of shifting or volatile markets because asset sales necessary to effectuate those shifts can be executed only with substantial liquidity costs. If limited liquidity in the fund's portfolio limits which assets the fund can sell to meet redemptions, such limited liquidity also could even result in the fund straying from its investment objective. Accordingly, a fund that does not effectively manage its liquidity risk may become constrained in its portfolio management, to the detriment of its investors and contrary to the way the fund represents its investment strategy to the public.[58] Therefore, when constructing a fund's portfolio of securities, it is essential for the fund to take into account the importance of maintaining a portfolio that is liquid enough to fulfill the fund's obligations under these provisions.[59]

As previously discussed, in addition to the seven-day redemption requirement in section 22(e), rule 15c6–1 under the Exchange Act also affects the timing of open-end fund redemptions because the rule requires broker-dealers to settle securities transactions, including transactions in open-end fund shares, within three business days after the trade date. Furthermore, rule 22c–1 under the Act, the ''forward pricing'' rule, requires funds, their principal underwriters, and dealers to sell and redeem fund shares

[49] *See* Restricted Securities Release, *supra* footnote 37; Proposing Release, *supra* footnote 9, at n.77 (''Disclosures by open-end funds are subject to the antifraud provisions of the federal securities laws. Therefore there may be liability under these provisions if a fund fails to meet redemptions with seven days or any shorter time disclosed in the fund's prospectus or advertising materials.'') (citing section 17(a) of the Securities Act, section 10(b) of the Exchange Act and rule 10b–5 under the Exchange Act, and section 34(b) of the Exchange Act); *id.* at n.109 (''[F]unds' redemption obligations are also governed by any disclosure to shareholders that a fund has made about the time within which it will meet redemption requests, as disclosures by open-end funds are subject to the antifraud provisions of the federal securities laws.''); *id.* at III.C (''We believe that assessing and managing liquidity risk in a comprehensive manner is critical to a fund's ability to honor redemption requests within the seven-day period required under section 22(e) . . . as well as within any shorter time period disclosed in the fund's prospectus or advertising materials or required for purposes of rule 15c6–1.''); *id.* at III.C.3.d (requesting public comment on whether liquid asset minimum requirements tighter than three days may be warranted ''given that there may be liability under the antifraud provisions of the federal securities laws if a fund fails to meet redemptions within any shorter time disclosed in the fund's prospectus or advertising materials.'').

[50] *See* Restricted Securities Release, *supra* footnote 37 (describing the ''serious problems of valuation'' arising from fund acquisition of restricted securities); Guidelines Release, *supra* footnote 38 (noting that a fund ''must maintain a high degree of portfolio liquidity'' to meet the requirements under section 22(e), rule 22c–1(a) and rule 2a–4).

[51] *See* Restricted Securities Release, *supra* footnote 37 at n.1 and accompanying text for a discussion of the various valuation challenges facing purchasers and sellers of restricted securities.

[52] *See* Restricted Securities Release, *supra* footnote 37. As the Commission explained there, ''[t]he offering price of securities issued by a management investment company is premised upon the net asset value of such shares as determined pursuant to [section 2(a)(41)] of the Act and Rule 2a–4 thereunder and is so represented in its prospectus.'' Consequently, ''the improper valuation of restricted securities held by such a company would distort the net asset value of the shares being offered or, in the case of an open-end company, redeemed, and would therefore constitute a fraud and deceit within the meaning of section 10(b) and Rule 10b–5.'' *See also infra* footnote 66.

[53] *See* Restricted Securities Release, *supra* footnote 37, at n.1 (''the valuation of restricted securities by reference to the market price for unrestricted securities of the same class assumes that the market price for unrestricted securities of the same class is representative of the fair value of the securities. This may not be the case when the market for the unrestricted securities is very thin, *i.e.,* only a limited volume of shares are available for trading.'').

[54] Section 22(a) authorizes securities associations registered under section 15A of the Exchange Act to prescribe rules related to the method of computing purchase and redemption prices of redeemable securities and the minimum time period that must elapse after the sale or issue of such securities before any resale or redemption may occur, for the purpose of ''eliminating or reducing so far as reasonably practicable any dilution of the value of other outstanding securities of such company or any other result of such purchase, redemption, or sale which is unfair to holders of such other outstanding securities.''

[55] Section 22(c) authorizes the Commission to make rules and regulations applicable to registered investment companies and to principal underwriters of, and dealers in, the redeemable securities of any registered investment company, whether or not members of any securities association, to the same extent, covering the same subject matter, and for the accomplishment of the same ends as are prescribed in section 22(a) in respect of the rules which may be made by a registered securities association governing its members.

[56] *See* Restricted Securities Release, *supra* footnote 37.

[57] *Id.*

[58] *See* Restricted Securities Release, *supra* footnote 37 (''It is desirable that an open-end company retain maximum flexibility in the choice of portfolio securities which, on the basis of their relative investment merits, could best be sold where necessary to meet redemptions.'').

[59] *Id.*

at a price based on the current NAV next computed after receipt of an order to purchase or redeem fund shares, even though fund assets may be sold in subsequent days in order to meet redemption obligations.[60]

With the exception of money market funds subject to rule 2a–7 under the Act,[61] the Commission has not promulgated rules requiring open-end funds to invest in a minimum level of liquid assets.[62] As discussed above, the Commission has historically taken the position that, in order to comply with section 22(e) and other applicable legal provisions, open-end funds should maintain a high degree of portfolio liquidity to ensure that their portfolio securities and other assets can be sold and the proceeds used to satisfy redemptions in a timely manner.[63] In addition to a fund's ''general responsibility to maintain a level of portfolio liquidity that is appropriate under the circumstances,'' the Commission has stated that open-end funds must engage in ongoing portfolio liquidity monitoring to determine whether an adequate level of portfolio liquidity is being maintained in light of their redemption obligations.[64]

Registered investment companies and their investment advisers are subject to rules under the Act and the Advisers Act requiring them to adopt and implement written compliance policies and procedures reasonably designed to prevent various violations of laws and regulations. Rule 38a–1 under the Act requires registered investment companies to adopt and implement written policies and procedures reasonably designed to prevent violations of the federal securities laws by the fund, including policies and procedures that provide for the oversight of compliance by certain of the fund's service providers, including the fund's investment adviser; the rule also requires board approval and review of the service providers' compliance policies and procedures. Additionally, rule 206(4)–7 under the Advisers Act requires registered investment advisers to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of the Advisers Act and the rules thereunder by the adviser or any of its supervised persons. Such compliance policies and procedures should be appropriately tailored to reflect each firm's particular compliance risks.[65] For example, an open-end fund holding a significant portion of its assets in securities with long settlement periods or that trade infrequently may be subject to relatively greater liquidity risks than other open-end funds, and should appropriately tailor its policies and procedures in light of its particular risks and circumstances. The Commission has brought enforcement actions under the compliance rules against funds and their advisers for failures to adopt and/or implement policies and procedures reasonably designed to prevent violations relating to, for example, disclosure, valuation, and pricing for assets with limited liquidity.[66]

Thus, funds and their advisers already are required to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of various provisions implicated by fund liquidity, including those provisions identified above. The liquidity risk management program requirements of rule 22e–4, which we are adopting here, in effect will provide more specific and enhanced requirements in certain areas already generally covered by the compliance program rules.

In short, there are a number of statutory and regulatory provisions across the federal securities laws that bear on redemptions and the potential dilution of shareholders' interests. New rule 22e–4 advances the purposes of the Act by enhancing the ability of funds to meet their redemption obligations, reducing the risk of shareholder dilution, and reducing the potential for antifraud violations.[67]

[60] *See infra* footnotes 73–76 and accompanying text for a discussion of why this calculation method is permitted under rule 22c–1 and rule 2a–4.

[61] *See supra* footnote 43.

[62] However, the Commission has issued guidelines concerning funds' portfolio liquidity. *See supra* footnote 38 and accompanying text.

[63] *See* Restricted Securities Release, *supra* footnote 37; *see also* Rule 144A Release, *supra* footnote 37.

[64] Guidelines Release, *supra* footnote 38, at n.11 (''[T]he Commission expects funds to monitor portfolio liquidity on an ongoing basis to determine whether, in light of current circumstances, an adequate level of liquidity is being maintained. For example, an equity fund that begins to experience a net outflow of assets because investors increasingly shift their money from equity to income funds should consider reducing its holdings of illiquid securities in an orderly fashion in order to maintain adequate liquidity.''). Therefore, under current SEC guidance, a fund experiencing net outflows may wish to consider managing its illiquid asset holdings to maintain adequate liquidity. Similarly, a fund may need to determine whether it is appropriate to take certain actions when the fund has determined that a previously liquid holding has become illiquid due to changed circumstances. *See also* Rule 144A Release, *supra* footnote 37, at n.61.

[65] In the compliance rules adopting release, the Commission highlighted certain, non-exclusive examples of particular areas to be addressed in funds' and advisers' policies and procedures. For example, it stated that funds or advisers should adopt policies and procedures regarding valuation and the pricing of portfolio securities and fund shares, as well as the processing of fund shareholder transactions in accordance with rule 22c–1. *See* Compliance Programs of Investment Companies and Investment Advisers, Investment Company Act Release No. 26299 (Dec. 17, 2003) [68 FR 74714 (Dec. 24, 2003)] (''Rule 38a–1 Adopting Release'') (''These pricing requirements are critical to ensuring fund shares are purchased and redeemed at fair prices and that shareholder interests are not diluted.''). The Commission also identified ''portfolio management processes'' as an issue that should be covered in the compliance policies and procedures of a fund or its adviser and indicated that each fund should tailor its policies and procedures to address the fund's particular compliance risks. *See id.,* at n.82 (noting that the chief compliance officer's annual report should discuss the fund's particular compliance risks and any changes that were made to the policies and procedures to address newly identified risks). The Commission further identified ''the accuracy of disclosures made to investors, clients, and regulators'' as an issue to be covered.

[66] *See* In re Citigroup Alternative Investments LLC & Citigroup Glob. Markets Inc., Investment Advisers Act Release No. 4174 (Aug. 17, 2015) (settled order) (hedge fund adviser failed to adopt policies and procedures to prevent misrepresentations to private fund investors about fund performance and liquidity and violated rule 206(4)–7); In re J. Kenneth Alderman, CPA, *et al.,* Investment Company Act Release No. 30557 (Jun. 13, 2013) (settled order) (respondent directors failed to exercise their responsibilities with respect to adoption and implementation of valuation policies and procedures by mutual funds holding securities with reduced liquidity and caused funds' violations of rule 38a–1); In re UBS Glob. Asset Mgmt. (Americas) Inc., Investment Company Act Release No. 29920 (Jan. 17, 2012) (settled order) (mutual fund adviser failed to implement fair value pricing procedures with respect to subordinated fixed income securities without an active market and violated rule 38a–1); In re Morgan Asset Mgmt., Inc., *et al.,* Investment Company Act Release No. 29704 (June 22, 2011) (settled order) (mutual fund adviser failed to implement valuation procedures in pricing fixed income securities backed by subprime mortgages and violated rule 38a–1).

[67] One commenter argued that the Commission lacks the statutory authority to issue rule 22e–4. Comment Letter of Justin Banks (Jan. 13, 2016) (''Banks Comment Letter'') (considering the authority conferred by sections 22(c), 22(e), and 38 of the Act, although we note that in referring to our authority under section 38, the commenter actually quoted and addressed the text of section 39 of the Act.). We disagree. The Commission has ample authority under the Act, including sections 22(c), 22(e), and 38(a), as well as under the antifraud provisions of the federal securities laws, to require that open-end funds maintain adequate liquidity and adopt responsible liquidity risk management policies and procedures. *See supra* section II.B.2. Section 38(a), in particular, gives the Commission authority to issue rules, regulations, and orders ''as are necessary or appropriate to the exercise of the powers conferred upon the Commission elsewhere in this title.'' As discussed above, the liquidity risk management program required under rule 22e–4 is necessary and appropriate to reduce the risk that funds will be unable to meet their redemption obligations, to improve industry-wide liquidity risk management practices, to mitigate potential dilution of the interests of non-redeeming shareholders, and to increase the likelihood that funds are able to fulfill representations made in their prospectuses and advertising materials and implicit in their open-end status.

3. Liquidity Management by Open-End Funds

Portfolio managers consider a variety of factors in addition to liquidity when constructing a fund's portfolio, including but not limited to the fund's investment strategies, economic and market trends, portfolio asset credit quality, and tax considerations. Nevertheless, meeting redemption obligations is fundamental for open-end funds, and funds must manage liquidity in order to meet these obligations.[68] Several factors influence how liquidity management by open-end funds affects the equitable treatment of investors in a fund, investor redemption behavior, and potentially the orderly operation of the markets when fulfilling redemption obligations.

First, it is important to consider how a fund meets redemptions. When a fund receives redemption requests from shareholders, and the fund does not have cash on hand to meet those redemptions,[69] the fund may sell portfolio assets to generate cash to meet the redemptions and generally has the discretion to determine which assets will be sold.[70] It is possible that a fund would choose to sell its most liquid assets first. This method of selling is limited to some degree by the investment strategies of the fund, and a fund pursuing this method of meeting redemptions to any significant degree may need to adjust its portfolio so that the fund continues to follow its investment strategies. A fund that chooses to sell its most liquid assets to meet fund redemptions may minimize the effect of the redemptions on short-term fund performance for redeeming and remaining shareholders, but may leave remaining shareholders in a potentially less liquid and riskier fund until the fund adjusts the portfolio.[71] An ETF redeeming in kind with its most liquid assets first would similarly leave remaining shareholders in a potentially less liquid and riskier fund. In contrast to meeting redemptions by selling its most liquid assets first, a fund alternatively could choose to meet redemptions by selling, to the best of its ability, a ''strip'' of the fund's portfolio (*i.e.,* a cross-section or representative selection of the fund's portfolio assets).[72] Funds also could choose to meet redemptions by selling a range of assets in between its most liquid, on one end of the spectrum, and a perfect *pro rata* strip of assets, on the other end of the spectrum. Similarly, an ETF redeeming in kind could use a *pro rata* strip of assets. Additionally, funds could choose to opportunistically pare back or eliminate holdings in a particular asset or sector to meet redemptions.

Second, the effect of redemptions on shareholders is determined by how and when those redemptions affect the price of the fund's shares. Under rule 22c–1, all investors who redeem from an open-end fund on any particular day must receive the NAV next calculated by the fund after receipt of such redemption request.[73] As most funds, with the exception of money market funds, calculate their NAV only once a day, this means that redemption requests received during the day receive the end of day NAV, typically calculated as of 4 p.m. Eastern time.[74] When calculating a fund's NAV, however, rule 2a–4 requires funds to reflect changes in holdings of portfolio securities and changes in the number of outstanding shares resulting from distributions, redemptions, and repurchases no later than the first business day following the trade date.[75] We allowed this calculation method to provide funds with additional time and flexibility to incorporate last-minute portfolio transactions into their NAV calculations on the business day following the trade date, rather than on the trade date.[76] As a practical matter, this calculation method also gave broker-dealers, retirement plan administrators, and other intermediaries additional time to receive transactions submitted before the cut-off time on the trade date, which then may be reflected in the fund's NAV on the business day following the trade date.

Nevertheless, we recognize that trading activity and other changes in portfolio holdings associated with meeting redemptions may occur over multiple business days following the redemption request. If these activities occur (and their associated costs are reflected in NAV) in days following redemption requests, the costs of providing liquidity to redeeming investors could be borne by the remaining investors in the fund, thus potentially diluting the interests of non-redeeming shareholders.[77] The less liquid the fund's portfolio holdings, the greater these liquidity costs can become.[78]

There can be significant adverse consequences to remaining investors in a fund that does not adequately manage liquidity.[79] As noted above, the

[68] See Comment Letter of Investment Company Institute on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001(''FSOC Notice'') (Mar. 25, 2015) (''ICI FSOC Notice Comment Letter'') (''For mutual funds, the central importance of meeting redemptions means that liquidity management is a key element of regulatory compliance, investment risk management, and portfolio management—and a constant area of focus. Even before launching a mutual fund, the fund manager and fund board consider whether the fund's proposed investments and strategies are suitable for the mutual fund structure, including whether it will be able to satisfy applicable regulatory requirements on an ongoing basis. If not, the manager may decide to offer that strategy through a different vehicle (*e.g.,* a closed-end fund or a private fund).''). *See also supra* footnotes 2, 3, and 5–7.

[69] A fund can have cash on hand to meet redemptions from cash held in the fund's portfolio, cash received from investor purchases of fund shares, interest payments and dividends on portfolio securities, or maturing bonds. *See, e.g.,* Comment Letter of Fidelity Investments on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''Fidelity FSOC Notice Comment Letter''), at n.17 (''[S]ecurities do not need to be sold every time a redemption order is placed. Sale of fund assets is necessary only when gross redemptions significantly exceed net inflows.'').

[70] A fund may also obtain cash by other available means such as bank lines of credit, but funds infrequently utilize this method to meet redemptions. *See* Proposing Release, *supra* footnote 9, at n.35 and accompanying text. *See also infra* footnote 262 and accompanying text for a discussion of the use of interfund lending as an alternative source of cash for funds.

[71] *See* Proposing Release, *supra* footnote 9, at n.37 and accompanying text.

[72] There are practical limitations on a fund's ability to sell a *pro rata* slice of its portfolio, such as minimum trade sizes, transfer restrictions, illiquid assets, tax complications from certain sales, and avoidance of odd lot positions.

[73] The process of calculating or ''striking'' the NAV of the fund's shares on any given trading day is based on several factors, including the market value of portfolio securities, fund liabilities, and the number of outstanding fund shares, among others.

[74] Commission rules do not require that a fund calculate its NAV at a specific time of day. Current NAV must be computed at least once daily, subject to limited exceptions, Monday through Friday, at the specific time or times set by the board of directors. *See* rule 22c–1(b)(1).

[75] Rule 2a–4(a)(2)–(3).

[76] *See* Adoption of Rule 2a–4 Defining the Term ''Current Net Asset Value'' in Reference to Redeemable Securities Issued by a Registered Investment Company, Investment Company Act Release No. 4105 (Dec. 22, 1964) [29 FR 19100 (Dec. 30, 1964)].

[77] The transaction costs associated with redemptions can vary significantly, with some costs having a more immediate impact on shareholders than others. For example, during times of heightened market volatility and wider bid-ask spreads for the fund's underlying holdings, selling the fund's investments to meet redemptions will necessarily result in costs to the fund, which in turn may negatively impact investors who chose to redeem in the days immediately following the stress event. The impact of such costs on the remaining fund investors can vary depending on when a shareholder chooses to redeem. *See, e.g.,* Comment Letter of Mutual Fund Directors Forum on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 6.

[78] *See, e.g.* Comment Letter of Morningstar, Inc. (Jan. 13, 2016) (''Morningstar Comment Letter''). *See also* Proposing Release, *supra* footnote 9, at n.45 and accompanying text.

[79] *See, e.g.,* Jason Greene & Charles Hodges, *The Dilution Impact of Daily Fund Flows on Open-end Mutual Funds,* 65 J. of Fin. Econ. 131 (2002)

proportion of illiquid assets held by a fund can increase if the fund sells its more liquid portfolio assets to meet redemptions. This in turn could adversely affect the fund's risk profile and cause the fund to have difficulty meeting future shareholder redemptions.[80] For example, during the pendency of our proposal, the Third Avenue Focused Credit Fund, a non-diversified open-end fund, adopted a plan of liquidation, and requested and obtained exemptive relief to suspend shareholder redemptions.[81] The Commission noted that the fund represented that, at the time the fund and its investment adviser requested exemptive relief, it had experienced a significant level of redemption requests over the prior six-month period that reduced the fund's portfolio liquidity, as well as a significant decline in its NAV.[82] The fund's board authorized the plan of liquidation after it determined that additional redemptions would have to be made at prices that would unfairly disadvantage the fund's remaining shareholders.[83] This event highlights the extent to which shareholders can be harmed when a fund holding portfolio assets that entail significant liquidity risk does not adequately anticipate the effects of market deterioration and increased shareholder redemptions.[84] Furthermore, if a fund finds that it can sell portfolio assets only at prices that incorporate a significant discount to the assets' stated value, the discounted sale prices can materially affect the fund's NAV.

These factors in fund redemptions—either individually or in combination—can create incentives in times of liquidity stress in the markets for shareholders to redeem quickly to avoid further losses (or a ''first-mover advantage'').[85] If shareholder redemptions are motivated by this first-mover advantage, they can lead to increasing outflows, and as the level of outflows from a fund increases, the incentive for remaining shareholders to redeem may also increase. Additionally, a fund experiencing large outflows as a result of redemptions may be exposed to predatory trading activity in the securities it holds.[86] Regardless of whether investor redemptions are motivated by a first-mover advantage or other factors, there can be significant adverse consequences to remaining investors in a fund when it fails to adequately manage liquidity.[87] This underlines the importance of fund liquidity management for advancing investor protection by reducing the risk that a fund would be unable to meet redemption obligations without significant dilution of remaining investors' interests in the fund.

There also is a potential for adverse effects on the markets when open-end funds fail to adequately manage

(''Greene & Hodges'') (''Active trading of open-end funds has a meaningful economic impact on the returns of passive, nontrading shareholders, particularly in U.S.-based international funds. The overall sample of domestic equity funds shows no dilution impact, but we find an annualized negative impact of 0.48% in international funds (and nearly 1% for a subsample of funds whose daily flows are particularly large).'').

[80] *See, e.g.,* In re Heartland Advisors, Inc., *et al.,* Investment Company Act Release No. 28136 (Jan. 25, 2008) (''Heartland Release'') (settled order) (finding that certain high-yield bond funds experienced liquidity problems (caused in part by adviser's unwillingness to sell bond holdings at prices below which the funds had valued them) and, as a result, the funds borrowed heavily against a line of credit to meet fund redemption requests, and investors redeemed fund shares at prices that benefited redeeming shareholders at the expense of remaining and new investors).

[81] *See* Third Avenue Temporary Order, *supra* footnote 12. *But see infra* footnote 209 and accompanying text. We note that there is no assurance that the Commission would grant similar relief in the future. *See also* ICI Comment Letter I (''Third Avenue Focused Credit Fund experienced a significant level of redemption requests and an ongoing reduction in the liquidity of its portfolio securities, which consisted largely of junk bonds . . . The SEC granted a temporary order under section 22(e)(3) after expressing concerns with a board-approved plan of liquidation that provided for distribution to shareholders of the fund's remaining net cash and a separate transfer of the fund's other assets into a liquidating trust.''); BlackRock Comment Letter (''[A]s recently demonstrated by the issues meeting redemption requests that were experienced by the Third Avenue Focused Credit Fund, a small and highly concentrated portfolio can present its own liquidity challenges.''); *see also infra* footnote 84.

[82] Third Avenue Temporary Order, *supra* footnote 12. At the time that the fund adopted its plan of liquidation, the fund had experienced $1.1 billion in estimated net outflows for the year to date through December 9, 2015, which was more than 145% of the fund's total net assets as of that date. Furthermore, in November 2015, the fund experienced a total of $317 million in estimated net redemptions and the fund's retail class NAV per share fell from $7.82 to $7.09.

[83] *Id. See also* Third Avenue Management, Press Release: Third Avenue Management Obtains Exemptive Relief for Focused Credit Fund (Dec. 16, 2015), *available at: http://thirdave.com/news/press-release-third-avenue-management-obtains-exemptive-relief-for-focused-credit-fund/* (''As a result of the [SEC] exemptive order, redemptions are suspended for all shareholders, and . . . the [fund's adviser] will be able to conduct an orderly liquidation without having to resort to forced selling of securities at reduced or disadvantaged prices.'').

[84] *See* Comment Letter of Americans for Financial Reform (Jan. 13, 2016) (''AFR Comment Letter'') (''By all accounts, Third Avenue was holding the great majority of its assets in illiquid distressed debt and had very limited cash reserves, a strategy that can increase returns but at the price of greatly increased risks for investors . . . While the Third Avenue fund may be an outlier in terms of the sheer volume of illiquid assets it holds, evidence also indicates that larger and more significant funds are also testing the bounds of previous SEC guidance on liquidity, and are holding a large fraction of potentially illiquid assets. If such funds come under selling pressure, the need to dispose of such assets could add to market stress in ways that have a negative impact on corporate credit and the real economy, as well as potentially harming investors.''); *see also* Heartland Release, *supra* footnote 80.

[85] *See infra* footnotes 1086–1088 and accompanying text for a discussion of the first-mover advantage and its negative consequences. *But see* Comment Letter of Nuveen Investments on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''Nuveen FSOC Notice Comment Letter''), at 10 (stating that there is no evidence that shareholders are actually motivated by a first-mover advantage); Comment Letter of BlackRock on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''BlackRock FSOC Notice Comment Letter''), at 17 (stating that although incentives to redeem may exist, this does not necessarily imply that investors will in fact redeem *en masse* in times of market stress, but also noting that a well-structured fund ''should seek to avoid features that could create a 'first-mover advantage' in which one investor has an incentive to leave'' before others); Comment Letter of Association of Institutional Investors on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 10–11 (''The empirical evidence of historical redemption activity, even during times of market stress, supports the view that either (i) there are not 'incentives to redeem' that are sufficient to overcome the asset owner's asset allocation decision or (ii) that there are disincentives, such as not triggering a taxable event, that outweigh the hypothesized 'incentives to redeem.' ''); Comment Letter of The Capital Group Companies on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 8 (''We also do not believe that the mutualization of fund trading costs creates any first mover advantage.''); ICI FSOC Notice Comment Letter, *supra* footnote 68, at 7 (''Investor behavior provides evidence that any mutualized trading costs must not be sufficiently large to drive investor flows. We consistently observe that investor outflows are modest and investors continue to purchase shares in most funds even during periods of market stress.''). *See also* discussion of the potential first-mover advantage in the Proposing Release, *supra* footnote 9, at n.49.

[86] *See, e.g.,* Joshua Coval & Erik Stafford, *Asset Fire Sales (and Purchases) in Equity Markets,* 86 J. Fin. Econ. 479 (2007) (''Coval & Stafford'') (''Funds experiencing large outflows tend to decrease existing positions, which creates price pressure in the securities held in common by distressed funds. Similarly, the tendency among funds experiencing large inflows to expand existing positions creates positive price pressure in overlapping holdings. Investors who trade against constrained mutual funds earn significant returns for providing liquidity. In addition, future flow-driven transactions are predictable, creating an incentive to front-run the anticipated forced trades by funds experiencing extreme capital flows.''); Teodor Dyakov & Marno Verbeek, *Front-Running of Mutual Fund Fire-Sales,* 37 J. of Bank. and Fin. 4931 (2013) (''Dyakov & Verbeek'') (''We show that a real-time trading strategy which front-runs the anticipated forced sales by mutual funds experiencing extreme capital outflows generates an alpha of 0.5% per month during the 1990–2010 period . . . Our results suggest that publicly available information of fund flows and holdings exposes mutual funds in distress to predatory trading.''). *See* discussion of predatory trading concerns in the Proposing Release, *supra* footnote 9, at nn.805–809 and accompanying text.

[87] *See* Proposing Release, *supra* footnote 9, at n.37.

liquidity.[88] For example, if liquid asset levels are insufficient to meet redemptions, funds may sell less-liquid portfolio assets at discounted or even fire sale prices. These sales can produce significant negative price pressure on those assets and correlated assets. Accordingly, redemptions and funds' liquidity risk management can affect not just the remaining investors in the fund, but any other investors holding these assets. Depending on the asset and the level of stress, such liquidity stress on the assets held in the fund has the potential to transmit stress to other funds or portions of the market as well.[89]

C. Recent Developments in the Open-End Fund Industry

Recent industry developments have underlined our focus on the importance of sufficient liquidity and liquidity risk management practices in open-end funds.[90] These developments include significant growth in assets of, and shareholder inflows into, open-end funds with fixed income strategies and alternative strategies since 2008 and the evolution of settlement periods and redemption practices utilized by open-end funds. We will discuss each of these developments in turn.

1. Fixed Income Funds and Alternative Funds

We have observed significant growth in cash flows into, and assets of, fixed income mutual funds and fixed income ETFs (excluding ETMFs).[91] As growth in fixed income fund assets was occurring, we increased our focus on fixed income market structure, publishing a report on the municipal securities markets in 2012 and holding a roundtable focused on the fixed income markets in 2013.[92] In addition, Commissioners and Commission staff have spoken about the need to focus on potential risks relating to the fixed income markets and their underlying liquidity.[93] Commission staff also has focused on the nature of liquidity risk management in fixed income funds, including by selecting fixed income funds as an examination priority in 2014, 2015, and 2016.[94]

We also have observed significant growth in alternative mutual funds over the last decade.[95] Although the assets of open-end funds pursuing alternative strategies accounted for a relatively small percentage of the mutual fund market as of December 2014, the growth of assets in these funds has been substantial. Assets of open-end funds with alternative strategies grew from approximately $365 million at the end of 2005 to approximately $334 billion at the end of 2014.[96]

Unlike alternative mutual funds and ETFs, private funds (such as hedge funds and private equity funds) and closed-end funds pursuing similar alternative strategies can invest in portfolio assets that are relatively illiquid without generating the same degree of redemption risk for the fund because investor redemption rights are often limited.[97] In addition, investor expectations of private funds' redemption rights differ from the redemption expectations of typical retail investors in open-end funds.[98] For example, investors in private equity funds typically commit their capital for the life of the fund.[99]

In contrast, alternative strategy mutual funds and ETFs have no such ability to tailor investor redemption rights based on the liquidity profile of the funds' portfolios. Yet some of these funds seek to pursue similar investment strategies as hedge funds and other private funds, while still being bound

[88] *See, e.g.,* See Comment Letter of Americans for Financial Reform on the FSOC Notice (Mar. 27, 2015) (''AFR FSOC Notice Comment Letter'') (citing evidence that ''bond fire sales by mutual funds during the financial crisis created direct economic harm to real economy companies, reducing investment and profitability over a period of years.''); Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 18 (''Managing liquidity levels to fulfill [a fund adviser's] fiduciary obligations benefits [redeeming and remaining] shareholders as well as the broader financial markets.'').

[89] *See* Proposing Release, *supra* footnote 9, at n.54.

[90] We note that, up until 1970, open-end funds had limited investments in the bond market. *See* Protecting Investors: A Half Century of Investment Regulation (May 1992) for a discussion of the regulatory and market developments that occurred between 1940 and 1992.

[91] Assets in these funds grew from $1.5 trillion at the end of 2008 to $3.6 trillion at the end of 2015, with net inflows exceeding $1.4 trillion during that period. These figures were obtained from staff analysis of Morningstar Direct data, and are based on fund categories defined by Morningstar. While mutual funds holding U.S. equities continue to make up the largest category of funds in terms of fund assets, their share of the total industry assets has declined from 65.2% in 2000 to 44.7% in 2015. DERA Study, *infra* footnote 95, at Table 2. The statistics in the DERA Study were calculated through the end of 2014. Commission staff used the CRSP US Mutual Fund Database to update them as of the end of 2015.

[92] *See* Securities and Exchange Commission, Transcript: Roundtable on Fixed Income Markets (Apr. 16, 2013), *available at https://www.sec.gov/spotlight/fixed-income-markets/2013-04-16-fixed-income-markets-transcript.txt* (discussing, among other topics, liquidity characteristics and risks in the municipal bond and corporate bond markets); Securities and Exchange Commission, Report on the Municipal Securities Market (July 31, 2012), *available at https://www.sec.gov/news/studies/2012/munireport073112.pdf* (discussing, among other topics, the low liquidity, opacity and fragmentation of the municipal securities market).

[93] *See* Proposing Release, *supra* footnote 9, at n.62.

[94] *See, e.g.,* IM Guidance Update No. 2014–01, Risk Management in Changing Fixed Income Market Conditions (Jan. 2014) (''2014 Fixed Income Guidance Update''), *available at https://www.sec.gov/divisions/investment/guidance/im-guidance-2014-1.pdf*; National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2016 (2016), *available at https://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2016.pdf* (''Amidst the changes in fixed income markets over the past several years, we will examine advisers to mutual funds, ETFs, and private funds that have exposure to potentially illiquid fixed income securities. We will also examine registered broker-dealers that have become new or expanding liquidity providers in the marketplace. These examinations will include a review of various controls in these firms' expanded business areas, such as controls over market risk management, valuation, liquidity management, trading activity, and regulatory capital''); National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2015 (2015) (''National Exam Program 2015 Examination Priorities''), *available at http://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2015.pdf* (''With interest rates expected to rise at some point in the future, we will review whether mutual funds with significant exposure to interest rate increases have implemented compliance policies and procedures and investment and trading controls sufficient to ensure that their funds' disclosures are not misleading and that their investments and liquidity profiles are consistent with those disclosures.''); National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2014 (2014), *available at http://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2014.pdf* (''The staff will monitor the risks associated with a changing interest rate environment and the impact this may have on bond funds and related disclosures of risks to investors.'').

[95] Paul Hanouna, Jon Novak, Tim Riley & Christof Stahel, *Liquidity and Flows of U.S. Mutual Funds,* Division of Economic and Risk Analysis White Paper (Sept. 2015) (''DERA Study''), at 7–8, *available at https://www.sec.gov/dera/staff-papers/white-papers/liquidity-white-paper-09-2015.pdf* . While there is no clear definition of ''alternative'' in the mutual fund space, an alternative mutual fund is generally understood to be a fund whose primary investment strategy falls into one or more of the three following buckets: (i) Non-traditional asset classes (for example, currencies or managed futures funds); (ii) non-traditional strategies (such as long/short equity, event driven); and/or (iii) less liquid assets (such as private debt). Their investment strategies often seek to produce positive risk-adjusted returns that are not closely correlated to traditional investments or benchmarks, in contrast to traditional mutual funds that historically have pursued long-only strategies in traditional asset classes.

[96] *See* Proposing Release, *supra* footnote 9 at nn.64–66 and accompanying text. *See also id.*

[97] A private fund is an issuer that would be an investment company, as defined in section 3 of the Investment Company Act, but for the exclusion from the definition of ''investment company'' in section 3(c)(1) or 3(c)(7) of the Act. Section 202(a)(29) of the Advisers Act.

[98] Hedge Funds often contain ''lock-up'' provisions and impose gates, suspensions of redemptions, and side pockets to manage liquidity stress. *See* Proposing Release, *supra* footnote 9, at n.69 and accompanying text.

[99] *See* Comment Letter of the Private Equity Growth Capital Council on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015).

by the redemption obligations applicable to open-end funds. Accordingly, our staff has been focused on the liquidity of alternative strategy mutual funds and ETFs (excluding ETMFs), as well as the nature of liquidity and redemption risks faced by investors in these funds given their legal right to be paid the proceeds of any redemption request within seven days and a fund's representations about payment in less than seven days.[100] Certain observations by the Commission's Division of Economic and Risk Analysis (''DERA'') have lent further support to our focus on liquidity risk management practices in this industry segment, as DERA's analysis has shown that alternative strategy mutual funds demonstrate cash flows that are significantly more volatile than other strategies, indicating that these funds may face higher levels of redemptions, and thus higher liquidity risk.[101] Volatility in flows places additional importance on liquidity risk management to prevent some of the consequences from a failure to adequately manage liquidity discussed in section II.B.2 above. The final rules and rule amendments build off of many of the observations we and our staff have made through efforts examining the growth in funds and ETFs with fixed income strategies and alternative strategies.

2. Evolution of Settlement Periods and Redemption Practices

Practices relating to securities trade settlement periods and the timing of the payment of redemption proceeds to investors also have evolved considerably over the decades since the Commission last addressed liquidity needs in open-end funds.[102] Due to the adoption of rule 15c6–1 under the Exchange Act in 1993, the standard settlement time frame declined from five business days (T+5) to three business days (T+3).[103] Furthermore, while standard settlement periods for securities trades in many markets have tended to fall significantly over the last several decades—and investor expectations that redemption proceeds will be paid promptly after redemption requests have risen—settlement periods for other securities held in large amounts by certain funds have not fallen correspondingly. For example, some bank loan funds do not consider most of their portfolio holdings to be illiquid and generally represent in their disclosures that they comply with the Commission's current guidelines,[104] even though the settlement periods associated with some bank loans and participations may extend beyond the period of time the fund would be required to meet shareholder redemptions. This creates a potential mismatch between the timing of the receipt of cash upon sale of these assets and the payment of cash for shareholder redemptions.[105]

Overall, the evolution of the market towards shorter settlement periods—and corresponding fund disclosures—combined with open-end funds holding certain securities with longer settlement periods have raised concerns for us about whether fund portfolios are sufficiently liquid to support a fund's ability to meet its redemption and other legal obligations.

D. Overview of Current Practices

Over the last several years, Commission staff has observed through a variety of different events the current liquidity risk management practices at a cross-section of fund complexes with varied investment strategies. The staff has observed that liquidity risk management techniques may vary across funds, including funds within the same fund complex, in light of unique fund characteristics, including, for example, the nature of a fund's investment objectives or strategies, the composition of the fund's investor base, and historical fund flows. These observations collectively have shown the staff that, even with various unique characteristics, many open-end funds and fund complexes have implemented procedures for assessing and managing the liquidity of their portfolio assets.[106]

Specifically, some of the funds observed by the staff assess their ability to sell particular assets within various time periods (typically focusing on one-, three-, and/or seven-day periods).[107] In conducting this analysis, these funds may take into account relevant market, trading, and other factors, and monitor whether their initial liquidity determination should be changed based on changed market conditions. This process helps these funds determine their ability to meet redemption requests without significant dilution in various market conditions within the disclosed period for payment of redemption proceeds.

Funds observed by the staff that have implemented procedures for assessing the liquidity of their portfolio assets also often have developed controls to manage fund portfolio liquidity risk and the risk of changing levels of shareholder redemptions, such as holding certain amounts of the fund's portfolio in highly liquid investments, setting minimum cash reserves, and establishing committed back-up lines of credit or interfund lending facilities.[108] A few of the funds observed by staff conduct stress testing relating to the availability of liquid assets to cover possible levels of redemptions.[109] Some of these funds' advisers also have periodic discussions with their boards of directors about how the funds approach liquidity risk management and what emerging risks they are observing relating to liquidity risk. The staff has observed that some of the funds with the more thorough liquidity risk management practices have appeared to be able to better meet periods of higher than typical redemptions without significantly altering their risk profile or materially affecting their performance, and thus with less dilutive impacts.

Conversely, the Commission is concerned that some funds employ liquidity risk management practices that are substantially less rigorous. Some funds observed by the staff do not take different market conditions into account when evaluating portfolio asset liquidity, and do not conduct any ongoing liquidity monitoring. Some funds do not incorporate any independent oversight of fund liquidity risk management outside of the portfolio management process.[110] Staff has observed that some of these funds, when faced with higher than normal redemptions, experienced particularly

[100] *See* Proposing Release, *supra* footnote 9, at n.72.

[101] *See* DERA Study, *supra* footnote 95.

[102] *See supra* footnotes 7–9 and accompanying text.

[103] The decline in the securities trading settlement period from T+5 to T+3 prompted funds that were sold through broker-dealers to satisfy redemption requests within three business days. *See supra* footnote 32.

[104] *See supra* section II.B.3.

[105] *See* discussion of this timing mismatch of the Proposing Release, *supra* footnote 9, at n.79 and accompanying text.

[106] There are varying degrees of formality in the adoption and implementation of these procedures. Several commenters also discussed existing liquidity risk management practices. *See, e.g.,* Blackrock Comment Letter; ICI Comment Letter I; Comment Letter of Vanguard (Jan. 6, 2016) (''Vanguard Comment Letter'').

[107] *See* 2014 Fixed Income Guidance Update, *supra* footnote 94 (noting that fund advisers ''generally assess overall fund liquidity and funds' ability to meet potential redemptions over a number of periods'' and discussing certain steps that fund advisers may consider taking given potential fixed income market volatility); *see also* Proposing Release, *supra* footnote 9, at n.151 and accompanying text.

[108] *See* Proposing Release, *supra* footnote 9, at n.100 and accompanying text.

[109] *See* Proposing Release, *supra* footnote 9, at n.101.

[110] *See* Proposing Release, *supra* footnote 9, at n.102.

poor performance compared with their benchmark and some even experienced an adverse change in the fund's risk profile, each of which can increase the risk of investor dilution as well as the risk that the fund will be unable to meet those redemptions.

Finally, the Commission learned through staff outreach that many funds treat their risk management process for assessing the liquidity profile of portfolio assets, and the incorporation of market and trading information, as entirely separate from their assessment of assets under the 15% guideline. The former process is typically conducted on an ongoing basis through the fund's risk management function, through the fund's portfolio management function, or through the fund's trading function (or a combination of the foregoing), while assessment of assets under the 15% guideline is more typically conducted upon purchase of an asset through the fund's compliance or ''back-office'' functions, with little indication that information generated from the risk management or trading functions informs the compliance determinations. This functional divide may be a by-product of the limitations of the 15% guideline as a stand-alone method for comprehensive liquidity risk management, a situation that our final liquidity risk management program framework is meant to address.[111]

Overall, our staff outreach has increased our understanding of some of the valuable liquidity risk management practices employed by some firms as a matter of prudent risk management. This outreach also has shown us the great diversity in liquidity risk management practices that raises concerns regarding various funds' ability to meet their redemption and other legal obligations and minimize the effects of dilution under certain conditions. Collectively, these observations have informed our understanding of the need for an enhanced minimum baseline requirement for fund management of liquidity risk.

E. Rulemaking Adoption Overview

Against this background, today we are adopting a set of reforms designed to promote effective liquidity risk management throughout the open-end fund industry and thereby reduce the risk that funds will not be able to meet redemption or other legal obligations and mitigate potential dilution of the interests of fund shareholders. We believe that limitations on illiquid holdings and more effective liquidity risk management among funds would, in turn, result in significant investor protection benefits and enhance the fair and orderly operation of the markets.[112] The final amendments also seek to enhance reporting and disclosure regarding fund liquidity and redemption practices.

First, we are adopting new rule 22e–4, which requires each registered open-end fund, including open-end ETFs but not including money market funds, to adopt and implement a written liquidity risk management program reasonably designed to assess and manage the fund's liquidity risk.[113] The new rule requires a fund's liquidity risk management program to incorporate certain specified elements. These include: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments,[114] as well as at-least-monthly reviews of the fund's liquidity classifications; (iii) determining and periodically reviewing a highly liquid investment minimum—the percentage of its net assets that the fund invests in highly liquid investments that are assets; (iv) limiting the fund's investment in illiquid investments that are assets to no more than 15% of the fund's net assets; and (v) for funds that engage in, or reserve the right to engage in, redemptions in kind, the establishment of policies and procedures regarding how they will engage in such redemptions in kind.

The liquidity risk assessment requirement generally provides a broad, principles-based foundational framework for a fund's liquidity risk management program, including a requirement that the fund assess whether its investment strategy is appropriate for an open-end fund. The final rule also provides for a tailored program for ETFs, requiring them to consider additional factors as part of their liquidity risk assessment and management that reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs, and excepting ETFs that redeem in kind (''In-Kind ETFs'') from the classification and highly liquid investment minimum requirements.[115] The final rule also provides that funds whose assets primarily consist of highly liquid investments need not adopt a highly liquid investment minimum.[116] Additionally, rule 22e–4 will not apply to closed-end funds, and will apply to principal underwriters and depositors of UITs only to a limited degree, as discussed further below. The classification requirement will provide important liquidity profile information to the Commission and investors and reflects that liquidity may be viewed as falling on a spectrum rather than a binary conclusion that an investment is either ''liquid'' or ''illiquid.''[117] The highly liquid investment minimum requirement is aimed at decreasing the

[111] *See supra* section II.B.2 for a discussion of the limitations of the 15% guideline.

[112] *See infra* section IV.C.

[113] *See* rule 22e–4(b). Rule 22e–4, as adopted today, defines ''liquidity risk'' as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.

[114] As discussed in more detail below, rule 22e–4 as adopted requires a fund to classify each of the fund's portfolio *investments,* including investments that are liabilities of the fund (*e.g.,* certain out-of-the-money derivatives transactions). *See infra* footnote 480 and accompanying text. As proposed rule 22e–4 would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset), but did not specifically address the treatment of a fund's holdings that are liabilities. Thus, in this Release, we use the term ''assets'' when referring to the proposed classification requirement and comments on the proposed requirement, and the term ''investments'' when referring to the adopted classification requirement.

[115] Under the final rule, each ''In-Kind ETF,'' or an ETF that meets redemptions through in-kind transfers of securities, positions, and assets other than a *de minimis* amount of cash, will be subject to the tailored program requirement. *See* rule 22e–4(a)(9) (definition of ''In-Kind Exchange Traded Fund'' or ''In-Kind ETF''); rule 22e–4(b)(1)(i)(D) (incorporating additional factors that an ETF would be required to consider as applicable as part of its liquidity risk assessment and management that reflect liquidity-related risks that could be particularly relevant to the ETF). Under rule 22e–4(a)(5), the term ''fund'' is defined to exclude an In-Kind ETF. As a result, rule 22e–4(b)(1)(ii) and rule 22e–4(b)(1)(iii), which apply to funds as defined in rule 22e–4(a)(5), exclude In-Kind ETFs from the classification and highly liquid investment minimum requirements, respectively.

[116] *See* rule 22e–4(b)(1)(iii) (applying the highly liquid investment minimum requirement only to a fund that does not primarily hold assets that are highly liquid investments).

[117] The Commission is adopting a classification framework consisting of four liquidity categories based on the number of days within which it is determined that the investment is reasonably expected to be convertible to cash (or, in the case of the least-liquid categories, sold or disposed of) without the conversion (or, in the case of the least-liquid categories, sale or disposition) significantly changing the market value of the investment. More specifically, as discussed below, rule 22e–4 would require a fund to classify each of its portfolio investments into one of the following liquidity categories: *Highly liquid* investment*s* (category based on fund's reasonable expectation that an investment can be converted to cash within three business days); *moderately liquid* investment*s* (category based on fund's reasonable expectation that an investment can be converted to cash within four to seven calendar days); *less liquid* investment*s* (category based on fund's reasonable expectation that an investment can be sold or disposed of in seven calendar days but the settlement is reasonably expected to be greater than seven calendar days); and *illiquid* investment*s* (category based on fund's reasonable expectation that an investment cannot be sold or disposed of within seven calendar days).

likelihood that funds would be unable to meet their redemption obligations.

Rule 22e–4 includes board oversight provisions related to the liquidity risk management program. Specifically, a fund's board will approve, but not design, the fund's liquidity risk management program, as well as the fund's designation of the fund's investment adviser or officers as responsible for administering the day-to-day aspects of the fund's liquidity risk management program.[118] A fund also will be subject to board reporting requirements to the extent that its investments in assets that are highly liquid investments fall below its minimum or its assets that are illiquid investments rise above 15% of its net assets.[119] We anticipate that the new program requirement will result in investor protection benefits, as improved liquidity risk management could decrease the chance that a fund could meet its redemption obligations only with significant dilution of remaining investors' interests or changes to the fund's risk profile.

Rule 22e–4, by requiring funds to limit illiquidity and manage liquidity, should reduce the potential likelihood and extent of dilution of non-transacting shareholders that otherwise could result from redemptions effected at prices determined in accordance with rules 22c–1 and 2a–4. Thus, rule 22e–4, although it is numbered with reference to section 22(e), has a broader scope and also should separately help rule 22c–1 operate so as to reduce dilution, as contemplated by sections 22(a) and (c).

Second, we are adopting certain public disclosure- and confidential reporting-related rules and amendments to provide shareholders and other users with additional information with respect to funds' liquidity risk profile as well as assist the Commission in its monitoring efforts. Specifically, we are adopting reporting requirements on Form N–PORT that will require a fund to report monthly position-level liquidity classification information and its highly liquid investment minimum to the Commission on a confidential basis.[120] Form N–PORT will also require a fund to publicly disclose the aggregated percentage of its portfolio representing each of the four classification categories adopted by the Commission as of the end of each of its fiscal quarters.[121]

We are adopting new rule 30b1–10 and Form N–LIQUID to require a fund to confidentially notify the Commission when the fund's illiquid investment holdings exceed 15% of its net assets or if its amount of highly liquid investments declines below its highly liquid investment minimum for more than a brief period of time. We also are adopting amendments to Form N–1A to require a fund to publicly disclose certain information regarding the fund's redemption procedures. Finally, we are adopting requirements for funds to provide information on Form N–CEN about funds' use of lines of credit and interfund lending.

We anticipate that these new requirements will facilitate the Commission's risk and compliance monitoring efforts by providing greater transparency regarding the liquidity characteristics of fund portfolio holdings, as well as its ability to monitor and assess compliance with rule 22e–4. While Form N–PORT and Form N–CEN are primarily designed to assist the Commission, we believe that the requirements to publicly disclose certain information will also help investors and other potential users utilize information on particular funds' liquidity-related risks and redemption policies, which in turn may assist investors in making more informed investment choices.[122] As further discussed below, we believe that these reporting requirements strike the right balance between protecting the funds from certain adverse effects that could arise from public disclosure of detailed portfolio liquidity information with the need to provide shareholders and other users with improved information about funds' liquidity risk profile.

III. Discussion

A. Program Requirement and Scope of Rule 22e–4

Today the Commission is adopting rule 22e–4 under the Investment Company Act. This rule will require each registered open-end management investment company, including open-end ETFs but not including money market funds, to establish a written liquidity risk management program. Rule 22e–4 will not apply to closed-end funds, and will apply to UITs only to a limited degree, as discussed further below.

1. Liquidity Risk Management Program

Rule 22e–4 generally will require each registered open-end management investment company to establish a written liquidity risk management program. The majority of commenters generally supported the proposed requirement for each fund to adopt a formal, written liquidity risk management program,[123] although many commenters objected to certain aspects of the proposal and suggested modifications to certain proposed program elements, as discussed in more detail below. Other commenters opposed the proposed written program requirement, asserting that funds have a history of successfully managing their liquidity and that the proposed requirement was thus unnecessary.[124] We continue to believe, as discussed in the Proposing Release, that the program requirement will produce significant investor protection benefits, in light of the fact that funds are not currently subject to specific requirements under

[118] Rule 22e–4(b)(2).

[119] Rule 22e–4(b)(1)(iii)(A)(3) and rule 22e–4(b)(1)(iv).

[120] We are adopting Form N–PORT today in a companion release. *See* Investment Company Reporting Modernization, Investment Company Act Release No. 32314 (October 13, 2016) (''Investment Company Reporting Modernization Adopting Release'') We discuss the Form N–PORT reporting requirements related to rule 22e–4 in this Release, including the requirements that a fund report: (i) The liquidity classification assigned to each portfolio position (which may be based on asset type to the extent discussed below); (ii) the asset type label that the fund has assigned to each portfolio position, using any asset type labeling scheme the fund employs in its own portfolio management systems; and (iii) the fund's highly liquid investment minimum.

[121] This information will be reported monthly on Form N–PORT, but it will be disclosed to the public only for the third month of each fiscal quarter with a 60-day delay.

[122] *See, e.g.,* Comment Letter of Markit on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''[W]e believe that liquidity and redemption risk contained in asset management products can be mitigated by providing risk managers or investors of pooled investment vehicles better information about the liquidity risk associated with pool investments so that they can price it more accurately. This could be done through, among other things, disclosures of the 'prudent valuation' (accounting for pricing uncertainty) of the fund's investments and the implementation of appropriate liquidity risk management policies and procedures.'').

[123] *See, e.g.,* Comment Letter of Alternative Investment Management Association (Jan. 13, 2016) (''AIMA Comment Letter''); Comment Letter of Capital Research and Management Company (Jan. 13, 2016) (''CRMC Comment Letter''); Comment Letter of Cohen & Steers (Jan. 13, 2016) (''Cohen & Steers Comment Letter''); Comment Letter of Dechert LLP (Jan. 13, 2016) (''Dechert Comment Letter''); Comment Letter of Fidelity Management & Research Company (Jan. 13, 2016) (''Fidelity Comment Letter''); Comment Letter of Association of the Bar of the City of New York (Jan. 13, 2016) (''NYC Bar Comment Letter''); Comment Letter of Securities Industry and Financial Markets Association (Jan. 13, 2016) (Comments on Proposal to Require Liquidity Risk Management Programs and Related Liquidity Disclosures) (''SIFMA Comment Letter I''); Comment Letter of T. Rowe Price (Jan. 13, 2016) (''T. Rowe Comment Letter'').

[124] *See* Comment Letter of Cove Street Capital (Oct. 8, 2015) (''Cove Street Comment Letter''); Comment Letter of Jim H. Francis (Nov. 4, 2015); Comment Letter of Jordana Keefer (Jan. 7, 2016) (''Keefer Comment Letter''); Comment Letter of Don G. Powell (Oct. 5, 2015); Comment Letter of John Wahh (Oct. 1, 2015) (''Wahh Comment Letter'').

the federal securities laws or Commission rules obliging them to manage their liquidity risk. Outreach by Commission staff has identified practices at some funds that raise concerns regarding funds' ability to meet their redemption obligations and lessen the effects of dilution.[125] The Commission is thus adopting, as proposed, a requirement for each fund to adopt and implement a written liquidity risk management program.[126] However, we note that the program requirement we are adopting incorporates modifications to most of the proposed program elements.[127]

A fund may, as it determines appropriate, expand its liquidity risk management procedures and related disclosure concerning liquidity risk beyond the required program elements.[128] While a fund would be required to adhere to certain requirements—such as the requirement to classify the liquidity of a fund's portfolio investments and determine a highly liquid investment minimum[129]—in other respects, the proposed program requirements would permit each fund to tailor its liquidity risk management program to the fund's particular risks and circumstances. Commenters stressed that many funds are currently engaged in operational practices that are designed to support fund liquidity and the redeemability of fund shares.[130] Commenters also noted that funds' approaches to liquidity risk management should, and currently do, differ markedly depending on their individual risks.[131] We believe that the program requirement will permit funds that already have programs that satisfy the rule requirements to continue to engage in the liquidity risk management practices that they have found to be effective. However, the program requirement's common obligations should strengthen liquidity risk management across the fund industry, while also providing important transparency into funds' liquidity profiles and risk management practices.

2. Scope of Rule 22e–4 and Related Disclosure and Reporting Requirements

The liquidity risk management program requirements of rule 22e–4, as well as related disclosure and reporting requirements, will apply to all registered open-end funds, except money market funds.[132] Rule 22e–4 will apply to open-end ETFs, but incorporates tailored program requirements to reflect their particular liquidity-related risks.[133] The final rule also excludes from the highly liquid investment minimum requirement funds whose portfolios consist primarily of highly liquid investments. Closed-end funds are excluded from the scope of rule 22e–4,[134] and UITs are not subject to the rule's general program requirement, although each UIT's principal underwriter or depositor will be required to determine, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[135] We discuss these scope determinations in more detail below.

a. Inclusion of Funds With All Investment Strategies and Inclusion of ETFs Within the Scope of Rule 22e–4

We are not excluding funds with any particular strategies from the scope of rule 22e–4.[136] We proposed to apply rule 22e–4 to all open-end funds (except money market funds) regardless of the fund's investment strategy, stating that even funds with investment strategies that have historically entailed little liquidity risk could experience liquidity stresses in certain environments.[137] We also stated that different types of funds within the same broad investment strategy could demonstrate different levels of liquidity and relatedly, different levels of liquidity risk.

Some commenters expressed concern about the costs of some of the proposed requirements relative to the liquidity risks typically associated with certain investment strategies,[138] as well as concerns about burdensome effects of some particular requirements for certain strategies.[139] Other commenters, however, generally supported a program requirement that applies to all registered open-end funds, regardless of the fund's investment strategy.[140] We believe the modifications to the proposal we are adopting (in particular, changes to the classification requirement and the proposed three-day liquid asset minimum requirement) appropriately address commenters' concerns and reflect support that some commenters provided for a program requirement that applies to all registered open-end funds.

As noted above, rule 22e–4 will apply to open-end ETFs, although we are adopting certain tailored program requirements for ETFs.[141] Some commenters objected to all or certain proposed program requirements applying to ETFs.[142] We respond in detail to these comments in section III.J below. We note, however, that while ETFs' liquidity risks can differ from the liquidity risks faced by other open-end funds, ETFs still have liquidity-related risks that could affect their shareholders, as well as the broader markets in which they operate. The tailored requirements that we are

[125] *See* Proposing Release, *supra* footnote 9, at section IV.C.1.b.

[126] *See* rule 22e–4(b).

[127] As discussed throughout this Release, we believe that these modifications respond appropriately to specific concerns noted by commenters and help to increase the effectiveness of the program requirement in advancing the Commission's goals, while at the same time reducing associated burdens.

[128] *See supra* footnotes 113–115 and accompanying text for a description of the required program elements.

[129] In-Kind ETFs are excepted from the classification and highly liquid investment minimum requirements. *See infra* section III.J. In addition, funds whose portfolios consist primarily of highly liquid investments would not be required to determine a highly liquid investment minimum. *See infra* section III.D.5.

[130] *See, e.g.,* ICI Comment Letter I; BlackRock Comment Letter; Invesco Comment Letter; Vanguard Comment Letter.

[131] *See, e.g.,* ICI Comment Letter I; Dechert Comment Letter; Vanguard Comment Letter.

[132] Although money market funds are excluded from the scope of rule 22e–4, they will be subject to the amendments to Form N–1A and Form N–CEN. *See infra* section III.A.2.a (''Inclusion of Funds with All Investment Strategies and Inclusion of ETFs within the Scope of Rule 22e–4''); section III.A.2.b (''Inclusion of Funds of All Sizes within the Scope of Rule 22e–4''); and section III.A.2.e (''Exclusion of Money Market Funds from the Scope of Rule 22e–4'').

[133] *See infra* section III.J.

[134] *See infra* section III.A.2.c (''Exclusion of Closed-End Funds from the Scope of Rule 22e–4'').

[135] *See infra* section III.K.

[136] *But see infra* section III.D.5 (discussing exclusion of In-Kind ETFs as well as funds that primarily hold highly liquid investments from the highly liquid investment minimum requirement).

[137] *See* Proposing Release, *supra* footnote 9, at nn.123–125 and accompanying text.

[138] *See, e.g., infra* footnote 1107 and accompanying text.

[139] For example, some commenters expressed concerns about the extent to which the proposed liquidity classification factors were applicable to certain investment strategies, particularly funds that invest in fixed income or other OTC assets (*see, e.g.,* Comment Letter of Federated Investors, Inc. (Jan. 13, 2016) (''Federated Comment Letter''); Comment Letter of Government Finance Officers Association (Jan. 13, 2016) (''GFOA Comment Letter''); Comment Letter of Nuveen Fund Advisors, LLC (Jan. 13, 2016) (''Nuveen Comment Letter''); Comment Letter of OppenheimerFunds (Jan. 13, 2016) (''Oppenheimer Comment Letter'')). Commenters also expressed concerns about the extent to which a three-day liquid asset minimum requirement could impede an index fund's ability to track its index (*see, e.g.,* BlackRock Comment Letter; HSBC Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I).

[140] *See, e.g.,* CRMC Comment Letter; Comment Letter of Eaton Vance Investment Managers (Jan. 13, 2016) (''Eaton Vance Comment Letter I'').

[141] We note that rule 22e–4 only applies to ETFs that are structured as open-end funds. For ease of reference, however, unless indicated otherwise, when we refer to ETFs we mean open-end ETFs only.

[142] *See infra* footnotes 839–841 and accompanying text.

adopting for ETFs respond to commenters' suggestions that the Commission tie these funds' liquidity risk management obligations to the particular risks that they face, as well as our assessment of how these funds' risks could most appropriately be addressed.[143]

b. Inclusion of Funds of All Sizes Within the Scope of Rule 22e–4

Also, as proposed, we are not excluding any fund from the scope of rule 22e–4 on the basis of size or adopting different liquidity requirements for relatively small funds. As discussed in the Economic Analysis section below, smaller funds tend to demonstrate relatively high flow volatility, and thus we believe they should be subject to the same liquidity risk management requirements as other funds.[144] Conversely, some commenters argued that the proposed classification requirement could unduly burden larger funds by inappropriately making these funds appear to be less liquid than they actually are, and we have incorporated certain modifications to the proposed classification requirement that we believe respond to these concerns, as discussed below.[145]

c. Exclusion of Closed-End Funds From the Scope of Rule 22e–4

As proposed, rule 22e–4 would have excluded closed-end investment companies from the scope of rule 22e–4. As discussed in detail in the Proposing Release, closed-end funds' liquidity needs are different from those of open-end funds, because closed-end funds generally do not issue redeemable securities and are not subject to sections 22(c) and 22(e) of the Investment Company Act.[146] Although closed-end interval funds do have to comply with certain liquidity standards under rule 23c–3 and therefore must manage their liquidity risk, we are not subjecting them to rule 22e–4 because they are already required to adopt written liquidity procedures under rule 23c–3(b)(10)(iii).[147] Closed-end interval funds may be better able to anticipate their liquidity needs than open-end funds because closed-end interval funds do not permit daily redeemability, closed-end interval funds must limit the size and timing of repurchase offers, and rule 23c–3 requires shareholders who wish to tender their shares pursuant to a repurchase offer to provide advance notice thereof to such funds.[148] Commenters uniformly agreed that closed-end funds should be excluded from the scope of rule 22e–4 and we continue to believe that closed-end funds (including closed-end interval funds) should be excluded from the rule's scope.

d. Separate Requirements for UITs Under Rule 22e–4

As proposed, the scope of rule 22e–4 did not include UITs.[149] As adopted today, the rule will require a limited liquidity review under which the UIT's principal underwriter or depositor determines, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[150] UITs and their principal underwriters and depositors will not, however, be subject to any of the rule's other liquidity risk management program requirements.

While one commenter supported excluding UITs from the scope of rule 22e–4,[151] several other commenters argued that ETFs structured as UITs should be subject to the same rule requirements as ETFs structured as open-end funds.[152] We respond in detail to these comments in section III.K below, including discussing how we believe the requirement to determine that a UIT's illiquid investment holdings are consistent with the redeemable nature of the UIT's securities responds to commenters' concerns.

e. Exclusion of Money Market Funds From the Scope of Rule 22e–4

Finally, as proposed, money market funds are excluded from the scope of rule 22e–4. Money market funds are currently subject to extensive requirements concerning the liquidity of their portfolio assets that are more stringent in many respects than the requirements of rule 22e–4, due to the historical redemption patterns of money market fund investors and the characteristics of the assets held by money market funds.[153] Money market funds also are already subject to broad liquidity-related disclosure and reporting requirements,[154] and they have certain tools at their disposal to manage heavy redemptions that are not available to other open-end funds.[155] For these reasons, we did not include money market funds within the scope of the proposed rule, and commenters uniformly agreed that money market funds should be excluded from the rule's scope.[156] We continue to believe that money market funds should be excluded from the scope of rule 22e–4.

B. Assessment, Management, and Review of Liquidity Risk

Section 22(e) of the Investment Company Act requires a registered investment company[157] to make payment to shareholders for securities tendered for redemption within seven days of their tender.[158] The legislative history of the Act indicates that shareholder dilution was a significant concern of the Act's framers.[159] An open-end fund's ability to pay redeeming shareholders within this seven-day period without significant dilution is directly related to its liquidity. Thus, assessing and managing liquidity risk in a comprehensive manner is critical to an open-end fund's capacity to honor redemption requests within this seven-day period, as well as within any shorter time period disclosed in the fund's prospectus or advertising materials, while mitigating dilution.

Today we are adopting a new liquidity risk assessment and management framework for funds. Specifically, rule 22e–4 requires a fund to assess, manage, and periodically review its liquidity risk, considering certain factors as applicable. As discussed in more detail below, the requirements we are adopting incorporate a definition of ''liquidity risk'' that focuses on whether a fund can meet redemption requests without significant dilution of remaining investors' interests rather than, as proposed, whether the fund can meet redemption requests without materially

[143] *See infra* section III.J.

[144] *See infra* footnote 1160 and accompanying text.

[145] *See infra* section III.C.3.b.

[146] *See* Proposing Release, *supra* footnote 9, at nn.132–135 and accompanying text. Certain closed-end funds (''closed-end interval funds'') do elect to repurchase their shares at periodic intervals pursuant to rule 23c–3 under the Investment Company Act.

[147] *See* Proposing Release, *supra* footnote 9, at n.134.

[148] *See id.,* at text following n.135.

[149] *See* Proposing Release, *supra* footnote 9, at section III.A.2.

[150] *See* rule 22e–4(c). The rule also requires UITs to maintain a record of that determination for the life of the UIT and for five years thereafter.

[151] *See* ICI Comment Letter I.

[152] *See, e.g.,* Comment Letter of Anonymous (Jan. 13, 2016) (''Anonymous Comment Letter I''); BlackRock Comment Letter.

[153] *See* Proposing Release, *supra* footnote 9, at nn.145–150 and accompanying text.

[154] *See id.,* at nn.151–152 and accompanying text.

[155] *See id.,* at nn.153–155 and accompanying text.

[156] *See, e.g.,* CRMC Comment Letter; Eaton Vance Comment Letter I; ICI Comment Letter I; Comment Letter of Voya Investment Management (Jan. 12, 2016) (''Voya Comment Letter'').

[157] *See supra* footnote 4 and accompanying text.

[158] *See supra* footnote 36.

[159] *See supra* footnote 7 and accompanying text.

affecting the fund's NAV.[160] We are also adopting certain changes to the proposed factors that a fund would consider in assessing and managing its liquidity risk. These changes aim to simplify and streamline the proposed liquidity risk assessment and management factors, and reflect additional considerations that the Commission, along with certain commenters, believes could entail heightened liquidity risk. Notably, the proposed requirement to consider a fund's investment strategy and portfolio liquidity in assessing and managing liquidity risk now incorporates the instruction that this consideration includes whether the investment strategy is appropriate for an open-end fund, as well as whether the strategy involves a relatively concentrated portfolio or large positions in particular issuers.[161] Additionally, the proposed requirement to consider a fund's short-term and long-term cash flow projections has been simplified to eliminate the five separate sub-considerations relevant to this factor that were incorporated in the proposed rule, but which now are discussed as guidance in this Release.[162]

We proposed liquidity risk assessment and management program requirements with the primary goals of reducing the risk that funds would be unable to meet redemption and other legal obligations, minimizing dilution, and elevating the overall quality of liquidity risk management across the fund industry while at the same time providing funds with reasonable flexibility to adopt policies and procedures that would be most appropriate to assess and manage their liquidity risk.[163] As we discuss throughout this section, we believe that the modified requirements we are adopting today continue to reflect these goals, while promoting a more efficient and workable framework.

1. Definition of ''Liquidity Risk''

Rule 22e–4, as adopted today, defines ''liquidity risk'' as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.[164] This definition is largely similar to the proposed definition of ''liquidity risk,'' that is, the risk that a fund could not meet requests to redeem shares issued by the fund that are expected under normal conditions, or are reasonably foreseeable under stressed conditions, without materially affecting the fund's NAV.[165] However, in response to comments, the revised definition substitutes the phrase ''without significant dilution of remaining investors' interests in the fund'' for the phrase ''without materially affecting the fund's net asset value.'' The definition also does not include references to redemption requests that are expected under normal conditions or reasonably foreseeable under stressed conditions. Instead, the final definition simply refers to ''requests to redeem.'' We believe our modifications to the liquidity risk factors used to assess a fund's liquidity risk, as discussed below, make any reference to market conditions within the definition of liquidity risk unnecessary, confusing, and duplicative.[166]

a. Evaluating Risk of Significant Dilution of Remaining Investors' Interests

Multiple commenters objected to the proposed inclusion of any NAV-impact standard in the definition of ''liquidity risk.'' One commenter argued that including the concept of ''without materially affecting the fund's net asset value'' in the definition of liquidity risk would inappropriately merge liquidity and valuation, which are subject to different regulatory and compliance controls.[167] Many commenters also objected that including such a price concept in the definition of ''liquidity risk'' would incorrectly indicate that market impact can be accurately identified and measured separate from market price movements generally.[168] These commenters argued that many factors (including market volatility, portfolio composition, and trade execution and activity) influence the price at which a fund transacts in a security as well as the levels of cash the fund holds, and thus it is difficult to identify the effects of the fund's transaction activity on the fund's NAV. Finally, some commenters argued that the inclusion of a NAV-impact standard in the definition of ''liquidity risk'' could lead investors to believe that appropriate liquidity risk management will protect their investments from declining in value.[169]

While we agree that liquidity and valuation are distinct concepts, we consider these concepts as having certain inter-relationships. First, liquidity risk in an open-end fund inherently involves an assessment of the liquidity of the fund's investments. Common definitions of investment liquidity include consideration of the value impact or costs from trading that investment.[170] Second, our staff has observed in its outreach many occasions when a fund was unwilling to transact

[160] *See infra* section III.B.1.a.

[161] *See infra* section III.B.2.a.

[162] *See infra* section III.B.2.b.

[163] *See* Proposing Release, *supra* footnote 9, at paragraph following n.261.

[164] When determining whether a fund's liquidity risk will cause significant dilution for purposes of this definition, a fund should consider the impact of liquidity risk on the total net assets of the fund and the adverse consequences such dilution will have on all the fund's remaining shareholders.

Furthermore, as discussed above, a fund's inability to meet redemption requests may cause harm to shareholders. *See, e.g., supra* footnotes 81–84 and accompanying text for a discussion of the suspension of shareholder redemptions in the Third Avenue Focused Credit Fund following a period of heavy redemptions that the fund stated reduced the fund's portfolio liquidity.

[165] *See* proposed rule 22e–4(a)(7); *see also* Proposing Release, *supra* footnote 9, at text accompanying n.255.

[166] *See* rule 22e–4(b)(1)(i).

[167] *See* SIFMA Comment Letter I.

[168] *See, e.g.,* Comment Letter of Credit Suisse (Jan. 13, 2016) (''Credit Suisse Comment Letter''); Comment Letter of Dodge & Cox (Jan. 21, 2016) (''Dodge & Cox Comment Letter''); Comment Letter of MFS Investment Management (Jan. 13, 2016) (''MFS Comment Letter''); SIFMA Comment Letter I; Comment Letter of Investment Company Institute (May 17, 2016) (''ICI Comment Letter III'') (encouraging the Commission to adopt a definition of liquidity risk that incorporates language related directly to dilution rather than value impact on the NAV).

[169] *See, e.g.,* ICI Comment Letter I; MFS Comment Letter; SIFMA Comment Letter I.

[170] *See, e.g.,* Radhakrishnan Gopalan, *et al., Asset Liquidity and Stock Liquidity,* 47 J. Fin & Quant. Anal. 333 (2012), *available at http://apps.olin.wustl.edu/faculty/gopalan/asset_stock_liquidity.pdf* (''An asset is liquid if it can be converted into cash quickly and at a low cost.''); Yakov Amihud & Haim Mendelson, *Liquidity, Asset Prices, and Financial Policy, 47 Fin. Anal. J.* 56 (1991), *available at http://www.jstor.org/stable/4479488?seq=1#page_scan_tab_contents* (''An asset is liquid if it can be bought or sold at the current market price quickly and at low cost.'').

In addition, we note that many funds disclose liquidity risk as a principal investment risk in their prospectuses, and these disclosures often reference possible adverse value impacts from selling fund investments under certain conditions. *See, e.g.,* Schwab Strategic Trust rule 485(b) Registration Statement (June 30, 2016), *available at https://www.sec.gov/Archives/edgar/data/1454889/000119312516632635/d203200d485bpos.htm* (''Liquidity Risk. The fund may be unable to sell certain securities, such as illiquid securities, readily at a favorable time or price, or the fund may have to sell them at a loss.''); Voya Variable Funds rule 485(b) Registration Statement (May 1, 2016), *available at https://www.sec.gov/Archives/edgar/data/2664/000119312516562669/d124096d485bpos.htm* (''Liquidity: If a security is illiquid, the [fund] might be unable to sell the security at a time when the [fund's] manager might wish to sell, or at all. Further, the lack of an established secondary market may make it more difficult to value illiquid securities, exposing the [fund] to the risk that the price at which it sells illiquid securities will be less than the price at which they were valued when held by the [fund]. The prices of illiquid securities may be more volatile than more liquid investments. The risks associated with illiquid securities may be greater in times of financial stress. The [fund] could lose money if it cannot sell a security at the time and price that would be most beneficial to the Portfolio.'').

in certain portfolio investments when such sales would yield a price that the fund considered unacceptable.[171] This relationship is clear in the Commission guidelines limiting a fund's investment in illiquid investments. These guidelines specify that an illiquid investment is one that cannot be sold or disposed of within seven days *at approximately the value at which the fund has valued the investment*'' (emphasis added).[172] We continue to believe that the inclusion of a conceptual relationship between liquidity and sale price in the definition of ''liquidity risk'' is appropriate.[173] Such a relationship indicates that liquidity risk involves the risk that a fund will not be able to meet redemption requests under any circumstances, as well as the risk that a fund could meet redemption requests, but only in a manner that adversely affects the fund's non-redeeming shareholders through significant dilution.[174]

We believe a definition of ''liquidity risk'' that includes a reference to the value impact from trading portfolio investments should not imply that mutual fund shareholders are guaranteed a protected NAV or that the fund cannot sell investments at a loss due to market risk, credit deterioration, or liquidity risk. Indeed, funds' narrative risk disclosure in their registration statements and other shareholder communications generally should make clear those risks that could adversely affect the fund's NAV, yield, and total return, including liquidity-related risks.[175] However, we believe defining liquidity risk clarifies what funds must manage under rule 22e–4, and, for the reasons discussed above, we believe impacts on valuation may play a significant role in evaluating the ability to effectively meet shareholder redemptions while lessening the effects of dilution.

Nonetheless, we agree with commenters that using the proposed specific standard of ''materially affecting the fund's NAV'' may pose certain challenges. We recognize that it may be difficult to calculate the particular market impact that a fund's transactions in an investment will have on that investment's price, which some commenters suggested was inherent to the proposed standard. There could be other reasons for a fund's NAV fluctuating, separate from the fund's sales of portfolio investments to meet redemption requests as well.

Accordingly, in the final rule we have modified the NAV-impact standard in the definition of ''liquidity risk'' to substitute the phrase ''without significant dilution of remaining investors' interests in the fund'' for the phrase ''without materially affecting the fund's net asset value.'' This revised standard more directly corresponds to the concerns of the Act[176] and rule 22e–4 by focusing on meeting investor redemptions without dilution.

We also note that commenter interpretations of the term ''materially'' varied, with some commenters adopting very narrow interpretations[177] of the term and others taking a more broad view.[178] We note that, for purposes of this definition, the term ''significant'' is not meant to reference slight NAV movements, the causes of which may not be easily distinguishable, nor is it limited only to fire-sale situations. Instead, a fund's liquidity risk management program should focus on the fund's ability to meet redemptions in a manner that does not harm shareholders.[179] In particular, ''significant'' dilution of remaining investors' interests in the fund can occur at much lower levels of dilution than what would occur in a fire sale situation. We believe ''significant'' conveys more effectively than ''materially'' that the definition is not meant to reference slight NAV movements, while avoiding the confusion around the term ''materially'' evident in the comment letters and better focusing the rule on the level of dilution that would harm remaining investors' interests even in the absence of a fire sale.

Under rule 22e–4, a fund would be required to adopt a liquidity risk management program that is ''reasonably designed to assess and manage the fund's liquidity risk.'' A fund's liquidity risk management program should be appropriately tailored to reflect that fund's particular liquidity risks. Therefore, while a fund is required to consider certain liquidity risk factors specified in rule 22e–4 as applicable, a fund may also, as it determines appropriate, expand its liquidity risk management program beyond the required program elements, and must do so to the extent it would be necessary to effectively assess and manage its liquidity risk.[180] This

[171] That is, the price that a portfolio manager could realistically receive for certain portfolio investments could, in effect, render such investments de facto illiquid if these pricing considerations cause the portfolio manager to refrain from selling them. *See, e.g.,* Third Avenue Temporary Order, *supra* footnote 12 (''On December 9, 2015, after considering the environment the Fund was in and the likelihood that incremental sales of portfolio securities to satisfy additional redemptions would have to be made at prices that would unfairly disadvantage all remaining shareholders, the Board determined that the fairest action on behalf of all shareholders would be to adopt a plan of liquidation.'').

[172] *See supra* footnote 39 and accompanying text.

[173] We also note that several commenters favorably discussed foreign and international regulators' liquidity risk management regimes, including ones that define the concepts of liquid (or illiquid) portfolio assets, as well as funds' liquidity risk, with reference to value impact or a discount that the fund may incur upon sale. *See, e.g.,* Dechert Comment Letter (favorably discussing certain liquidity risk management requirements, including the definition of ''liquidity risk,'' under the UCITS Directive); ICI Comment Letter I (noting that the Commission could look to other jurisdictions, including the European Union, for support for a principles-based program rule); Invesco Comment Letter (also noting that the UCITS Directive provides a framework for a principles-based liquidity risk management program requirement); *see also* Commission Directive 2010/43/EU, OJ L 176 (2010), at Ch. 1, Art. 3(8) (defining ''liquidity risk'' as ''the risk that a position in the UCITS portfolio cannot be sold, liquidated or closed at limited cost in an adequately short time frame and that the ability of the UCITS to comply at any time with its redemption obligation is thereby compromised''); Ontario Securities Commission, Report on Staff's Continuous Disclosure Review of Mutual Fund Practices Relating to Portfolio Liquidity, OSC Staff Notice 81–727 (June 25, 2015) (definition of ''illiquid asset'' refers to the ''ability to readily dispose of a portfolio asset through a market facility on which public quotations are available at a price that approximates the amount at which the portfolio asset is valued'').

We note as well that U.S. banking regulators have defined ''liquidity'' as ''a financial institution's capacity to meet its cash and collateral obligations at a reasonable cost.'' Interagency Policy Statement on Funding and Liquidity Risk Management, 75 FR 13656 (Mar. 22, 2010), *available at http://www.occ.gov/news-issuances/federal-register/75fr13656.pdf.*

[174] *See supra* footnote 79 and accompanying text.

[175] *See, e.g.,* Item 4(b) of Form N–1A.

[176] *See supra* footnote 32and accompanying text for a discussion of the liquidity concerns of the Act.

[177] *See* Comment Letter of Interactive Data Pricing and Reference Data (Dec. 18, 2015) (''Interactive Data Comment Letter'') (noting that there are several possible interpretations of the term, including an NAV price impact based on a one penny movement, among others.).

[178] *See* SIFMA Comment Letter I (proposing the Commission substitute the phrase ''assuming no fire-sale discounting'' for the phrase ''without materially affecting the fund's net assets'' and arguing that a fire-sale standard is a more appropriate outer boundary for price movements.). We believe that adopting a fire-sale standard as the outer boundary for price movements would be inappropriate because such an extreme outer boundary would fail to capture a fund's liquidity risk exposure during normal and stressed conditions and would, thus, inadequately address the liquidity risk management concerns of rule 22e–4.

[179] The classification requirements under rule 22e–4 include a value impact standard as well, which is based on the number of days within which it is determined that an investment would be convertible to cash (or, in the case of the less-liquid and illiquid categories, sold or disposed of) without the conversion (or, in the case of the less-liquid and illiquid categories, sale or disposition) significantly changing the market value of the investment. *See infra* section III.C and accompanying text.

[180] Rule 22e–4(b) requires that a fund ''adopt and implement a written liquidity risk management program that is reasonably designed to assess and

Continued

requirement, however, requires a fund to assess and *manage* liquidity risk and does not require a fund to eliminate all adverse impacts of liquidity risk, which would be incompatible with an investment product such as a mutual fund or ETF, whose NAV may fluctuate for a variety of reasons, including changing liquidity conditions.

b. Expected and Reasonably Foreseeable Redemption Requests

As proposed, the definition of ''liquidity risk'' would have required funds to consider redemption requests that are expected under normal conditions, as well as those that are reasonably foreseeable under stressed conditions. Some commenters stated that the concept of redemption requests that are reasonably foreseeable under stressed conditions was vague and could subject funds to ex-post second guessing.[181] One commenter suggested that the Commission clarify: (i) Whether funds should address both normal and reasonably foreseeable stressed conditions (or select one set of conditions) in assessing liquidity risk; and (ii) the level of market stress that funds should assume in conducting a liquidity risk assessment.[182]

The final definition of liquidity risk eliminates references to redemption requests that are expected under normal conditions or reasonably foreseeable under stressed conditions. The final definition simply refers to ''requests to redeem.'' We believe our modifications to the liquidity risk factors used to assess a fund's liquidity risk, including the clarification that a fund must consider certain liquidity risk factors both during normal and reasonably foreseeable stressed conditions, makes any reference to market conditions within the definition of liquidity risk unnecessary, confusing and duplicative. We believe the revised definition also addresses commenters' concerns that the proposed definition was unclear. We have provided guidance below regarding each liquidity risk factor and the need to consider normal and reasonably foreseeable stressed market conditions.

2. Liquidity Risk Factors

Rule 22e–4 will require each fund to assess, manage, and periodically review (with such review occurring no less frequently than annually) its liquidity risk, considering the following factors as applicable:

- Investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions (including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives);
- Short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions; and
- Holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[183]

A fund may incorporate other considerations, in addition to these factors, in evaluating its liquidity risk.

Like the rule we are adopting today, rule 22e–4 as proposed would have required each fund to assess its liquidity risk, taking certain specified factors into account.[184] Specifically, the proposed rule would have required each fund to take the following factors into account in assessing the fund's liquidity risk: (i) Short-term and long-term cash flow projections, considering size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and stressed periods; the fund's redemption policies; the fund's shareholder ownership concentration; the fund's distribution channels; and the degree of certainty associated with the fund's short-term and long-term cash flow projections; (ii) the fund's investment strategy and liquidity of portfolio investments; (iii) use of borrowings and derivatives for investment purposes; and (iv) holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[185] The person(s) designated to administer the liquidity risk management program must also conduct reviews of the adequacy and effectiveness of the implementation of the liquidity risk management program, and such reviews must occur no less frequently than annually.[186] Commenters generally supported the requirement for a fund to assess its liquidity risk.[187] Additionally, some commenters expressed support for the proposed liquidity risk factors, as well as the proposed requirement to consider these factors in assessing liquidity risk.[188] However, several commenters objected to the proposed requirement for a fund to consider certain specified factors and suggested instead that consideration of the factors be permissive instead of mandatory.[189]

We continue to believe that the factors are central to evaluating and managing a fund's liquidity risk and that requiring each fund to consider, as a baseline, a standard set of factors for assessing and managing liquidity risk would promote effective and thorough liquidity risk management across the fund industry. However, we recognize that some of the proposed factors may not be applicable in assessing and managing the liquidity risk of certain funds or types of funds.[190] One commenter requested that we clarify that a fund only needs to consider factors relevant to its operations, which may include some or all of the factors outlined in rule 22e–4, and others not enumerated.[191] We agree, and to the extent any liquidity risk factor specified in rule 22e–4 is not applicable to a particular fund, the fund will not be required to consider it in assessing and managing its liquidity risk. We have therefore added the words ''as applicable'' in the rule's instruction to consider the specified factors.[192] For example, a fund will not be required to consider the use of borrowings for investment purposes and derivatives, as specified under rule 22e–4(b)(1)(i)(A), if that fund does not engage in borrowing

manage its liquidity risk,'' and identifies certain specific elements that a fund must consider in doing so.

[181] *See* Federated Comment Letter; NYC Bar Comment Letter.

[182] *See* AFR Comment Letter.

[183] *See* rule 22e–4(b)(1)(i). We note that rule 22e–4 as adopted also includes two additional factors that an ETF will have to consider as applicable in assessing, managing, and periodically reviewing its liquidity risk, which reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs (including In-Kind ETFs). These are: (i) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including, the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and (ii) the effect of the composition of baskets on the overall liquidity of the ETF's portfolio. These factors are discussed in more detail below. *See infra* section III.J.

[184] *See* Proposing Release, *supra* footnote 9, at section III.C.1.

[185] *See* proposed rule 22e–4(b)(2)(iii).

[186] *See id.*

[187] *See, e.g.,* AFR Comment Letter; Comment Letter of CFA Institute (Jan. 12, 2016) (''CFA Comment Letter''); FSR Comment Letter; ICI Comment Letter I.

[188] *See, e.g.,* AFR Comment Letter; CRMC Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[189] *See, e.g.,* CFA Comment Letter; MFS Comment Letter; Voya Comment Letter.

[190] *See* Proposing Release, *supra* footnote 9, at section III.C.1.

[191] *See* ICI Comment Letter I.

[192] *See* rule 22e–4(b)(1)(i) (requiring a fund to consider, ''as applicable,'' certain factors); *see also* FSR Comment Letter (supporting the proposed liquidity risk assessment requirement and agreeing with the Commission's position in the proposal that a fund would not be required to consider those factors that are not applicable to that particular fund).

or use derivatives. Similarly, a fund that maintains borrowing sources for investment purposes will be required to consider the use of borrowings for investment purposes as specified under the rule. We also believe that condensing and simplifying the proposed factors helps respond to commenters' concerns that the proposed factors were overly complex [193] and potentially inapplicable to certain funds.[194]

As noted above, this list of liquidity risk factors is not meant to be exhaustive. In assessing, managing, and periodically reviewing its liquidity risk, a fund may take into account considerations in addition to the factors set forth in rule 22e–4 and must do so to the extent necessary to adequately assess and manage the fund's liquidity risk.[195] For example, as discussed in the Proposing Release, if a fund elects to conduct stress testing to determine whether it has sufficient liquid investments to cover different levels of redemptions, a fund may wish to incorporate the results of this stress testing into its liquidity risk assessment and management.[196] We continue to believe that stress tests that analyze the proposed factors could be particularly useful to a fund in evaluating its liquidity risk.

Below we provide guidance on specific issues associated with each of the liquidity risk factors and also discuss the Commission's decision to adopt each of these factors (some with modifications).

a. Investment Strategy and Portfolio Liquidity

We are adopting the proposed requirement for a fund to consider its investment strategy and portfolio liquidity in assessing, managing, and periodically reviewing its liquidity risk, but with certain modifications in response to commenters.[197] The principal changes include a requirement to consider whether the investment strategy is appropriate for an open-end fund, as well as the extent the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and a clarification that this factor should be assessed both during normal and reasonably foreseeable stressed conditions.

We continue to believe that various aspects of a fund's investment strategy—including whether the fund is actively or passively managed [198] and a fund's portfolio management decisions that are meant in part to decrease an undesirable tax impact on the fund [199]— could significantly affect the fund's liquidity risk. Also the extent to which the fund is diversified, including a fund's status as a regulated investment company under Subchapter M of the Internal Revenue Code, as well as its principal investment strategies as disclosed in its prospectus, could affect its liquidity risk in that the fund could be limited by its diversification obligations in its ability to sell certain portfolio securities.[200] We note, for example, that the Third Avenue Focused Credit Fund stated that its status as a regulated investment company under Subchapter M limited the fund's ability to return cash to its shareholders after it suspended redemptions because of its need to comply with certain asset diversification tests to maintain its regulated investment company status.[201] As discussed in the Proposing Release, we also continue to caution that while a fund's investment strategy is an important factor in evaluating a fund's liquidity risk, different types of funds within the same broad investment strategy may demonstrate different levels of liquidity, (and thus, presumably, different levels of liquidity risk).[202]

Consideration of Strategy Appropriateness for Open-End Fund Structure

We are adopting several modifications to the proposed requirement to consider a fund's investment strategy and portfolio liquidity in assessing, managing, and periodically reviewing its liquidity risk. First, we clarify in final rule 22e–4 that consideration of investment strategy must take into account whether the fund's strategy is appropriate for an open-end fund. This clarification reflects several commenters' suggestions that a fund's liquidity risk management program could (or should) involve a consideration of whether the fund's investment strategy and permissible holdings are suitable for the open-end structure.[203]

We agree with this suggestion raised by commenters. As discussed above, all open-end funds are subject to section 22(e) of the Investment Company Act, which requires a fund to pay redemption proceeds within seven days after receipt of a redemption request, and hold themselves out at all times as being able to meet redemptions (in many cases within an even shorter period of time).[204] To the extent that a fund's investment strategy involves investing in securities whose liquidity is limited, or otherwise entails a significant degree of liquidity risk, the fund may not be able to meet its redemption and other legal obligations, or may not meet redemptions without diluting its shareholders' interests in the fund. We understand that it is a common best practice for a fund and its management to consider the appropriateness of a fund's investment strategy in the context of launching an open-end fund, and then for an open-end fund to continue to manage its liquidity risk such that its strategy and holdings remain appropriate for the open-end structure. However, not all funds appear to consider this. Also, as we have observed funds beginning to pursue more complex investment

[193] *See, e.g.,* Comment Letter of Better Markets, Inc. (Jan. 13, 2016) (''Better Markets Comment Letter'').

[194] *See, e.g.,* ICI Comment Letter I; MFS Comment Letter.

[195] *See* note 180 and accompanying text.

[196] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.266.

[197] *See* rule 22e–4(b)(1)(i)(A).

[198] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.292–295 (discussing factors that could increase or decrease the liquidity risk associated with index-based strategies versus actively-managed strategies).

[199] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.299 (detailing the ways in which a fund's tax management strategy could make its portfolio managers unwilling to sell certain portfolio assets in order to meet redemptions, which could in turn increase the fund's liquidity risk compared to a similarly situated fund).

[200] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.296–298 (discussing the extent to which a fund's portfolio is diversified (or, relatedly, a fund's concentration in certain types of portfolio assets) could have ramifications on the fund's potential liquidity risk, including the ways that various diversification requirements could constrain its ability to sell certain portfolio securities in order to meet redemptions).

[201] *See* Third Avenue Focused Credit Fund Update (Mar. 8, 2016), *available at http://thirdave.com/wp-content/uploads/2016/04/03-09-16-FCF-Call-Transcript-1.pdf* (noting that, because one of the diversification tests under Subchapter M would require the fund to have less than 50% of its assets in concentrated positions, the fund needed to retain cash in order not to violate this test, in light of the manner in which it chose to manage the fund's liquidation of its other assets).

[202] *See* Proposing Release, *supra* footnote 9, at n.301 and accompanying text.

[203] *See* BlackRock Comment Letter (''[W]e recommend that the Commission consider whether funds should be required to explicitly address the level of position concentration that is appropriate for the fund's investment strategy and investor profile in [liquidity risk management] policies and procedures''); ICI Comment Letter I (''A risk-based liquidity management program could require a fund manager, when launching a new mutual fund, to assess whether the fund's investment strategy and permissible holdings are suitable for the open-end structure in light of [its] liquidity characteristics.''); *see also* CRMC Comment Letter (encouraging the Commission to consider whether certain funds may be inappropriate for the open-end fund structure).

[204] *See supra* footnotes 34–36, 42–47 and accompanying text.

strategies,[205] we believe it is appropriate to require that each open-end fund consider whether it has a liquidity risk management framework in place that corresponds with the liquidity risks inherent in its strategy and its structure as a fund that offers redeemable securities.

We believe that specifically requiring an open-end fund to consider whether its investment strategy is appropriate for the open-end structure would supplement existing practices and provide an important additional layer of shareholder protection. For example, this requirement will likely cause funds to evaluate the suitability of investment strategies that will be permitted under the 15% illiquid investment requirement, but still could entail significant liquidity risk—such as strategies involving highly concentrated portfolios, or strategies involving investment in portfolio investments that are so sensitive to stressed conditions that funds may not be able to find purchasers for those investments during stressed periods.[206] Furthermore, funds that have significant holdings of securities with extended settlement periods may face challenges operating as open-end funds and should take these holdings into account when determining whether the fund's portfolio is appropriate for an open-end fund.[207] For example, primarily holding securities with extended settlement periods beyond seven days may not be appropriate for an open-end fund, as primarily having such extended settlement holdings may raise concerns with the fund's ability to meet redemptions within seven days, particularly if the fund has not established adequate other sources of liquidity.

Because a fund will be required to consider the liquidity risk factors (as applicable) in periodically reviewing its liquidity risk, the final rule requires a fund's periodic liquidity risk review to include a consideration of whether the fund's investment strategy is appropriate for an open-end fund.[208] For example, if a fund's illiquid investments exceed 15% of net assets, this could indicate that the fund is encountering liquidity pressures that could significantly impair the fund's ability to meet its redemption and other legal obligations. In this case, we believe it would be appropriate for a fund to review and potentially update its liquidity risk management procedures for handling the fund's high levels of illiquid investment holdings. In circumstances in which it appears unlikely that the fund will be able to reduce its illiquid investment holdings to or below 15% within a period of time commensurate with its redemption obligations, a fund's periodic liquidity risk review could lead the fund to reconsider its continued operation as an open-end fund.[209]

Consideration of Portfolio Concentration, and Holdings of Large Portfolio Positions

We also are adopting a modification to the proposed liquidity risk factors to clarify that consideration of a fund's investment strategy must include an evaluation of whether the strategy involves a relatively concentrated portfolio or large positions in particular issuers. Some commenters suggested that funds with extraordinarily concentrated portfolios may have particular liquidity risks that could make redeemability from these funds especially challenging.[210] Our evaluation of these comments, together with recent events discussed below, have led us to revise the proposed ''investment strategy'' liquidity risk factor to focus on fund concentration issues.

We believe that this component of a fund's investment strategy is a particularly significant factor in evaluating the extent to which investment strategy contributes to liquidity risk. As we noted in the Proposing Release, while a fund with a relatively more diversified portfolio that needs to sell portfolio investments to build liquidity may be able to select investments for sale based on whether the markets for those investments are favorable, a relatively less diversified fund may have fewer options (*i.e.,* because it has less choice of investments to sell or because the markets for its portfolio investments are uniform or correlated) and could thus be compelled to transact in unfavorable markets.[211] In addition, as discussed below, holding a large portion of a particular issue could adversely affect a fund's ability to convert the position to cash without a value impact, and this can hamper a fund's portfolio management flexibility due to the higher liquidity risk in its positions.[212] Thus, we believe that investment strategies that involve holding large portions of a particular issue—particularly if the market for these securities is thinly traded[213] or if the fund's strategy involves investment in a relatively small number of holdings—could notably increase a fund's liquidity risk. As discussed above, the recent suspension of redemptions by Third Avenue Focused Credit Fund, which had a concentrated portfolio and large holdings of particular issues, illustrates how these methods of concentration directly affect liquidity risk, which in turn could adversely affect shareholders to the extent that they are not able to redeem their shares, or redeem their shares only at a significant discount.[214]

Use of Borrowings for Investment Purposes and Derivatives

We have incorporated the proposed requirement to consider a fund's use of borrowings for investment purposes and derivatives within the requirement to consider investment strategy in assessing, managing, and periodically reviewing a fund's liquidity risk.[215] As

[205] *See supra* footnote 11 and accompanying text.

[206] We note that, when a fund files its initial registration statement and post-effective amendments thereto with the Commission's Division of Investment Management for review, Commission staff could request information from the fund regarding the fund's basis for determining that its investment strategy is appropriate for the open-end structure, just as staff currently may request information from a fund to support its disclosure reflecting the fund's compliance with various provisions of the Investment Company Act and rules thereunder.

[207] *See infra* footnote 378 and accompanying text.

[208] *See infra* section III.B.3.

[209] Moreover, we note that actions that either directly or indirectly extinguish the rights of shareholders to redeem their shares could, depending on the facts and circumstances, involve violations of section 22(e) and other provisions of the Act, such as section 48(a) (prohibiting a person from doing indirectly, through another person, what that person is prohibited by the Act from doing directly).

[210] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[211] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.296–298.

However, as also discussed above, the extent to which a fund is required to be diversified, including a fund's status as a regulated investment company under Subchapter M of the Internal Revenue Code, could affect its liquidity risk in that the fund could be limited by its diversification obligations in its ability to sell certain portfolio securities. *See supra* footnotes 200–201 and accompanying text.

[212] *See infra* footnote 440 and accompanying text; *infra* paragraph accompanying footnote 450.

[213] *See infra* footnote 544 and accompanying text.

[214] *See, e.g.,* Jeffrey Ptak & Sarah Bush, *Third Avenue Focused Credit Abruptly Shuttered,* Morningstar (Dec. 11, 2015), *available at http://ibd.morningstar.com/article/article.asp?id=733021&CN=brf295,http://ibd.morningstar.com/archive/archive.asp?inputs=days=14;frmtId=12,%20brf295* (noting that ''Third Avenue Focused Credit stood out for its large, concentrated allocation to distressed and other low-quality fare''); *see also* Third Avenue Temporary Order, *supra* footnote 12 (noting that ''Applicants further state that relief permitting the Fund to suspend redemptions in connection with its liquidation would permit the Fund to liquidate its assets in an orderly manner and prevent the Fund from being forced to sell assets at unreasonably low prices to meet redemptions.'').

[215] *See* proposed rule 22e–4(b)(2)(iii)(C); rule 22e–4(b)(1)(i)(A).

proposed, this consideration was not included within the investment strategy factor, but instead was a stand-alone liquidity risk factor. However, we believe that including this consideration within the general investment strategy factor is clearer, because a fund's use of borrowings for investment purposes and derivatives may be viewed as a component of its investment strategy. We note that we have also revised the phrase ''use of borrowings and derivatives for investment purposes'' that was used in the Proposing Release, and instead are using the term, ''use of borrowings for investment purposes and derivatives'' in the final rule. We have made this revision in order to clarify that funds should consider all derivatives, including those used for hedging purposes. As proposed, this provision could potentially have been read to exclude the consideration of derivatives used for hedging, which was not the intent of the proposed requirement. We believe this clarification will make clear that the requirement is for a fund to consider both use of borrowings for investment purposes and use of derivatives in general. One commenter stated that it agreed that funds should consider the use of derivatives when assessing liquidity risk, including the extent and types of derivatives used, as well as the structure and terms of a fund's derivatives transactions.[216] No commenters suggested that a fund's use of borrowings for investment purposes and derivatives is inapplicable to a fund's liquidity risk (provided that the fund engages in borrowing or uses derivatives [217]).

We continue to believe that the potential effects of the use of borrowings for investment purposes and derivatives are relevant to assessing, managing, and periodically reviewing a fund's liquidity risk.[218] As we noted in the Proposing Release, borrowing for investment purposes, whether from a bank [219] or through financing transactions such as reverse repurchase agreements and short sales,[220] may affect a fund's liquidity risk.[221] Similarly, a fund's use of derivatives such as futures, forwards, swaps and written options may affect a fund's liquidity risk as well.[222] We note that in addition to the liquidity of the derivatives positions themselves, assessing, managing, and periodically reviewing liquidity risk generally may include an evaluation of the potential liquidity demands that may be imposed on the fund in connection with its use of derivatives, including any variation margin or collateral calls the fund may be required to meet.[223] To the extent the fund is required to make payments to a derivatives counterparty, those assets would not be available to meet shareholder redemptions.

Consideration of Investment Strategy and Portfolio Liquidity During Normal and Reasonably Foreseeable Stressed Conditions

Finally, we also are modifying the proposed liquidity risk assessment requirement to clarify that certain liquidity risk factors must be considered during both normal and reasonably foreseeable stressed conditions. As proposed, rule 22e–4 did not specify whether a consideration of these factors should consider normal conditions, stressed conditions, or both. One commenter stated that the proposed rule's treatment of stressed conditions was unclear,[224] and another said that the proposed rule was unclear about what needed to be considered in assessing ''stress.'' [225] For those liquidity risk factors that could vary depending on market conditions (*i.e.,* a fund's portfolio liquidity and cash flow projections), we believe that it is appropriate to require a fund to evaluate those factors in normal and reasonably foreseeable stressed conditions. Thus, if a fund's portfolio strategy involves investing in securities whose liquidity is likely to decline in stressed conditions, a fund should take this into account in determining how its portfolio liquidity could contribute to its overall liquidity risk. For example, a fund's portfolio liquidity could decrease in stressed conditions if such conditions led to market participants pulling back on transacting in the fund's portfolio securities, or if stressed conditions affecting other assets or asset classes were to have correlated effects on the fund's portfolio securities. In considering normal and reasonably foreseeable stressed conditions, funds should consider historical experience but should recognize that such

[216] *See* CFA Comment Letter.

[217] *See supra* footnotes 191–192 and accompanying text (clarifying that, to the extent one of the factors specified in rule 22e–4(b)(1)(i) is not applicable to a particular fund, the fund would not be required to consider that factor in assessing its liquidity risk).

[218] *See* Proposing Release, *supra* footnote 9, at section III.C.1.c.

[219] *See id.,* at n.303 and accompanying text (noting that, in addition to the asset coverage limitations imposed by section 18 of the Investment Company Act, any borrowing from a bank would be subject to the terms agreed between a fund and the bank, including terms relating to the maturity date of the borrowing and any circumstances under which the borrowing may be required to be repaid).

[220] *See id.,* at nn.304–305 and accompanying text (noting that funds that borrow for investment purposes, for example through financing transactions such as reverse repurchase agreements and short sales, generally do so in reliance on certain Commission guidance, under which funds cover their obligations under such transactions by segregating certain liquid assets, and discussing the effects of asset segregation on funds' liquidity risk).

Segregated assets are considered to be unavailable for sale or disposition, including for redemptions, unless replaced by other appropriate non-segregated assets of equal value. *See* Securities Trading Practices of Registered Investment Companies, Investment Company Act Release No. 10666 (Apr. 18, 1979) [44 FR 25128 (Apr. 27, 1979)] (''Release 10666''). This means that a fund that receives significant redemption requests may need to exit a portion of its financing transactions in order make more liquid investments available for sale to fulfill such requests. Furthermore, if a fund seeks to exit its financing transactions in a declining market, it may need to dispose of a greater amount of its more liquid holdings in order to repay its borrowings, thereby reducing the amount of liquid investments it has available to meet redemptions. Consequently, a fund's assessment and management of its liquidity risk must include an evaluation of the nature and extent of its borrowings and the potential impact of borrowings on the fund's overall liquidity profile.

[221] We note that borrowings for investment purposes pose a variety of liquidity risks, including the risk that redemptions may require the sale of securities in amounts exceeding the amount of the redemption, resulting in a reduction of the fund's borrowings. Additionally, even without redemptions, the fund may need to sell securities and reduce borrowings if its investment values decline, which may have negative effects on the fund's liquidity.

[222] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.306–307 (discussing how the use of derivatives may affect a fund's liquidity risk). Funds that use derivatives under which they have an obligation to pay typically do so in reliance on the guidance we provided in Release 10666 and in related no-action letters issued by our staff, and therefore segregate liquid assets in respect of their obligations under derivatives transactions. *See generally* Use of Derivatives by Investment Companies under the Investment Company Act of 1940, Investment Company Act Release No. 29776 (Aug. 31, 2011) [76 FR 55237 (Sept. 7, 2011)], at 13–17; *see also* Use of Derivatives by Registered Investment Companies and Business Development Companies, Investment Company Act Release No. 31933 (Dec. 1, 2015) [80 FR 80884 (Dec. 28, 2015)] (''2015 Derivatives Proposing Release''), at n.47 and accompanying text; *see also supra* footnote 220. Derivatives may therefore raise concerns that are similar to those discussed at footnote 220 in the context of borrowings. Funds also may be required to dispose of assets in order to post required margin with respect to their short sale transactions. In addition, some derivatives transactions— particularly those that are complex or entered into OTC—may be less liquid, have longer settlement periods, or be more difficult to price than other types of investments, which potentially increases the amount of time required to exit such transactions.

[223] *See* In re OppenheimerFunds, Inc., *et al.,* Investment Company Act Release No. 30099 (June 6, 2012) (settled action) (''OppenheimerFunds Release'') (alleging the adviser made misleading statements regarding two fixed income mutual funds that suffered significant losses during the 2008 financial crisis primarily due to their use of total return swaps to obtain exposure to commercial mortgage-backed securities and noting that the funds ''had to raise cash for anticipated [total return swap] contract payments by selling depressed bonds into an increasingly illiquid market.'').

[224] *See* BlackRock Comment Letter.

[225] *See* AFR Comment Letter.

experience may not necessarily be indicative of future outcomes, depending on changes in market conditions and the fund's particular circumstances.

We note that ''stressed'' conditions will likely entail different scenarios for different types of funds. For example, differing levels of changes in interest rates and/or interest rates' implied volatility could affect two bond funds very differently, depending on factors such as the maturity, coupon rates and other characteristics of the funds' portfolio holdings. Assessment of stressed conditions also should take into account stresses originating outside of market stress. For example, certain funds could be significantly affected by geopolitical stresses, such as an emerging markets debt fund whose holdings' liquidity is affected by factors such as economic uncertainty in the holdings' countries of issuance. The extent to which stressed conditions are reasonably foreseeable will vary depending on the fund's facts and circumstances.

b. Cash Flow Projections

We are adopting the requirement for a fund to consider its short-term and long-term cash flow projections, during both normal and reasonably foreseeable stressed conditions, in assessing and managing its liquidity risk.[226] The proposed rule also included the requirement for a fund to consider its cash flow projections in assessing its liquidity risk. However, we are adopting some modifications to this proposed requirement. Most significantly, although the proposed rule specified five separate considerations a fund would have to take into account in evaluating the extent to which its cash flow projections contribute to its liquidity risk, rule 22e–4 as adopted today does not enumerate these five considerations. Instead, we are discussing these five considerations as guidance that funds should generally take into account in evaluating their cash flow projections, as discussed in more detail below.

We continue to believe, as discussed in the Proposing Release, that understanding a fund's cash flows is important in determining whether the fund will have sufficient cash to satisfy redemption requests.[227] We also continue to believe that the better a fund's portfolio and risk managers are able to predict the fund's net flows, the better they will be able to measure and manage the fund's liquidity risk.[228] Predictability about whether periods of market stress or declines in fund performance generally lead to increased redemptions of fund shares is particularly significant, as careful liquidity risk management during these periods could prevent the need to sell less-liquid portfolio assets under unfavorable circumstances. This type of selling, in turn, could create significant negative price pressure on the assets and, to the extent the fund continues to hold a portion of those assets, decrease the value of the assets still held by the fund at least temporarily.[229] To the extent a fund understands the composition of its shareholder base (for example, among retirement investors, other individual investors, or discretionary accounts), it may be able to better predict fund flows in response to market events or fund performance.

Consideration of Cash Flow Projections During Normal and Reasonably Foreseeable Stressed Periods

We also are revising the rule to require a fund to consider its short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions.[230] As discussed above, proposed rule 22e–4 would have required a fund, in evaluating short-term and long-term cash flow projections, to consider the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and stressed periods.[231] Although we are not including a specific requirement for a fund to consider historical purchases and redemptions in considering its cash flow projections, we believe continuing to incorporate the concept of normal and reasonably foreseeable stressed conditions within the requirement to consider cash flow projections is critical for a fund to obtain a complete picture of how its cash flows may affect its liquidity risk, particularly because greater, more frequent, or more volatile outflows during stressed conditions could exacerbate a fund's liquidity risk.[232] A fund and its portfolio and/or risk managers should review the guidance we provide below regarding funds' evaluation of the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed circumstances, as well as similar funds' purchases and redemptions, in determining how normal and reasonably foreseeable stressed market conditions could affect a fund's cash flows and contribute to the fund's liquidity risk.[233]

Guidance on Evaluating a Fund's Cash Flow Projections

As discussed above, rule 22e–4 as adopted today requires a fund to consider its short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions in assessing, managing, and periodically reviewing liquidity risk. This liquidity risk factor simplifies the rule as proposed, which would have codified five separate considerations that would comprise a fund's consideration of its cash flow projections—namely, (i) the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed periods, (ii) the fund's redemption policies, (iii) the fund's shareholder ownership concentration, (iv) the fund's distribution channels, and (v) the degree of certainty associated with the fund's short-term and long-term cash flow projections. Instead of enumerating these five considerations in the text of rule 22e–4, we are discussing each of them as guidance in this Release (together, the ''cash flow guidance considerations'').

We are not codifying the cash flow guidance considerations to simplify the rule 22e–4 liquidity risk factors and to alleviate certain commenter concerns about the complexity of the proposed factors. Commenters argued that the requirement to consider a specified list of multiple liquidity risk factors is overly complex—making compliance more difficult for funds, and oversight more difficult for the Commission.[234] Commenters discussed the dangers of an analysis that mandates consideration of multiple factors becoming a generic ''checklist'' approach to liquidity risk management that does not fully capture

[226] *See* rule 22e–4(b)(1)(i)(B).

[227] *See* Proposing Release, *supra* footnote 9, at nn.267–268 and accompanying text.

[228] *See id.,* at n.269 and accompanying text. *See also* Fidelity Comment Letter (noting that the predictability of fund cash flows varies depending on the predictability of the redemption behavior of the fund's shareholder base. ''[F]unds whose shareholders include investors who purchased shares distributed through a retirement program or other planned savings program may exhibit redemption patterns that are relatively more predictable.''); BlackRock Comment Letter (noting that funds may need additional data from their distributors and transfer agents regarding shareholder redemption activity to allow funds to make short-term and long-term cash projections).

[229] *See* Proposing Release, *supra* footnote 9, at n.270 and accompanying text.

[230] *See* rule 22e–4(b)(1)(i)(B).

[231] *See* proposed rule 22e–4(b)(2)(iii)(A)*(1).*

[232] *See* Proposing Release, *supra* footnote 9, at text accompanying and following n.273.

[233] *See infra* footnotes 236–239 and accompanying text.

[234] *See, e.g.,* Better Markets Comment Letter.

the business practices, strategies, and risks that are germane to certain funds.[235] We agree that requiring an overly complex liquidity risk assessment analysis could lead to this result, to the detriment of investors. Such procedures could appear to be robust, but in actuality may not reflect (or may underweight) a fund's most significant risk factors because of the perceived requirement to focus on enumerated factors that may not be particularly important to a fund's operations and risks. Thus, we believe that simplifying the cash flow liquidity risk factor in rule 22e–4 will benefit funds and their shareholders and continue to advance the Commission's goal of promoting meaningful liquidity risk analysis.

With respect to the size, frequency, and volatility of historical purchases and redemptions of fund shares, we continue to believe, as discussed in the Proposing Release, that funds whose historical net flows are relatively less volatile in terms of size and frequency will likely entail less liquidity risk than similar funds with more volatile net flows.[236] A fund should generally review historical purchases and redemptions of fund shares across a variety of market conditions in order to determine how the fund's flows may differ during normal and reasonably foreseeable stressed periods (keeping in mind that historical experience may not necessarily be indicative of future outcomes).[237] In addition to considering its own historical flow data, a fund, particularly a fund without substantial operating history, should consider purchase and redemption activity in funds with similar investment strategies.[238] A fund may wish to evaluate whether the size, frequency, and volatility of its shareholder flows follow any discernible patterns (for example, patterns relating to seasonality, shareholder tax considerations, fund advertising, changes in fund performance ratings provided by third-party rating agencies, and the fund's investment strategy and size).[239]

We also continue to believe that a fund generally should consider its normal redemption policies and practices in evaluating the extent to which its cash flow projections may contribute to its liquidity risk. Specifically, as discussed in the Proposing Release, a fund should generally consider its disclosed or advertised time period for paying (or endeavoring to pay) redemption proceeds and whether this time period varies based on the payment method the fund employs.[240] For example, a fund whose policies require it to typically pay redeeming shareholders on a next-day basis may have fewer options for managing high levels of redemptions than a fund whose policies require it to typically pay redeeming shareholders on a T + 3 basis.[241]

A fund's shareholder ownership concentration also could affect its cash flow projections, as a fund that has a concentrated set of beneficial owners could experience considerable cash outflows from redemptions by a single or small number of shareholders, or by the decisions of an intermediary that has discretionary power over a significant number of shareholder accounts.[242] This in turn could hamper a fund's management of liquidity risk if the fund does not have procedures in place to manage large redemptions. For these reasons, we believe a fund should consider the extent to which its shareholder concentration affects its liquidity risk, particularly taking into account other factors that could magnify shareholder concentration-related liquidity risk (*e.g.,* if a fund has an investment strategy that attracts shareholders who trade based on short-term price movements).

We also continue to believe that a fund should consider how its distribution channels could affect its cash flows, including the predictability of its cash flows. For example, a fund may wish to consider the extent to which its redemption practices could depend on its distribution channels,[243] as well as whether its distribution channels (particularly, whether the fund's shares are held through omnibus accounts) could make it difficult for a fund to be fully aware of the composition of its underlying investor base,[244] including investor characteristics that could affect the fund's short-term and long-term flows.[245] A fund's distribution channels could affect its cash flow predictions because certain distribution channels are generally correlated with particular purchase and redemption patterns.[246] Additionally, we note that investors in mutual funds distributed through certain channels also may have similar purchase and redemption characteristics relating to their financial and tax-related needs.[247]

[235] *See, e.g.,* MFS Comment Letter.

[236] *See* Proposing Release, *supra* footnote 9, at nn.272 and accompanying text.

[237] *See supra* footnotes 230–233 and accompanying text. A fund may find it instructive to understand when its highest, lowest, most frequent, and most volatile purchases and redemptions occurred within various time horizons, such as the past one, five, ten, and twenty years (as applicable, considering the fund's operating history).

[238] *See* Proposing Release, *supra* footnote 9, at text following n.273. We note that consideration of similar funds' purchases and redemptions could show whether the fund's historical flows are typical or aberrant compared to those seen in similar funds and assist new funds in predicting flow patterns.

[239] *See* Proposing Release, *supra* footnote 9, at nn.274–279 and accompanying text (discussing how a fund's investment strategy could contribute to its shareholder flows and noting that smaller funds may experience greater flow volatility). For instance, we understand that certain investors tend to trade in and out of ETFs with index-based strategies frequently because they invest in these ETFs for hedging and/or short-term trading purposes.

[240] *See* Item 6(b) of Form N–1A (requiring a fund to briefly identify the procedures for redeeming shares); *infra* section III.M.1 (discussing amendments to Item 11 of Form N–1A).

[241] To illustrate, when a fund that pays redemption proceeds within one day receives a large redemption request and a fund that pays redemption proceeds within three business days receives a redemption request of the same size, the first fund must satisfy the full request within one day, whereas the second fund has more time to satisfy the redemption request. Even though the shareholder flows of the first and second fund are identical, the redemption policies of the first fund magnify its liquidity risks by requiring that the fund pay redemptions quickly. *See, e.g.,* Proposing Release, *supra* footnote 9, at n.270.

[242] We note that a relatively concentrated fund shareholder base may make it easier for funds to communicate with those shareholders or intermediaries about anticipated future redemptions, and thus plan liquidity demands. However, those shareholders are under no legal obligation to forewarn the fund of their redemptions and, particularly in times of stress, may not do so.

[243] For example, mutual funds that are sold through broker-dealers will generally have to meet redemption requests within three business days, because rule 15c6–1 under the Exchange Act effectively establishes a T+3 settlement period for purchases and sales of securities (other than certain types of securities exempted by the rule) effected by a broker or dealer, unless a different settlement period is expressly agreed to by the parties at the time of the transaction.

[244] *See, e.g.,* Comment Letter of Coalition of Mutual Fund Investors (Jan. 18, 2016) (''CMFI Comment Letter'') (raising concerns regarding omnibus account transparency).

[245] These investor characteristics could include whether ownership in the mutual fund is relatively concentrated, as well as whether the types of underlying investors in the fund typically share common investment goals affecting redemption frequency and timing.

[246] For instance, investors in mutual funds distributed through a retirement plan channel or other planned savings channel (such as a qualified tuition plan authorized by section 529 of the Internal Revenue Code) may be more likely to be long-term investors who do not trade based on short-term price movements, and their purchase and redemption patterns thus may be relatively predictable compared to those of other investors.

[247] For example, taxable investors who are considering purchasing mutual fund shares around capital gains distribution dates have an incentive to delay their purchases until after the distribution, but non-taxable shareholders (such as those who invest through IRAs and other tax-deferred accounts) face no such incentive for delaying purchases. *See* Woodrow T. Johnson & James M. Poterba, *Taxes and Mutual Fund Inflows around*

Continued

Finally, we continue to believe that a fund should consider the degree of certainty surrounding its short-term and long-term cash flow projections. A fund could consider the length of its operating history (including the fund's experience during points of market instability, illiquidity, or volatility) and any purchase and redemption patterns. A fund may use ranges in considering cash flow projections and their relationship to liquidity risk. If a fund has implemented policies to encourage certain shareholders (*e.g.,* large shareholders or institutional shareholders) to provide advance notification of their intent to redeem a significant number of shares of the fund, this could increase the degree of probability surrounding its cash flow projections.[248]

c. Holdings of Cash and Cash Equivalents, Borrowing Arrangements, and Other Funding Sources

We are adopting the requirement for a fund to consider its holdings of cash and cash equivalents, as well as its borrowing arrangements and other funding sources, in assessing, managing, and periodically reviewing its liquidity risk, as proposed.[249] As discussed in the Proposing Release, current U.S. Generally Accepted Accounting Principles (''GAAP'') define cash equivalents as short-term, highly liquid investments that are readily convertible to known amounts of cash and that are so near their maturity that they present insignificant risk of changes in value because of changes in interest rates.[250] While we understand based on staff outreach and the comments we received on the proposal that many asset managers establish minimum cash and cash equivalent targets as part of their liquidity risk management practices,[251] commenters stated that significant cash and cash equivalent holdings are not necessarily appropriate for all funds and as a stand-alone tool do not necessarily entirely mitigate liquidity risk.[252] We agree with commenters that the amount of cash and cash equivalent holdings appropriate for liquidity risk management depends on a particular fund's facts and circumstances. Similarly, we agree with commenters that significant holdings of cash and cash equivalents could still be insufficient to protect a fund with large holdings of illiquid investments (or investments whose liquidity decreases significantly during stressed periods) if the fund were faced with heavy redemptions.[253] But we continue to believe that holdings of cash and cash equivalents can be a valuable liquidity risk management tool because these holdings tend to remain very liquid under nearly all market conditions.[254] Thus, a fund could use its cash and cash equivalent holdings in normal and stressed conditions to meet some redemption requests without significant dilution of remaining investors' interests. Holdings of cash and cash equivalents also could provide a fund's portfolio manager with flexibility to readjust its portfolio as it deems advantageous (either in terms of performance or risk management) under changing market circumstances. We therefore believe it is appropriate for a fund to consider its holdings of cash and cash equivalents as part of its liquidity risk assessment.

Several commenters discussed the extent to which a fund's borrowing arrangements and other funding sources could shape the fund's liquidity risk. Some commenters strongly supported the use of borrowing arrangements to help mitigate liquidity risk, asserting that funds historically have generally succeeded in managing liquidity risk, partly due to lines of credit and interfund lending.[255] Commenters also asserted that obtaining access to backup sources of liquidity like lines of credit, interfund lending arrangements, and repurchase agreements should be considered beneficial as the flexibility to use these liquidity sources has value to a fund's shareholders.[256] However, another commenter argued that asset managers should not meet redemptions through the use of borrowing facilities other than to meet short-term settlement mismatches, as this could potentially disadvantage non-redeeming investors.[257]

We continue to believe that entering into borrowing or other funding arrangements could assist a fund in meeting redemption requests in certain cases (for example, by bridging any timing mismatches between when a fund is required to pay redeeming shareholders and when any asset sales that the fund has executed in order to pay redemptions will settle).[258] However, we have concerns that, in some situations, borrowing arrangements may not be beneficial to a fund's liquidity risk management to the extent that the fund's use of borrowings to meet redemptions leverages the fund at the expense of non-redeeming investors. In such a case, non-redeeming shareholders would effectively bear the costs of borrowing and the increased risk to the fund created by leverage.[259] Thus, we believe that funds should consider the likely overall benefits and risks in including such borrowing or other funding arrangements within a liquidity risk management program.

In evaluating the extent to which a fund's borrowing arrangements could help the fund manage its liquidity risk, a fund may wish to consider any aspects of those arrangements that could limit the fund's ability to borrow. For instance, a fund generally may wish to consider the terms of the credit facility (*e.g.* whether the credit facility is committed or uncommitted), as well as the financial health of the institution(s) providing the facility. A fund also generally should consider whether a credit facility would be shared among multiple funds within a fund family.

Distribution Dates, NBER Working Paper 13884 (Mar. 2006, rev'd Mar. 2008), *available at http://economics.mit.edu/files/2512*; *see also supra* footnote 239 and accompanying text (discussing seasonality in mutual fund flows).

[248] We understand, based on staff outreach, that advance notification procedures are a relatively common liquidity risk management tool that funds currently employ. *See* Comment Letter of Invesco on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 11 (''Invesco FSOC Notice Comment Letter'') (noting that Invesco has advance notification arrangements regarding anticipated redemptions above certain levels in place with certain distribution partners).

[249] *See* rule 22e–4(b)(1)(i)(C).

[250] *See* Proposing Release, *supra* footnote 9, at n.311 and accompanying text.

[251] *See, e.g.,* Comment Letter of Pacific Investment Management Company LLC (Jan. 13, 2016) (''PIMCO Comment Letter'').

[252] *See, e.g.,* ICI Comment Letter I (noting that fund complexes that specialize in U.S. equity funds, especially those focusing on large-cap stocks, are likely to be able to meet redemptions with only modest holdings of cash or cash equivalents because the U.S. equity market is so liquid); *see also infra* footnote 662 and accompanying text (discussing commenters' concerns that the proposed three-day liquid asset minimum requirement would be construed to require a fund specifically to hold cash and cash equivalents, which commenters argued could prevent funds from meeting their principal investment strategies and could give investors a false sense of security that cash buffers will eliminate liquidity risk).

[253] We also note that a substantial investment in cash and cash equivalents could decrease a fund's total return and/or cause the fund to diverge from its investment strategy, and thus a fund may wish to calibrate its holdings of these instruments to manage its liquidity risk while taking these concerns into consideration.

[254] We note that cash and cash equivalent holdings and borrowing arrangements are just two of several liquidity management tools that are at a fund's disposal. Though we are requiring funds to consider these tools, the rule neither creates a substantive obligation on funds to maintain specific levels of cash and cash equivalents nor requires funds to procure any specific borrowing arrangements.

[255] *See, e.g.,* Comment Letter of Independent Directors Council (Jan. 13, 2016) (''IDC Comment Letter'').

[256] *See, e.g.,* BlackRock Comment Letter; Oppenheimer Comment Letter.

[257] *See* HSBC Comment Letter.

[258] *See* Proposing Release, *supra* footnote 9, at n.314 and accompanying text.

[259] *See* Heartland Release, *supra* footnote 80.

When a credit facility is shared, a fund should assess the extent the facility mitigates its liquidity risk given the liquidity risk associated with the other funds sharing the facility.[260] Similarly, with respect to interfund lending within a family of funds, the terms of an interfund lending arrangement and any conditions required under exemptive relief permitting the arrangement[261] (including limitations on the circumstances in which interfund lending may be used) will shape the role that interfund lending has in a fund's overall liquidity risk management.[262]

3. Periodic Review of a Fund's Liquidity Risk

Rule 22e–4 as adopted includes the requirement for a fund to periodically review the fund's liquidity risk, taking into account the same liquidity risk factors a fund would have to consider in initially assessing and managing its liquidity risk.[263] The proposed rule also included the requirement for a fund to periodically review its liquidity risk, considering those factors it would evaluate in initially assessing its liquidity risk.[264] Commenters generally supported the proposed liquidity risk review requirement.[265] Specifically, some commenters agreed that this requirement will help further the Commission's goals,[266] expressed support for the proposed liquidity risk review factors,[267] and agreed with the Commission's general approach of permitting funds to develop their own policies and procedures for conducting periodic liquidity risk reviews.[268] Other commenters objected to the requirement for a fund to consider certain specified liquidity risk review factors and suggested instead that consideration of the factors be made permissive instead of mandatory.[269] Still another commenter argued that the proposed liquidity risk review approach gives funds too much discretion and recommended that the Commission adopt a baseline standard for the frequency of funds' liquidity risk reviews (*i.e.,* adopt an annual or quarterly review requirement).[270]

We are adopting a periodic review requirement substantially as proposed. As discussed above, we have revised the liquidity risk factors that a fund must consider in assessing, managing, and periodically reviewing its liquidity risk. A fund will not have to consider any factor that is not applicable to a particular fund.[271] This requirement is principles-based, and thus each fund may develop and adopt procedures to review the fund's liquidity risk tailored as appropriate to reflect the fund's particular facts and circumstances.

After evaluating commenters' concerns about the liquidity risk assessment factors, we continue to believe that these factors, modified as discussed above, are central to reviewing a fund's liquidity risk. We also continue to believe that requiring each fund to consider a baseline set of factors, as applicable, in reviewing liquidity risk would promote effective liquidity risk management across the fund industry. As discussed above,[272] we believe that our changes to the proposed liquidity risk factors—which highlight particular risks but also condense and simplify some proposed factors—strike an appropriate balance between promoting consistency in funds' consideration of a standard set of liquidity risk factors and easing burdens associated with this analysis.

We considered a commenter's suggestion that the Commission adopt a minimum frequency for funds' liquidity risk review, and we have modified the proposed rule to clarify that a fund's periodic review of its liquidity risk must occur no less frequently than annually.[273] As discussed below, we are adopting a requirement that a fund periodically review, no less frequently than annually its highly liquid investment minimum (as determined considering the same factors that a fund would reference in periodically reviewing its liquidity risk).[274] Because this review of a fund's highly liquid investment minimum would, de facto, necessitate a fund's review of its liquidity risk, we believe it is appropriate to align the minimum periods for these reviews. Similarly, as discussed further below, we also are adopting a requirement that a fund's board must review, no less frequently than annually, a written report that describes a review of the adequacy of the fund's liquidity risk management program.[275] Accordingly, the minimum period for the liquidity risk review will be aligned with the period in which this report will be presented to the fund's board, creating further synergies. We note, however, that a fund may determine that it is appropriate for its liquidity risk to be reviewed more frequently than annually, depending on the extent to which the required review factors could vary based on market- or sector-wide developments, as well as changes to the fund's operations or other fund-specific circumstances.

C. Classifying the Liquidity of a Fund's Portfolio Investments, and Disclosure and Reporting Requirements Regarding Portfolio Investments' Liquidity Classifications

Today we are adopting requirements for each fund, with the exception of In-Kind ETFs, to classify the liquidity of its portfolio investments. Rule 22e–4 as adopted today requires a fund to classify the liquidity of each portfolio investment based on the number of days within which it determined that it reasonably expects an investment would be convertible to cash (or, in the case of the less-liquid and illiquid categories, sold or disposed of) without the conversion (or, in the case of the less-

[260] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.314–317.

[261] *See, e.g.,* Nationwide Mutual Fund, *et al.,* Investment Company Act Release No. 32115 (May 16, 2016) [81 FR 31988 (May 20, 2016)] (notice of application) (''Nationwide Exemptive Relief''); TCW Alternative Funds, *et al.,* Investment Company Act Release No. 32113 (May 11, 2016) [81 FR 30585 (May 17, 2016)] (notice of application) (''TCW Exemptive Relief''); *see also* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.318–319.

[262] For example, it is common for such exemptive orders to permit interfund lending in circumstances in which there is a timing mismatch between when a fund is required to pay redeeming shareholders and when any asset sales that the fund has executed in order to pay redemptions will settle (*e.g.,* a fund may be required to pay redeeming shareholders within three business days, but the portfolio transactions the fund has executed in order to pay these shareholders may not settle for seven days). A fund can reasonably predict that it will repay borrowed money relatively quickly and reliably under these circumstances. Under these conditions, this type of borrowing would tend to be low risk, and thus entail less liquidity risk than borrowing money to pay redemptions without already having secured a price at which the assets used to cover the borrowing will be sold.

Funds may only engage in interfund lending when it is in the best interests of both the lending and the borrowing fund. The exemptive relief anticipates a fund family's interfund lending arrangements include an assessment of: (i) If the fund participates as a lender, any effect its participation may have on the fund's liquidity risk; and (ii) if the fund participates as a borrower, whether the fund's portfolio liquidity is sufficient to satisfy its obligation to repay the loan along with its other liquidity needs. *See* Nationwide Exemptive Relief, *supra* footnote 261; TCW Exemptive Relief, *supra* footnote 261. For example, the relief is not intended to permit a fund to act as lender of last resort to a borrowing fund.

[263] *See* rule 22e–4(b)(1)(i).

[264] *See* proposed rule 22e–4(b)(2)(iii).

[265] *See, e.g.,* CRMC Comment Letter; CFA Comment Letter; Fidelity Comment Letter; ICI Comment Letter I.

[266] *See* CRMC Comment Letter.

[267] *See, e.g.,* CRMC Comment Letter; ICI Comment Letter I.

[268] *See, e.g.,* CFA Comment Letter; Fidelity Comment Letter.

[269] *See, e.g.,* MFS Comment Letter; Voya Comment Letter.

[270] *See* Better Markets Comment Letter.

[271] *See supra* footnote 192 and accompanying text.

[272] *See supra* footnotes 193–194 and accompanying text.

[273] *See* rule 22e–4(b)(1)(i).

[274] *See infra* section III.D.4.

[275] *See infra* section III.H.2.

liquid and illiquid categories, sale or disposition) significantly changing the market value of the investment. Specifically, rule 22e–4 will require a fund to classify each of its portfolio investments, including its derivatives transactions,[276] into one of four liquidity categories:

• *Highly liquid investments,* defined as cash and any investment reasonably expected to be convertible to cash in current market conditions in *three business days* or less without the conversion to cash significantly changing the market value of the investment.

• *Moderately liquid investments,* defined as any investment reasonably expected to be convertible to cash in current market conditions in more than *three calendar days but in seven calendar days or less* without the conversion to cash significantly changing the market value of the investment.

• *Less liquid investments,* defined as any investment reasonably expected to be sold or disposed of in current market conditions in *seven calendar days or less* without the sale or disposition significantly changing the market value of the investment, but where the sale or disposition is reasonably expected to settle in more than seven calendar days.

• *Illiquid investments,* defined as any investment that may not reasonably be expected to be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment.

This determination must be based on information obtained after reasonable inquiry; the term ''convertible to cash'' in the category definitions refers to the ability to be sold, with the sale settled. The final rule requires a fund to take into account relevant ''market, trading, and investment-specific considerations'' in classifying its portfolio investments' liquidity, but the rule does not detail a list of factors comprising these considerations.[277] This Release does include, however, guidance on certain considerations that a fund may wish to evaluate in taking into account relevant market, trading, and investment-specific considerations when classifying the liquidity of its portfolio investments.[278] The fund may classify portfolio investments based on asset class, so long as the fund or its adviser,[279] after reasonable inquiry, does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment that would suggest a different classification for that investment.[280] As discussed in more detail below, the fund also must consider the investment's market depth in classifying the investment.[281] The fund also must review its portfolio investments' classifications at least monthly and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.[282] Finally, the fund must take into account certain considerations for highly liquid investments that it has segregated to cover certain derivatives transactions.[283]

Rule 22e–4 as proposed would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset) and review the liquidity classification of each position on an ongoing basis.[284] In classifying and reviewing the liquidity of portfolio assets, proposed rule 22e–4 would have required a fund to consider the number of days within which a fund's position in a portfolio asset (or portions of a position in a particular asset) would be convertible to cash at a price that does not materially affect the value of that asset immediately prior to sale.[285] Based on this determination, made using information obtained after reasonable inquiry, the proposed rule would have required a fund to classify each of its positions in a portfolio asset (or portions thereof) into one of six liquidity categories: (i) Convertible to cash within 1 business day; (ii) convertible to cash within 2–3 business days; (iii) convertible to cash within 4–7 calendar days; (iv) convertible to cash within 8–15 calendar days; (v) convertible to cash within 16–30 calendar days; and (vi) convertible to cash in more than 30 calendar days.[286] The proposed rule would have required a fund to consider certain specified factors, to the extent applicable, in determining the time period in which a portfolio position (or portion thereof) would be convertible to cash.[287]

Although some commenters acknowledged potential benefits to the proposed classification requirement, most commenters were generally opposed to the proposed six-category liquidity classification framework. As discussed further below, commenters' primary objections were concerns that the proposed classification framework would: (i) Not reflect current liquidity risk management practices or industry ''best practices''; (ii) require funds to make overly subjective projections about asset liquidity, particularly to the extent that they would have to project a fund's ability to sell and settle a position well into the future; (iii) place undue reliance on third-party data vendors and analysts; (iv) incorporate a materiality standard that is unclear and impractical to apply; and (v) inappropriately require funds to take position size and settlement timing into account when classifying the liquidity of a portfolio position.

Commenters suggested many alternatives to the proposed classification requirement—both changes to the structure of the proposed classification requirement, as well as suggestions about more granular aspects of the proposed requirement. Although the details vary, commenters raised three primary structural alternatives to the proposed classification requirement: (i) A ''principles-based'' liquidity classification approach, where each fund would have to classify the liquidity of its portfolio assets, but the Commission would not require any

[276] *See* rule 22e–4(b)(1)(ii). The final rule requires a fund to classify all portfolio investments, including investments that are liabilities of the fund. *See infra* section III.C.3.c.

[277] *See* rule 22e–4(b)(1)(ii).

[278] *See infra* section III.C.4.

[279] The term ''adviser'' as used in this Release and rule 22e–4 generally refers to any person, including a sub-adviser, that is an ''investment adviser'' of an investment company as that term is defined in section 2(a)(20) of the Investment Company Act. *See infra* paragraph accompanying footnote 818 (discussing the coordination of liquidity risk management efforts undertaken by various service providers, including a fund's sub-adviser(s)).

[280] *See* rule 22e–4(b)(1)(ii)(A).

[281] More specifically, the fund must determine whether trading varying portions of a position in a particular investment, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect the liquidity of that investment, and if so, the fund must take this determination into account when classifying the liquidity of that investment. *See* rule 22e–4(b)(1)(ii)(B).

[282] *See* rule 22e–4(b)(1)(ii); *see also* rule 22e–4(b)(1)(i) (imposing an ongoing responsibility on the fund to assess and manage its liquidity risk).

[283] More specifically, with respect to the fund's derivatives transactions that it has classified as moderately liquid investments, less liquid investments, and illiquid investments, it must identify the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories. *See* rule 22e–4(b)(1)(ii)(C); *see also* rule 22e–4(b)(1)(iii)(B) (addressing such percentage of highly liquid investments in connection with determining whether a fund primarily holds highly liquid investments).

[284] *See* Proposing Release, *supra* footnote 9, at section III.B.

[285] Proposed rule 22e–4(b)(2)(i).

[286] Proposed rule 22e–4(b)(2)(i).

[287] Proposed rule 22e–4(b)(2)(ii); *see also infra* section III.C.4.

specific classification scheme; [288] (ii) a simplified version of the proposed classification system, with fewer classification categories based on shorter time projections than the proposal; [289] and (iii) an approach with new classification categories based on qualitative distinctions in the market- and trading-related characteristics of different asset classes under different market conditions, which generally would rely on the Commission mapping different asset classes to each of these new classification categories.[290]

Our adopted liquidity classification requirement most closely resembles the second alternative described above and is designed to respond to commenters' concerns while also continuing to advance the Commission's goals. As discussed in the Proposing Release, we understand that funds today employ different practices for assessing the liquidity of their portfolios.[291] After considering comments, however, we continue to believe that a liquidity classification framework based on a days-to-cash determination, with certain modifications from the proposal, is an effective approach to further our goals of creating a meaningful, uniform framework for reporting to the Commission and providing public disclosure about funds' liquidity profiles. To achieve this goal, we believe the rule must provide a consistent methodology for assessing portfolio liquidity. This methodology also will form the basis for the highly liquid investment minimum and illiquid investment limit, each of which we believe will play an important role in fund liquidity risk management, as discussed in detail below. We also believe this classification system maintains the benefits of a spectrum-based liquidity analysis while responding to concerns about the burden and level of precision implied by the proposed approach.

While we agree that the suggested ''principles-based'' alternative approach would have benefits in terms of flexibility and funds' ability to leverage their existing procedures for assessing portfolio liquidity,[292] this approach would not provide a uniform methodology for funds' liquidity assessment procedures. It thus would not meaningfully advance our goal of establishing a foundation for reasonably comparable reporting to the Commission and disclosure to the public about funds' portfolio liquidity.[293] In particular, this approach would not permit detailed reporting about funds' portfolio investments' liquidity in a structured data format, as with reports on Form N–PORT, and thus would not provide an efficient basis for the Commission and its staff to monitor funds' portfolio liquidity and liquidity risk.

We likewise believe the third alternative classification system, based on liquidity characteristics of different asset classes—as opposed to a days-to-cash framework—may not provide clear distinctions between each liquidity category without the Commission assigning specific asset classes to each classification category. Given the size of the fund industry and the wide variety and types of asset classes held by funds, we believe that it would be impractical for the Commission or its staff to attempt to prescriptively categorize every asset class by liquidity. Further, the classification requirement is designed to provide information regarding the liquidity of portfolio investments under *current market conditions.* We are concerned that a classification system by which the Commission assigns specific asset classes to specific liquidity categories would not be sufficiently flexible to account for the impact changing market conditions may have on the liquidity of fund investments.

Relatedly, some commenters suggested an alternative classification system could be based on notions of liquidity other than ''days-to-cash,'' including, in whole or in part, on the fraction of average daily trading volume that each position size corresponds to, the expected behavior of bid-ask spreads in a given asset, or more qualitative liquidity buckets (*e.g.* ''converted to cash quickly under most circumstances'').[294] Other commenters suggested that all of the classification categories be defined based on a days-to-cash or days-to-trade determination,[295] while some recommended that only certain of the categories (generally, the relatively more liquid categories) be defined based on a days-to-cash or days-to-trade determination.[296] After considering comments, we have chosen to adopt a classification system that most closely resembles the second alternative raised by commenters and includes days-to-cash determinations for the more liquid categories. As noted below, some of the more specific criteria suggested by commenters in place of days-to-cash may not be appropriate for all asset classes, while more qualitative criteria make it more difficult to compare classifications across funds relative to the days-to-cash approach in the rule.[297]

1. Primary Elements of Classification Framework

a. Consolidation of Proposed Classification Categories

Similar to the proposed classification requirement, the final classification requirement is generally based on a framework that would require a fund to determine the number of days in which each portfolio investment is convertible to cash. However, the final classification framework reduces the number of classification categories from six (as proposed) to four. In addition, a fund may classify portfolio investments based on asset class under the final classification requirement, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment and that would require a different classification for that investment. When we proposed the rule 22e–4 classification requirement, we noted that the framework was meant to promote a more nuanced approach than a classification requirement under which a fund would simply designate assets as liquid or illiquid.[298] The proposed approach also was meant to provide the basis for detailed reporting and disclosure about the liquidity of funds' portfolio positions in a structured data format, as the six liquidity categories described above would be incorporated

[288] *See, e.g.,* AIMA Comment Letter; Comment Letter of the Loan Syndications and Trading Association (Jan. 13, 2016) (''LSTA Comment Letter''); Comment Letter of State Street Global Advisors (Jan. 13, 2016) (''State Street Comment Letter''); Comment Letter of Wellington Management Company LLP (Jan. 13, 2016) (''Wellington Comment Letter'').

[289] *See, e.g.,* Eaton Vance Comment Letter I; Interactive Data Comment Letter; Comment Letter of Markit (Jan. 13, 2016) (''Markit Comment Letter''); Comment Letter of Wells Fargo Funds Management, LLC (Jan. 13, 2016) (''Wells Fargo Comment Letter''). Commenters generally suggested three, four, or five classification categories.

[290] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Comment Letter of Systemic Risk Council (Jan. 13, 2016) (''SRC Comment Letter'').

[291] *See* Proposing Release, *supra* footnote 9, at section III.B.

[292] *See, e.g., supra* footnote 288; *see also* section IV.C.

[293] *See infra* section III.C.6.

[294] *See, e.g.,* AFR Comment Letter; BlackRock Comment Letter; SRC Comment Letter.

[295] AFR Comment Letter; Cohen & Steers Comment Letter; PIMCO Comment Letter; Charles Schwab Comment Letter.

[296] Oppenheimer Comment Letter; SIFMA Comment Letter I; T. Rowe Comment Letter.

[297] *See infra* section IV.C.1.

[298] *See* Proposing Release, *supra* footnote 9, at n.174 and accompanying and following text.

into the fund's portfolio holdings reported on proposed Form N–PORT.[299]

Multiple commenters expressed concerns about the proposed six-category classification framework. Many argued that the proposed classification method would require funds to make overly subjective projections about asset liquidity because predicting the time to liquidate a position for cash at a given price—particularly well into the future—is limited by required assumptions and market data availability, even for sophisticated asset managers.[300] They stated that making relatively subjective liquidity determinations would render liquidity assessments inconsistent across funds, and any appearance of objectivity and comparability among funds' liquidity assessments thus would be false.[301] Relatedly, commenters also maintained that the proposed liquidity classification categories were overly granular and therefore could present a false appearance of precision about portfolio assets' liquidity.[302] For example, commenters argued that determining whether an asset can be converted to cash in 15 calendar days versus 16 calendar days (that is, distinguishing between the fourth and fifth proposed classification categories) cannot realistically be known or predicted with accuracy.[303] Some commenters advocated reducing the number of classification categories[304] and expressed concern that the proposal would entail overly subjective classification analysis, which would give funds too much discretion to determine which assets are relatively liquid and thus make enforcement difficult and hinder meaningful risk mitigation.[305] Finally, commenters also predicted that the complexity of analyses inherent in the proposed six-category classification framework, and related operational burdens, could cause many funds to either shift their classification obligations to third-party analysts entirely, or to rely heavily on data provided by third-party vendors to help simplify funds' own classification analyses.[306]

After considering these comments, we agree that the level of precision implied by the proposed six-category classification system could have unintended negative consequences. We also agree that the six liquidity classification categories that we proposed could lead to varying liquidity assessments and could give rise to an appearance of a level of precision about liquidity determinations that may not be achievable for some funds or asset classes. However, we continue to believe that a classification approach that involves funds evaluating investments' liquidity across a liquidity spectrum (as opposed to making a binary determination of whether an investment is liquid or illiquid) provides a basis for more meaningful reporting and disclosure about funds' portfolio liquidity. Our opinion corresponds with many commenters' views that there are significant benefits associated with evaluating portfolio assets' liquidity across a spectrum.[307]

We believe that condensing the six proposed categories into four categories should decrease the variability in funds' liquidity assessments, since funds will not be required to make liquidity distinctions that are as detailed as would have been required under the proposal. The adopted categories also should reduce inconsistency in funds' liquidity assessments because the new categories do not include time periods in the least-liquid categories that are as granular or projected as far in the future as under the proposal. Furthermore, we believe that the adopted categories could decrease variability in some funds' liquidity assessments because we understand that the four adopted categories may correspond more closely than the proposed categories with classification methods and categories that some funds currently use in evaluating their portfolio liquidity.[308] For example, the time frames referenced in the moderately liquid, less liquid, and illiquid classification categories are tied to the seven-calendar-day period in which funds are required to pay redeeming shareholders under section 22(e) of the Investment Company Act. We understand through staff outreach conducted prior to the proposal that certain funds already classify their portfolios across a number of liquidity categories, taking into account days-to-cash determinations and focusing on assets that can be used to meet redemptions in the short- and medium-term.[309] Certain commenters likewise acknowledged that some asset managers may currently classify portfolio positions with categories that take days-to-cash or days-to-trade determinations into account, although not at the level of detail suggested by the proposal or for all classes of portfolio assets.[310]

We recognize that, although we are providing a uniform classification framework, different funds may still classify the liquidity of similar investments differently, based on the facts and circumstances informing their analyses. This simply reflects the fact that different funds likely have different views on liquidity based on considerations such as their assessment of various market, trading, and investment-specific factors, and the size of their position in a particular investment. We acknowledge that liquidity can be difficult to estimate and that there is no agreed-upon measure of liquidity for all asset classes.[311] Nevertheless, we believe the reporting of the liquidity classification information to us, and aggregated information to the public, will provide important information about fund liquidity.

b. Market, Trading, and Investment-Specific Considerations

Rule 22e–4 as adopted today requires a fund to take into account ''relevant market, trading, and investment-specific considerations'' in classifying and reviewing its portfolio investments' liquidity.[312] Rule 22e–4 as proposed did not include this requirement but instead included an enumerated list of nine separate factors that a fund would be specifically required to consider, as applicable, in classifying and reviewing the liquidity of its portfolio assets.[313]

[299] See id.

[300] *See, e.g.,* Comment Letter of Michael Aguilar, *et al.* (Jan. 12, 2016) (''Aguilar Comment Letter''); Credit Suisse Comment Letter; Comment Letter of J.P. Morgan Asset Management (Jan. 13, 2016) (''J.P. Morgan Comment Letter''); Voya Comment Letter.

[301] *See, e.g.,* AIMA Comment Letter; CRMC Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[302] *See, e.g.,* Cohen & Steers Comment Letter; MFS Comment Letter; Nuveen Comment Letter; SIFMA Comment Letter I.

[303] *See, e.g.,* Credit Suisse Comment Letter.

[304] *See* AFR Comment Letter; *see also* Better Markets Comment Letter (expressing concern about the complexity of the proposed classification requirement).

[305] *See* Better Markets Comment Letter; SRC Comment Letter.

[306] *See, e.g.,* FSR Comment Letter; Comment Letter of Brian Reid, Chief Economist, Investment Company Institute (Jan. 13, 2016) (''ICI Comment Letter II''); Charles Schwab Comment Letter; Wells Fargo Comment Letter.

[307] *See, e.g.,* CRMC Comment Letter; HSBC Comment Letter; J.P. Morgan Comment Letter; Comment Letter of MSCI (Jan. 13, 2016) (''MSCI Comment Letter'').

[308] *See infra* text accompanying footnotes 366, 375, 383.

[309] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n. 183.

[310] *See, e.g.,* HSBC Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Wellington Comment Letter.

[311] Indeed our recognition of these facts is part of what has lead us to adopt requirements that the more detailed liquidity classification of each individual portfolio investment be reported to us confidentially, with only the aggregated fund liquidity profile reported publicly, as discussed in section III.C.6 below.

[312] *See* rule 22e–4(b)(1)(ii).

[313] Rule 22e–4 as proposed would have required a fund to take into account the following nine factors, to the extent applicable, when classifying

The Proposing Release requested comment generally on whether the Commission should codify the proposed list of nine liquidity classification factors. While one commenter agreed that the factors should be codified,[314] most opposed codification and stated that funds should be permitted, but not required, to consider the factors.[315] Commenters stated that codifying the proposed factors would mandate a classification process that would be overly burdensome on funds' resources[316] and could limit portfolio managers' ability to rely on industry expertise in evaluating portfolio assets' liquidity.[317] One commenter specifically expressed concern that ''the scope and complexity of the required analysis may excessively burden fund boards of directors and may actually act to distract fund managers and directors from the assessment of liquidity and redemption risk, which we view as the more important analysis.''[318] Commenters also argued that a codified list of liquidity assessment factors could create a presumption that a fund must consider each factor in evaluating each portfolio holding, even if certain factors would not be useful or relevant to evaluating certain portfolio assets' liquidity.[319] Some commenters also stated that a codified list of factors could lead funds to place undue reliance on third-party data vendors,[320] and such reliance could result in these vendors being viewed as ''rating agencies'' for liquidity, which could lead to potential systemic risk issues.[321] In addition, they expressed more granular concerns about certain of the proposed factors, which are discussed in detail in section III.C.4 below.

After considering commenters' suggestions and concerns, we are not including the classification factors in the rule as proposed because we are concerned that including this list in rule 22e–4 could lead funds to focus too heavily on evaluating certain factors that may not be particularly relevant to the liquidity of a specific fund's portfolio investments, the evaluation of which may not help produce meaningful outcomes in terms of effective classification. This could operate to the detriment of efficient and appropriate liquidity assessments that focus on the liquidity characteristics most directly affecting a particular asset class or investment.

We are instead adopting a principles-based requirement that a fund take into account relevant market, trading, and investment-specific considerations in classifying its portfolio investments. We understand based on staff outreach that it is common for some funds, in assessing the liquidity of their portfolio investments, to look only at basic structural characteristics of an investment (such as asset class or restrictions on transfer) and not to supplement this analysis with market information or other potentially relevant factors.[322] This could lead to circumstances in which a fund's liquidity classifications do not reflect a fund's actual ability to sell its portfolio investments without significant dilution to meet redemptions within a given time period, or do not otherwise result in an accurate picture of a fund's liquidity profile. Thus, we believe that the classification requirement must require funds to evaluate relevant considerations in making liquidity determinations. We believe the requirement to take into account relevant market, trading, and investment-specific considerations achieves this goal and is broad and flexible enough to be relevant for all investment strategies and fund risk profiles. In addition, we continue to believe that the proposed classification factors could help funds in evaluating relevant market, trading, and investment-specific considerations, and thus we have included guidance on many of these areas in section III.C.4 of this Release that may be relevant to a fund's assessment of portfolio investments' liquidity characteristics.

We understand that some third-party service providers currently provide data and analyses assessing the relative liquidity of a fund's portfolio investments, and that many of these service providers assess certain market, trading, and investment-specific considerations in doing so. We believe that a fund could appropriately use this type of data to inform or supplement its own consideration of the liquidity of an asset class or investment. However, a fund would not be required to do so.[323] Also, we generally believe that a fund should consider having the person(s) at the fund or investment adviser designated to administer the fund's liquidity risk management program review the quality of any data received from third parties, as well as the particular methodologies used and metrics analyzed by third parties, to determine whether this data would effectively inform or supplement the fund's consideration of its portfolio holdings' liquidity characteristics. This review could include an assessment of whether modifications to an ''off-the-shelf'' product are necessary to accurately reflect the liquidity characteristics of the fund's portfolio holdings. As discussed above, certain commenters expressed concern that the proposed six-category classification framework, including the proposed codification of certain factors that a fund would be required to consider (as applicable) in classifying its portfolio holdings, would place undue reliance on data vendors and analysts, and that such reliance could produce potential systemic risk issues.[324] We believe that our decisions to simplify the proposed classification framework and not to include the proposed classification

the liquidity of each portfolio position in a particular asset: (1) Existence of an active market for the asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants; (2) frequency of trades or quotes for the asset and average daily trading volume of the asset (regardless of whether the asset is a security traded on an exchange); (3) volatility of trading prices for the asset; (4) bid-ask spreads for the asset; (5) whether the asset has a relatively standardized and simple structure; (6) for fixed income securities, maturity and date of issue; (7) restrictions on trading of the asset and limitations on transfer of the asset; (8) the size of the fund's position in the asset relative to the asset's average daily trading volume and, as applicable, the number of units of the asset outstanding; and (9) relationship of the asset to another portfolio asset. *See* proposed rule 22e–4(b)(2)(ii). These proposed factors are discussed in more detail in *infra* section III.C.4.

[314] *See, e.g.,* CRMC Comment Letter.

[315] *See, e.g.,* AFR Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Vanguard Comment Letter.

[316] *See, e.g.,* CFA Comment Letter; LSTA Comment Letter; Oppenheimer Comment Letter.

[317] *See, e.g.,* Federated Comment Letter; Charles Schwab Comment Letter.

[318] *See* AFR Comment Letter.

[319] *See, e.g.,* ICI Comment Letter I (''We are concerned that [the proposed factors'] inclusion in the rule could create a presumption that funds consider each factor in evaluating each portfolio holding . . .''); Oppenheimer Comment Letter (''As an example, a fund that invests solely in equity securities of large capitalization issuers that are traded on U.S. exchanges might reasonably determine that the frequency of trades in those equity securities and their average daily trading volumes are sufficient factors to determine their liquidity, and that consideration of factors such as bid-ask spread and volatility of trading prices are not useful or informative in a liquidity assessment. However, because these securities have observable bid-ask spreads and volatility, the fund would nonetheless be required to obtain and consider such data.'').

[320] *See, e.g.,* Dechert Comment Letter; Dodge & Cox Comment Letter; Comment Letter of the Mutual Fund Directors Fund (''MFDF Comment Letter''); T. Rowe Comment Letter.

[321] *See, e.g.,* Federated Comment Letter; ICI Comment Letter II; MFDF Comment Letter; SIFMA Comment Letter I.

[322] *See, e.g., infra* section III.E.

[323] *See* Nuveen Comment Letter (requesting that the Commission confirm that data from third-party vendors may be used in a fund's assessment of liquidity, but that funds are not required to use data provided by third-party vendors in classifying the liquidity of their portfolio assets).

[324] *See supra* footnotes 320–321 and accompanying text.

factors as part of rule 22e–4, together with the guidance on the appropriate use of data vendors discussed in this paragraph, should largely mitigate these concerns.

c. Value Impact Standard

As discussed further below, in a modification to the proposed standard, each of the liquidity categories included in the classification requirement we are adopting requires a fund to determine the time period in which an investment would be reasonably expected to be converted to cash (or in some cases, sold or disposed of) in current market conditions without the conversion to cash (or in some cases, sale or disposition) significantly changing the market value of the investment.[325] This modification highlights that the standard does not require a fund to actually re-value or re-price the investment for classification purposes, nor does the standard require the fund to incorporate general market movements in liquidity determinations or estimate market impact to a precise degree.

Many commenters opposed the value impact standard incorporated in the proposed liquidity classification requirement—that the asset was convertible to cash ''at a price that does not materially affect the value of that asset immediately prior to sale.'' [326] Many suggested that the value impact component of the proposed standard was inappropriate for liquidity analyses [327] and should be eliminated from the classification requirement.[328] Commenters particularly were concerned that a ''materiality'' standard could be difficult and impractical to apply because they argued any sale of an asset could impact its market value to some degree.[329] They stated that it is difficult to separate and quantify the market impact of a fund's trades in a particular asset from other reasons that an asset's price could move (such as market events), particularly in dynamic markets, and that projections of future market impact are difficult to make.[330] Furthermore, they stated that without further guidance from the Commission funds may not know what ''material'' should mean in the context of the proposed classification requirement.[331] Some commenters specifically noted that the proposed value impact standard differed from the value impact standard incorporated in the Commission's guidelines limiting funds' illiquid asset holdings, which is based on whether a fund could sell an asset at approximately the value at which the fund has valued it, and that conflicting standards could raise confusion and operational difficulties.[332] Finally, several commenters argued that the inclusion of the value impact standard in the proposed classification categories could give fund shareholders the false impression that the fund guarantees a protected NAV.[333]

As we noted when discussing the definition of ''liquidity risk,'' we continue to believe that incorporating a value impact analysis into liquidity considerations is appropriate because it indicates that liquidity risk for a fund captures not just the risk of being unable to meet redemption requests, but also the risk that a fund could only meet redemption requests in a manner that significantly dilutes the funds' non-redeeming shareholders. Separately, as we noted above, the inclusion of some consideration of value impact is common in regulators' characterization of portfolio liquidity and fund liquidity risk.[334] Because we believe that the liquidity of portfolio investments is a significant component of a fund's overall liquidity risk,[335] we continue to believe that the inclusion of a value impact standard in the rule 22e–4 classification categories is appropriate. We also understand that many current trade order management systems estimate value impacts that may result from trades, which may assist funds in making these estimates.

Nevertheless, we have determined that certain modifications to the proposed value impact standard are warranted to address certain concerns raised by commenters. First, we recognize that in complying with the value impact standard, funds will be making assessments about the trading behavior of certain asset classes (and individual investments, for investments that need to be treated on an exception basis in the final classification framework we are adopting today). Accordingly, funds should be able to rely on their reasonable expectations at the time they make these assessments, and we do not expect them to estimate to a precise degree the market impact of trading that investment or the value of that investment as the trades occur.[336] As a result, we have modified the final rule to provide that an investment's classification be based a fund's *reasonable expectations* in *current* market conditions (emphasis added).[337] We also expect that the consolidation of the liquidity classification categories into ones that only require days-to-cash projections out to seven days should also mitigate commenters' concerns about the uncertainty involved in these value impact projections because the consolidated categories do not involve projections as far into the future as the proposed categories.

We also changed the standard to capture only value impacts that *significantly change* the investment's market value, rather than the proposed standard that focused on *materially affecting* the value of the asset immediately prior to sale (emphasis added). We believe that funds will be less likely to interpret *significant changes* in market value as capturing very small movements in price, and

[325] *See* rule 22e–4(a)(6); 22e–4(a)(8); 22e–4(a)(10); and 22e–4(a)(12). We note the term ''market value'' as used in the value impact standard includes the value of investments that are fair valued.

[326] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Comment Letter of Milliman Financial Risk Management LLC (Jan. 7, 2016) (''Milliman Comment Letter''); Vanguard Comment Letter.

[327] *See, e.g.,* Eaton Vance Comment Letter I; Fidelity Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[328] *See, e.g.,* CRMC Comment Letter; J.P. Morgan Comment Letter (recognizing, however, the concern underlying the proposed standard—''namely that if funds sell assets at 'fire sale' prices there can be negative price pressure on those assets as well as correlated assets, which could transmit stress to other funds or portions of the market''); PIMCO Comment Letter; Vanguard Comment Letter.

[329] *See, e.g.,* CRMC Comment Letter; IDC Comment Letter; PIMCO Comment Letter; T. Rowe Comment Letter.

[330] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; MFS Comment Letter; Voya Comment Letter.

[331] *See, e.g.,* Aguilar Comment Letter; Markit Comment Letter; Milliman Comment Letter; SIFMA Comment Letter I.

[332] *See, e.g.,* Interactive Data Comment Letter; NYC Bar Comment Letter; *see also infra* text accompanying footnotes 341–342 (discussing the harmonization of the value impact standard incorporated in the definition of ''illiquid asset'' that we are adopting with the standard incorporated in the rule 22e–4 classification requirement generally).

[333] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter III; PIMCO Comment Letter; SIFMA Comment Letter I.

[334] *See supra* footnote 173.

[335] *See* rule 22e–4(b)(1)(i)(A) (requiring a fund to consider its portfolio investments' liquidity in assessing its liquidity risk).

[336] In the proposal, we noted that the proposed term ''immediately prior to sale'' was not meant to require a fund to anticipate and determine in advance the precise current value of an asset at the moment before the fund would sell the asset. We believe that the alterations to the final value impact standard reinforce this intent. *See* Proposing Release, *supra* footnote 9, at text following n.170

[337] A fund's reasonable expectations pertain to each aspect of the definition of highly liquid investments, moderately liquid investments, less liquid investments, and illiquid investments—*i.e.,* a fund may rely on its reasonable expectations as to the fund's ability to convert the investment to cash (or, in some cases, sell or dispose of the investment) in current market conditions in a certain number of days and a fund may rely on its reasonable expectations as to whether the conversion to cash (or, in some cases, sale or disposition) of the investment can be done without significantly changing the market value of the investment.

thus this change should address commenters' concern that the proposal would create a value impact standard that is impractical to apply because any sale of an investment could affect its market value to some degree. We also believe that a fund's classification policies and procedures should address what it would consider to be a significant change in market value. Common alternatives that commenters suggested in place of the proposed value impact standard included an ''assuming no fire sale discounting'' (or similar) standard [338] or various quantitative materiality standards.[339] We believe a standard based on fire sale discounting would be too high of a value impact threshold, whereas suggested quantitative standards would be too precise and require burdensome calculations. However, we believe that the final value impact standard of ''without the conversion to cash (or in some cases, sale or disposition) *significantly changing* the market value'' appropriately balances our desire to capture the risk of dilution in cases of inadequate liquidity, while not also requiring funds to account for every possible value movement.

Finally, we note that the final value impact standard does not require the fund to incorporate general market movements in liquidity determinations. We recognize that there can be many reasons for the market value of a particular investment to fluctuate, separate from the fund's transactions in those investments. We do not intend for the value impact standard to capture movements in an investment's value due to market events. For this reason, we are not adopting a value impact standard based on the fund's most recent valuation of that investment as suggested by some commenters.[340] This type of standard may have required a fund to compare the investment's traded price with the fund's prior day valuation of the investment—such a comparison likely would reflect the effects of general market movements. The value impact standard we are adopting today only requires a fund to consider the market value impact of a hypothetical sale of an investment.

We recognize that the value impact standard incorporated in the ''illiquid investment'' definition is slightly different from the standard used in the definition of ''illiquid asset'' under the Commission's current guidelines, as the latter is based on whether a fund could sell an asset at ''approximately the value at which the fund has valued the investment.'' [341] We believe the revised value impact standard in the illiquid investment definition is preferable both because it prevents confusion by harmonizing the value impact standards within the classification framework and because, as just discussed, it removes any confusion that the value impact standard incorporates general market movements that would occur between when a fund strikes its NAV and when it trades the investment.[342]

With respect to commenters' concerns that the inclusion of a value impact standard in the rule 22e–4 classification categories could give fund shareholders the false impression that the fund guarantees a protected NAV, we do not believe that the final rule's classification categories imply a protected NAV. As noted in our discussion of the rule 22e–4 definition of ''liquidity risk,'' we believe that funds' narrative risk disclosure in their registration statements and other shareholder communications generally should make clear those risks that could adversely affect the fund's NAV, yield, and total return, including liquidity-related risks. All open-end funds are required to disclose that loss of money is a risk of investing in the fund.[343]

d. Consideration of Current Market Conditions

The definition of each liquidity category in the classification requirement we are adopting today specifically requires a fund to consider the time period in which an investment can be converted to cash (or, in some cases, sold or disposed of) in current market conditions.[344] The ''current market conditions'' specification is a change from the proposed classification requirement, which did not explicitly require that a fund consider current market conditions in making liquidity classification determinations.[345] The proposal, however, did require a fund to ''engage in an ongoing review'' of the liquidity of each of its portfolio positions.[346] The Commission suggested in the Proposing Release that a fund's policies and procedures for reviewing the liquidity of its portfolio positions generally should include procedures for assessing market-wide developments, as well as security- and asset-class-specific developments that could demonstrate a need to change the liquidity classification of a portfolio position.[347] The proposal's ongoing review standard (as opposed to the at-least-monthly review standard we are adopting today [348]) thus would have implicitly required that a fund's liquidity determinations reflect current market conditions.

Multiple commenters requested guidance and provided suggestions regarding the market conditions a fund should consider in classifying its portfolio assets' liquidity. Some commenters requested clarity on whether a fund would be required to classify the liquidity of its portfolio assets based on an assessment of normal market conditions or stressed market conditions.[349] One commenter suggested that the Commission provide additional guidance on how to assess the value impact that a fund's sale of portfolio assets could have under future stressed market conditions.[350] Additionally, one commenter suggested that any final liquidity classification framework should incorporate an assessment of reasonably foreseeable stressed conditions instead of current market conditions.[351]

In addition to the commenters who requested clarification or made suggestions about the market conditions referenced in the proposed liquidity classification framework, multiple commenters suggested alternative classification schemes that would more explicitly define liquidity categories based on distinctions in how a particular asset would trade under normal versus stressed market

[338] *See, e.g.,* SIFMA Comment Letter I; T. Rowe Comment Letter; *see also* AFR Comment Letter (suggesting standard should be that an asset could be sold at a price that does not create harm to fund shareholders due to the fund being forced to accept disadvantageous terms of sale in order to find a buyer).

[339] *See, e.g.,* Interactive Data Comment Letter (asset could be sold at a price that has a less than 5% impact on the value of that asset; asset could be sold at a price that does not create a 1 penny or more impact on the fund's NAV; fund could use volatility measures to determine security-specific materiality thresholds).

[340] IDC Comment Letter; NYC Bar Comment Letter.

[341] *See supra* section II.B.2

[342] *See also infra* section III.C.2.d.

[343] *See* Item 4(b)(1)(i) of Form N–1A.

[344] *See* rule 22e–4(a)(6); 22e–4(a)(8); 22e–4(a)(10); and 22e–4(a)(12). *See also infra* section III.C.5. (discussing the requirement to review liquidity classifications at least monthly and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of a fund's classifications of investments) and section III.E. (discussing the prohibition on acquiring illiquid investments if, immediately after acquisition, the fund would have invested more than 15% of its net assets in illiquid investments that are assets).

[345] *See* proposed rule 22e–4(b)(2)(i).

[346] *Id.*

[347] *See* Proposing Release, *supra* footnote 9, at text following n.253.

[348] *See* section III.C.5.

[349] *See, e.g.,* AFR Comment Letter; HSBC Comment Letter.

[350] *See* ICI Comment Letter II.

[351] *See* AFR Comment Letter.

conditions.[352] One commenter suggested that this alternative method of defining liquidity classification categories would reflect directly the extent to which assets' liquidity can dynamically change as market conditions evolve.[353]

After considering commenters' suggestions and concerns, we are adopting liquidity classification categories that reflect current market conditions. We appreciate commenters' concerns that liquidity classifications based on current market conditions capture only a moment-in-time picture of a fund's portfolio liquidity, which may not accurately reflect liquidity in changing market conditions. We also appreciate commenters' concerns that investments that are relatively liquid under normal conditions may exhibit significantly reduced liquidity during times of stress.[354] However, we are concerned that requiring a fund to predict how an investment *may* trade in stressed market conditions would introduce an additional layer of subjectivity into the classification process. Specifically, we are concerned that funds would likely assume varying levels of stress when classifying the liquidity of their portfolio investments. We believe that liquidity categories requiring consideration of stressed conditions thus could impede our goals of promoting consistency in funds' processes for assessing portfolio investments' liquidity and enhancing the data quality of funds' liquidity-related reporting and disclosure. Conversely, we believe the requirement to assess current market conditions would increase consistency among funds' liquidity determinations by limiting the number of variables informing funds' classification determinations. Although we understand that the adopted classification scheme may not produce absolute consistency in how funds classify the liquidity of their portfolio investments as funds' assumptions and individual facts and circumstances may differ,[355] classifying based on current market conditions will result in all funds' classifications at a given time reflecting the same market conditions.

We believe that it would be informative to Commission staff to understand how the same set of market conditions could disparately affect different funds' assessments of their liquidity and that of different asset classes. Also, we note that, to the extent that the markets in which funds' portfolio investments trade are currently stressed, consideration of current market conditions would de facto reflect consideration of stressed market conditions. Therefore, the requirement to consider current market conditions, along with the requirement for funds to review the liquidity of their portfolio investments at least monthly[356] and the Form N–PORT reporting requirements concerning funds' liquidity classifications,[357] will provide data that will help the staff evaluate the role of changing market conditions on funds' liquidity by comparing liquidity data across different sets of current market conditions over time. We believe this liquidity data would be more useful than data based on projected stressed market conditions, because it would reflect funds' assessments in light of actual, not anticipated, market stresses.

Finally, we note that while we are not incorporating a requirement to evaluate potential future stressed market conditions in the portfolio investment liquidity *classification* requirement, we continue to believe that it is appropriate to require funds to consider reasonably foreseeable stressed conditions as part of the liquidity risk *assessment* and *management* requirements.[358] We believe that funds' liquidity risk assessment should inform the extent to which funds are prepared to manage their liquidity under both normal and reasonably foreseeable stressed conditions—particularly because, for many asset classes, liquidity is adversely affected by market stress and funds need to have a liquidity risk management program that is resilient under all market conditions. Thus, as discussed throughout this Release, a fund must establish liquidity risk management policies and procedures appropriate in light of both normal and reasonably foreseeable stressed market conditions.

2. Discussion of Specific Classification Categories

a. Highly Liquid Investments

The classification requirement we are adopting today requires a fund to identify its ''highly liquid investments,'' that is, cash held by a fund and investments that the fund reasonably expects to be convertible to cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment. This category condenses the first two liquidity classification categories in the proposed classification requirement (assets convertible to cash within one business day, as well as two-to-three business days) to simplify the proposed classification framework. Multiple commenters who suggested simplified alternatives to the proposed approach suggested including a classification category based on portfolio assets' convertibility to cash within three days.[359] One such commenter suggested that ''highly liquid assets'' should include cash and any asset that can be converted to cash in the ordinary course of business within three business days.[360] Additionally, another commenter agreed that, given current redemption practices, funds should assess how much liquidity they may need over a three-day period.[361]

We continue to believe, as discussed in the Proposing Release, that it is important for funds to determine what percentage of their portfolio is convertible to cash—that is, available to meet redemptions—within the relatively short term. We understand that most funds typically pay redemption proceeds within a fairly short period (typically, one to three days) after receiving a shareholder's redemption request, even though a fund may disclose that it reserves the right to delay payment for up to seven calendar days, as permitted by section 22(e) of the Act.[362] Likewise, funds may find it useful to identify portfolio investments

[352] *See, e.g.,* BlackRock Comment Letter; J.P. Morgan Comment Letter; SIFMA Comment Letter III; T. Rowe Comment Letter.

[353] *See* BlackRock Comment Letter. This commenter also noted that ''the time needed to liquidate a position at a given price in a normal market environment will not be reflective of the market impact incurred when liquidating positions during stressed markets.''

[354] *See generally* MFS Comment Letter; NYC Bar Comment Letter.

[355] As discussed above, we recognize that funds are likely to make different assumptions in classifying the liquidity of their portfolio investments depending on the facts and circumstances relating to funds and their trading practices. *See supra* paragraph accompanying footnote 311.

[356] *See infra* section III.C.5.

[357] *See infra* section III.C.6.b.

[358] *See supra* section III.B. In discussing funds' liquidity risk assessment obligations under rule 22e–4, we note above that if a fund conducts stress testing to determine whether it has sufficient liquid investments to cover different levels of redemptions, a fund should incorporate the results of this stress testing into its liquidity risk assessment. *See supra* footnote 196.

[359] *See, e.g.,* Federated Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter I; Vanguard Comment Letter.

[360] *See* Vanguard Comment Letter.

[361] *See* MFDF Comment Letter (stating in the context of the proposed three-day liquid asset minimum, that ''[g]iven current redemption practices in the industry, we agree with the Commission that funds should assess how much liquidity they may need, both in normal and stressed market conditions, over a three-day period to effectively meet anticipated redemption requests.'').

[362] *See supra* footnote 9 and accompanying text.

that may be converted to cash quickly in order to meet unexpected or unusually high redemption requests, or to rebalance or otherwise adjust a portfolio's composition in all market conditions.

We also understand that funds often consider which portfolio investments can be sold and settled on a T + 1 to T + 3 basis when determining their very liquid investments.[363] While such an analysis may be useful, our decision to define highly liquid investments to include any investment that the fund reasonably expects to be convertible into cash in current market conditions in three business days or less is founded in our belief that funds should understand what portion of their investments are convertible to cash in a short period of time taking into account current market conditions, not solely on which asset transactions can be settled in three days or less from the trade date. An investment that takes two days to sell but one day to settle, for example, would be convertible to cash in a short period of time. Conversely, an asset that may settle two days after trade date, but which is reasonably expected to take at least three days to trade, would not be available in a short period of time. Accordingly, we believe we have appropriately defined ''highly liquid investments'' under rule 22e–4 notwithstanding initiatives to shorten the standard settlement cycle for most broker-dealer transactions from T + 3 to T + 2.[364]

In addition, we emphasize that the highly liquid investment category (and the related highly liquid investment minimum) should not be interpreted as the Commission suggesting that a fund should, as a matter of routine practice, meet redemptions first by selling its highly liquid investments. Rather, we believe part of a thorough understanding of a fund's liquidity profile includes an understanding of the nature and level of the fund's highly liquid holdings.[365] As noted above, we understand that funds currently place significance on understanding the portion of their portfolio representing very liquid investments, as it is not unusual for funds to determine the percentage of their portfolio that can be liquidated in the short-to-medium term.[366] We anticipate that a fund could determine that a broad variety of investments within different asset classes could be classified as highly liquid investments, depending on facts and circumstances.[367]

We note that, as with the proposal, the highly liquid investment category measures the time period in which an investment could be converted to cash in business days, as opposed to the other liquidity categories, which use calendar days. Some commenters suggested that, instead of the references to both business days and calendar days, the categories that the Commission adopts should only reference business days.[368] One commenter stated that basing all classification categories on business days instead of calendar days would be ''preferable from a consistency standpoint, and reasonable given the lack of expectations around receiving cash flows on non-business days.'' [369] Other commenters suggested alternative liquidity classification categories that, like the proposed categories, would reference both business days and calendar days.[370]

After considering these comments, we are continuing to reference business days in the highly liquid investment definition we are adopting, while referencing calendar days in the other liquidity classification categories. We appreciate commenters' concerns that classification categories that reference both business days and calendar days could add some complexity in the assumptions and models that funds may use in classifying the liquidity of their portfolio investments. However, as discussed below, we believe it is important to tie the time frames referenced in the moderately liquid, less liquid, and illiquid classification categories to the seven-calendar-day period in which funds are required to pay redeeming shareholders under section 22(e) of the Investment Company Act.[371] Although we could have referenced calendar days instead of business days in the highly liquid investment definition to help standardize the time periods referenced in all of the classification categories, we continue to reference business days in this classification category for several reasons. First, for short time periods, a calendar day standard could be unworkable and create absurd results if the time period were to encompass weekends or holidays, during which trading cannot be expected to occur. Second, many of the alternate classification categories that commenters suggested incorporated categories that referenced a three-business-day period,[372] and we understand from these comments and staff outreach that this is a workable (and, for some fund complexes, currently-used) period for a fund to consider in assessing the liquidity of its portfolio investments.[373]

b. Moderately Liquid Investments

A fund also will be required to identify its ''moderately liquid investments,'' that is, those investments the fund reasonably expects to be convertible into cash in current market conditions in more than three calendar days, but in seven calendar days or less, without the conversion to cash significantly changing the market value of the investment. These investments are those that are not immediately or very quickly convertible to cash, but that nevertheless may be converted to cash in a time frame that would permit funds to pay redeeming shareholders within the seven-day period established by section 22(e) of the Investment Company Act. We expect that this classification category will be an important component of the Form N–PORT reporting obligations because it will provide the Commission with information regarding the portion of a fund's portfolio that is not on the most liquid end of the spectrum, but still is sufficiently liquid to meet redemption requests within the statutory seven-day period without causing significant dilution. We also anticipate that the public will have an interest in gaining transparency into this information on an aggregate basis.[374] Several commenters who suggested simplified alternatives to the proposed classification approach

[363] *See supra* footnote 309.

[364] *See supra* footnote 9.

[365] *See infra* footnote 374 and accompanying text (discussing the use of moderately liquid assets to meet redemption requests).

[366] *See supra* footnote 363 and accompanying text.

[367] *See infra* section III.D.

[368] *See, e.g.,* Interactive Data Comment Letter; Nuveen Comment Letter.

[369] *See* Interactive Data Comment Letter; *see also* ICI Comment Letter I; T. Rowe Comment Letter (noting that the proposed classification categories could require a fund to make difficult distinctions in determining which assets can be converted to cash in three business days versus four calendar days). The note to rule 22e–4(b)(1)(ii) addresses situations where the period to convert an investment to cash depends on the calendar or business day convention. *See infra* footnotes 376 and accompanying text.

[370] *See, e.g.,* Markit Comment Letter; PIMCO Comment Letter.

[371] *See infra* sections III.C.2.b–d.

[372] *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[373] We also note that rule 15c6–1 under the Exchange Act, which was adopted in 1993 and became effective in 1995, established three business days as the standard settlement period for securities trades effected by a broker-dealer. Thus, we understand that many funds pay redemption proceeds within three business days after receiving a redemption request, because a broker or dealer will be involved in the redemption process. *See supra* footnote 32 and accompanying text. *See also supra* footnote 366.

[374] *See infra* section III.C.6.c.

recommended including a classification category based on portfolio investments' convertibility to cash within seven days.[375]

We understand that circumstances could arise in which the sale and settlement period for a particular portfolio position could be viewed as within three business days or four-to-seven calendar days. For example, if a sale were to occur on a Thursday and be settled on a Monday, the sale and settlement period could be viewed either as within three business days or four calendar days. This situation could cause ambiguity for reporting purposes. Thus, rule 22e–4, similar to the proposed rule, includes a note stating that a fund should classify the portfolio position based on the shorter period (*i.e.,* as a highly liquid investment).[376]

c. Less Liquid Investments

Additionally, a fund will be required to identify its ''less liquid investments,'' that is, those investments that the fund reasonably expects to be able to sell or dispose of in current market conditions in seven calendar days or less a without the sale or disposition significantly changing the market value of the investment, but where the sale or disposition is reasonably expected to settle in more than seven calendar days. Thus, the less liquid investments category focuses on investments whose sale cannot be settled quickly. For example, transactions in certain types of securities—such as certain foreign securities [377] and U.S. bank loan participations [378]—have historically entailed settlement periods that are longer than standard settlement periods in the broader securities markets. If a fund were to determine that securities within these asset classes, or other asset classes with longer-than-standard settlement periods, were able to be sold within seven calendar days, but could not be settled within this period, the fund should classify these securities as less liquid investments. As an example, certain foreign securities may be able to be sold in seven calendar days or less, but may be subject to capital controls that would limit the extent to which the foreign currency could be repatriated or converted to dollars within this time frame. Thus, these securities would be considered to be less liquid investments because they would be reasonably expected to settle in more than seven calendar days. We note that trades in certain investments, however, may take an extended period of time to settle.[379] In the event of an extended settlement period, at some point, a fund may need to consider re-classifying such an investment as illiquid.[380] We also note that if a fund holds a forward contract on a security, such as a forward in a transaction in the ''To-Be-Announced'' (''TBA'') market,[381] the convert to cash determination for that instrument may be based on the forward contract and not on the underlying securities to be received.[382]

The ''less liquid investments'' category, like the ''moderately liquid investments'' category and the ''illiquid investments'' category, directly reflects the statutorily required seven-day period for meeting redemption requests. The ''less liquid investments'' category is meant to identify for the Commission and its staff, as well as investors and other potential users, the portion of a fund's portfolio investments that may be available to meet redemption requests within seven days, but only to the extent that the fund addresses the lengthier settlement period associated with these investments. Because less liquid investments are those that may be sold, but not settled, within seven days, a fund generally could use less liquid investments to meet redemptions within seven days only if the fund obtained an additional source of financing (for example, a line of credit) to bridge the period until the sales would settle, or if the fund used its cash holdings to meet the redemptions while simultaneously selling the less liquid investment and then replenishing its cash holdings upon settlement.

Transparency regarding the portion of a fund's portfolio held in less liquid investments also could demonstrate those investments that could be liquidated in order to meet redemptions that would occur more than a week in the future, if a fund were to enter into a period of extended redemptions that it anticipates would last for multiple days. Because an open-end fund has an obligation to meet redemption requests within seven days, we believe it is important for funds to identify those investments that could pose certain challenges in being used to meet redemption requests within that time period, for purposes of the fund's own liquidity risk assessment and management,[383] as well as to provide transparency into certain funds or strategies that could have relatively limited liquidity compared to peer funds.

d. Illiquid Investments

A fund also will be required to identify those investments that it

[375] *See, e.g.,* Federated Comment Letter; Fidelity Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[376] *See* note to rule 22e–4(b)(1)(ii); *see also* note to proposed rule 22e–4(b)(2)(i); *see also supra* footnote 369 (discussing comments that noted situations where the period to convert an asset to cash depends on the calendar or business day convention).

[377] *See, e.g.,* Comment Letter of the Global Foreign Exchange Division to the European Commission and the European Securities and Markets Authority re: Consistent Regulatory Treatment for Incidental Foreign Exchange (FX) Transactions Related to Foreign Securities Settlement—''FX Security Conversions'' (Mar. 25, 2014), *available at www.gfma.org/Initiatives/Foreign-Exchange-(FX)/GFMA-FX-Division-Submits-Comments-to-the-HKMA-on-the—Treatment-of-Securities-Conversion-Transactions-under-the-Margin-and-Other-Risk-Mitigation-Standards* (''Typically, the settlement cycle for most non-EUR denominated securities is trade date plus three days ('T + 3'). Accordingly, the bank custodian or broker-dealer would enter into a FX transaction on a T + 3 basis as well. In some securities markets, for example in South Africa, the settlement cycle can take up to seven days (T + 7).'').

[378] *See, e.g.,* BlackRock, *Who Owns the Assets? A Closer Look at Bank Loans, High Yield Bonds and Emerging Market Debt,* Viewpoint (Sept. 2014) (''Who Owns the Assets?''), *available at https://www.blackrock.com/corporate/en-fi/literature/whitepaper/viewpoint-closer-look-selected-asset-classes-sept2014.pdf*; Michael Mackenzie & Tracy Alloway, *Lengthy US loan settlements prompt liquidity fears,* Fin. Times (May 1, 2014) *available at http://www.ft.com/intl/cms/s/0/32181cb6-d096-11e3-9a81-00144feabdc0.html*; Comment Letter of OppenheimerFunds on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (stating that ''loans still take longer to settle than other securities. Median settlement times for buy-side loan sales are 12 days'' and noting that an ''important tool in managing settlement times is the establishment of a credit line dedicated to bank loan funds.''). *See also* LSTA Comment Letter.

[379] *See infra* footnote 416 and accompanying text.

[380] *See* rule 22e–4(b)(1)(ii) (requiring review of portfolio classifications at least monthly, and more frequently, if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications).

[381] In the TBA market, lenders enter into forward contracts to sell agency mortgage-backed securities and agree to deliver such securities on a settlement date in the future. The specific agency mortgage-backed securities that will be delivered in the future may not yet be created at the time the forward contract is entered into. The purchaser will contract to acquire a specified dollar amount of mortgage-backed securities, which may be satisfied when the seller delivers one or more mortgage-backed securities pools at settlement. For a discussion of the TBA market, *see* Task Force on Mortgage-Backed Securities Disclosure, Staff Report: Enhancing Disclosure in the Mortgage-Backed Securities Markets (Jan. 2003), at section II.E.2, *available at http://www.sec.gov/news/studies/mortgagebacked.htm.*

[382] *See* ICI Comment Letter I (noting that the ''TBA market is similar to the futures market, in which physically-settled futures contracts may trade continuously (*e.g.,* daily) but the underlying reference assets are delivered at a later date (*e.g.,* once every 3 months).'').

[383] For example, a fund's holdings of less liquid investments typically would be a relevant consideration when assessing whether its strategy is appropriate for an open-end fund and determining its highly liquid investment minimum. *See supra* section III.B; *see also infra* section III.D.2.

considers to be ''illiquid investments.'' Rule 22e–4 as adopted today defines an illiquid investment as any investment that a fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment. Like the ''less liquid investments'' and ''moderately liquid investments'' category, the ''illiquid investments'' category references the statutorily required seven-day period for meeting redemption requests. However, while the ''less liquid investments'' and ''moderately liquid investments'' categories are based on the time period in which investments are convertible to cash—that is, sold with the sale settled—the ''illiquid investments'' category only reflects the period for selling (or otherwise disposing of) an investment and does not also consider settlement timing.

Rule 22e–4 as proposed would have included a limit on funds' ability to acquire ''15% standard assets,'' or any asset that may not be sold or disposed of in the ordinary course of business within seven calendar days at approximately the value ascribed to it by the fund.[384] Under the proposal, 15% standard assets were not a category in the classification framework. In determining whether an asset was a 15% standard asset, a fund would not have been required to take into account any specific market or other factors, or assess position size as it could reflect market depth, in determining whether it could sell the asset within seven days without the specified value impact.[385] The proposed limit was intended to be consistent with the Commission's guidelines limiting funds' holdings of illiquid assets to 15% of net assets [386] and most commenters supported the proposed 15% limit.[387]

We understand, however, that funds have engaged in a variety of practices in determining the illiquidity of investments. It has been our staff's experience that some of these practices are less robust than others. We believe that the definition of illiquid investments we are adopting today will provide a clear standard for determining the illiquidity of investments and will better ensure that all funds are determining the illiquidity of investments more consistently. We recognize, however, that as a result of this new definition, some funds may take into account relevant market, trading, and investment-specific considerations, as well as market depth, for the first time and therefore, as discussed below, some funds may determine that a greater percentage of holdings are illiquid.[388]

We note that some commenters suggested strengthening the current illiquid asset guidelines.[389] Many commenters also suggested that these assets continue to be referred to as ''illiquid assets'' (not 15% standard assets) and be harmonized with any classification system that the Commission ultimately adopts.[390] Additionally, commenters requesting such a harmonization also stated that value impact standards should be consistent between the 15% standard asset definition and the categories used in the classification.[391]

We have determined to incorporate an illiquid investment category into rule 22e–4's broader classification requirement for several reasons. Specifically, harmonizing funds' illiquid investment determinations with the general liquidity classification framework will create consistency in the value impact standards across liquidity categories.[392] As noted above, the illiquid investment value impact standard in final rule 22e–4 has been changed from whether a fund could sell an investment at ''approximately the value at which the fund has valued the investment,'' to whether a fund could sell the investment ''without the sale or disposition significantly changing the market value of the investment.'' [393] We are adopting this new value impact standard for illiquid investment determinations in part as a response to commenters' concerns about confusion that could arise from conflicting standards. Accordingly, the value impact standard for illiquid investments is substantially identical to the value impact standard for all other classification categories.[394] As discussed in more detail above, the final classification value impact standard highlights that: (i) The standard does not require a fund to actually re-value or re-price an investment for classification purposes; and (ii) the standard does not require the fund to incorporate general market movements in liquidity determinations or estimate market impact to a precise degree.[395]

Significantly, in harmonizing features of the illiquid investment category with other categories in the liquidity classification framework, we also are replacing existing Commission guidance on identifying illiquid assets with new regulatory requirements regarding the process for determining that certain investments are illiquid.[396] In the Proposing Release, we noted that we were proposing to withdraw Commission guidance because we believed the proposal would provide ''a more comprehensive framework for funds to evaluate the liquidity of their assets.'' [397] We also requested comment on whether additional guidance is needed in connection with the proposed codification of the Commission's illiquid asset guidelines. Although many commenters supported the proposed codification of the Commission's guidelines on illiquid assets,[398] most did not specifically comment on the Commission's proposal to withdraw the guidance associated with its illiquid asset guidelines. However, certain commenters suggested that stronger requirements and guidance regarding assets subject to the 15% limit could be appropriate.[399] One commenter expressed concern that the Commission's guidelines today are having only a ''limited impact on fund behavior'' and that the current 15% limit ''applies to an inappropriately narrow range of assets and is therefore ineffective as an investor protection mechanism.'' [400] This commenter suggested that the limit should encompass not only those assets that are not able to be sold within seven days at approximately the value ascribed by the fund, but also those assets that cannot be converted to cash (that is, sold with the sale settled) within this same period, taking into account this same value impact standard.[401]

We agree with those commenters that suggested the Commission's current guidelines, together with many funds' interpretation of these guidelines today,

[384] *See* proposed rule 22e–4(b)(2)(iv)(D).

[385] *See* Proposing Release, *supra* footnote 9, at text following n.355.

[386] *See id.*, at section III.C.4.

[387] *See, e.g.,* Federated Comment Letter; Fidelity I Comment Letter; SIFMA Comment Letter I; State Street Comment Letter.

[388] *See infra* paragraph accompanying footnote 419.

[389] *See infra* footnotes 399–401 and accompanying text.

[390] *See, e.g.,* AFR Comment Letter; BlackRock Comment Letter; Interactive Data Comment Letter; Markit Comment Letter.

[391] *See, e.g.,* AFR Comment Letter; Markit Comment Letter.

[392] *See supra* section III.C.1.c.

[393] *See* rule 22e–4(a)(8).

[394] *Compare* rule 22e–4(a)(8) *with* rule 22e–4(a)(6), (10) and (12).

[395] *See supra* section III.C.1.c.

[396] *See infra* footnote 561 and accompanying text.

[397] *See* Proposing Release, *supra* footnote 9, at text following n.356.

[398] *See supra* footnote 387.

[399] *See, e.g.,* AFR Comment Letter; *see also* Keefer Comment Letter; Wahh Comment Letter (both suggesting that the 15% standard not just be limited to the time of purchase, but instead should be an ongoing requirement).

[400] *See* AFR Comment Letter.

[401] *Id.*

may result in funds only focusing on certain largely structural features that can lessen the liquidity of an investment (such as transfer restrictions and trading halts) rather than more market- and trading-based features. This can result in funds considering only an artificially narrow set of portfolio investments to be illiquid. As we discussed in the Proposing Release, we understand that today it is common—even for complexes with generally robust liquidity risk management procedures—to treat the process for determining whether an investment is illiquid under the current Commission guidelines as a compliance or ''back-office'' function, with little indication that information generated from the risk or portfolio management functions informs the compliance determinations. Thus, we understand that some funds currently may determine that an investment is liquid, rather than illiquid, primarily based on certain structural characteristics of the investment without assessing market or trading information or other potentially relevant factors. Such investments include private equity securities and certain other privately placed or restricted securities,[402] as well as certain instruments or transactions that by their structure do not mature and are not readily transferable in seven days or less, including term repurchase agreements.[403] While a focus on structural features alone may be appropriate in some circumstances (for example, an across-the-board assumption that all securities with a trading halt are illiquid, without an additional assessment of market or trading factors), in other circumstances the failure to consider market, trading, and other relevant information could result in a fund considering an investment to be liquid even if the fund cannot reasonably expect to sell amounts it reasonably anticipates trading without the sale or disposition significantly changing the market value of the investment within seven calendar days.

For these reasons, rule 22e–4 as adopted today, requires a fund to incorporate certain additional considerations in determining whether an investment is illiquid. We are withdrawing existing guidance and replacing it with new regulatory requirements and guidance regarding the process for determining whether a portfolio investment is illiquid.[404] A fund would have to take into account ''relevant market, trading, and investment-specific considerations'' when determining whether an investment is an illiquid investment.[405]

The guidance the Commission provides below on matters funds might consider in assessing market, trading, and investment-specific considerations reflects factors that the Commission has previously said are reasonable examples of factors to evaluate in determining whether a rule 144A security is liquid and makes them more generally applicable to assessing liquidity of other investments.[406] Thus, this guidance draws on past Commission guidance for evaluating whether a certain type of investment is liquid or illiquid, and extends this process to a fund's liquidity determinations regarding all types of investments. We recognize that the guidance in the Rule 144A Release anticipates that fund boards will determine whether certain securities are liquid or illiquid.[407] While we have considered the specific guidance factors discussed in the Rule 144A Release in the context of the guidance we provide herein with respect to classifying the liquidity of portfolio investments, neither our guidance nor the final rule places the responsibility for determining whether a specific security is liquid or illiquid on the fund's board. The board would, however, be responsible for approving the fund's liquidity risk management program, which provides the framework for evaluating the liquidity of the fund's investments, and for reviewing (at least annually) a written report that describes a review of the program's adequacy and the effectiveness of its implementation. Overall, a fund must classify its investments by focusing on those market, trading, and investment-specific considerations that are relevant to its portfolio. We believe that this principles-based approach should result in funds making realistic and well-informed determinations about investments' liquidity (or illiquidity) based on analysis beyond simple decisions solely about structural features of an asset class.

As with other liquidity classification categories and as discussed in more detail in section III.C.3.a below, funds can determine illiquid investments on an asset-class basis, with exceptions for investments whose liquidity characteristics significantly differ from the class. For example, a fund could employ procedures whereby certain asset classes are initially considered liquid, and then further evaluated to decide whether relevant market, trading, and investment-specific considerations should result in a particular investment being treated as an exception and a change to the initial liquidity determination.[408] A fund could use the specific guidance factors we discuss in section III.C.4 below as part of its process for taking into account relevant market, trading, and investment-specific considerations in determining whether an investment is illiquid. For example, a fund that generally considers certain high-yield bonds *not* to be illiquid (for instance, a fund that typically considers high-yield domestic corporate bonds to be moderately liquid investments) could determine that certain securities within this class are actually illiquid investments, based on restrictions on trading that could occur if one of these bonds' issuers were to enter bankruptcy and the debt were to become distressed. Conversely, a fund that generally considers certain investments to be illiquid (such as rule 144A securities) could determine that some of these investments should be included in another liquidity category based on relevant market, trading, and investment-specific considerations.[409]

We also understand, based on staff outreach, that some fund complexes make determinations of whether a portfolio investment is liquid (or illiquid) under the current Commission guidelines based on whether a single trading lot for the investment can be sold within seven days under normal market circumstances. Certain funds interpret this to allow them to declare an entire holding to be liquid even if they could only sell a very small portion of it without a significant value impact. Staff has observed that these fund practices and interpretations of current

[402] *See* Restricted Securities Release, *supra* footnote 37; *see also* Rule 144A Release, *supra* footnote 37.

[403] *See* Interval Fund Proposing Release, *supra* footnote 41.

[404] *See* rule 22e–4(b)(1)(ii), (iv).

[405] *See* rule 22e–4(b)(1)(ii).

[406] *See infra* footnotes 560 and 561 and accompanying text.

[407] *See* Rule 144A Release, *supra* footnote 37 (stating that ''determination of the liquidity of Rule 144A securities in the portfolio of an investment company issuing redeemable securities is a question of fact for the board of directors to determine, based upon the trading markets for the specific security.'').

[408] *See infra* section III.C.3.a (discussing that, under rule 22e–4, a fund would generally be permitted to classify its portfolio investments according to their asset class, but if it has information that a particular investment has different liquidity characteristics than other investments within the same asset class, it would need to treat that investment as an exception to the way that the fund classifies its other holdings within the same asset class).

[409] *See* rule 22e–4(b)(ii). *See also* section III.C (discussing the various considerations required when classifying the liquidity of fund securities).

Commission guidelines may result in a fund determining that very few, if any, portfolio investments are illiquid under the current guidelines, even in situations in which the liquidity of a large portion of a fund's portfolio is fairly limited.

Given the practices described above when funds did not consider market depth in making liquidity determinations and considering the comments discussed above regarding the proposed illiquid asset limit, under the final rule, a fund will be required to consider market depth in determining whether to classify portfolio investments as illiquid investments. To the extent that the fund determines that trading varying portions of a position is reasonably expected to significantly affect the liquidity characteristics of that investment—that is, the market depth for the investment is reasonably expected to significantly affect its liquidity—the fund would need to take this into account in classifying the investment as illiquid.[410] These are the same market depth considerations a fund would have to take into account in classifying the liquidity of its portfolio investments generally, as discussed in detail below.[411]

Members of the fund industry have argued that because a fund will not likely need to sell its entire position in a particular investment under normal market circumstances, liquidity determinations should be based on the sale of a single trading lot for that investment, except in unusual circumstances.[412] However, a fund could encounter situations in which it needs to liquidate larger portions than one trading lot of its positions in order to meet redemption requests, but cannot do so within the seven-day time period required under section 22(e). As discussed below, we believe that the market depth considerations required by the final classification requirement will appropriately require a fund to consider situations in which the size of a fund's holdings could significantly affect those holdings' liquidity and impact the fund's ability to manage its liquidity risk—that is, when portfolio liquidity may be significantly constrained by the fund's ability to trade meaningful sizes of its portfolio holdings. We believe this assessment of market depth will assist in illiquidity determinations incorporating a realistic analysis of a fund's ability to meet redemption requests without significant dilution, and thus in funds better managing liquidity risk.

As discussed above, one commenter suggested extending the definition of illiquid assets to encompass not only those assets that are not able to be sold within seven days at approximately the value ascribed by the fund, but also those assets where the sale cannot be settled within this same period, taking into account the same value impact standard.[413] After considering this suggestion, we have ultimately decided that the "illiquid investments" category under rule 22e–4 should reflect only the period for selling or disposing of an investment and not also consider settlement timing. Instead, the "less liquid" category reflects those investments that could be sold, but not settled, within seven days without a significant value impact. Investments that *cannot be sold* within seven days without a significant value impact (illiquid investments, under rule 22e–4) have different liquidity characteristics and are essentially less liquid than investments that *can be sold* within seven days without a significant value impact, but whose sale cannot be settled within this period (less liquid investments, under rule 22e–4).[414] As discussed above, less liquid investments could still be considered a limited source of liquidity for meeting redemptions within the seven-day period specified under section 22(e) of the Act, with the caveat that a fund may have to address certain challenges associated with their settlement, whereas a fund's illiquid investments are structurally or as a matter of market dynamics less liquid and a fund may be unable to use them to meet redemptions within seven days.[415]

However, we note that trades in certain investments may take an extended period of time to settle. Trades in some low quality loans, for example, may not settle for a number of months.[416] A fund that holds less liquid investments with extended settlement periods must develop a liquidity risk management program that takes into account the liquidity risks associated with extended settlement periods.[417] These policies and procedures could include limits on the amount of less liquid investments with extended settlement periods a fund will hold or more frequent liquidity classification reviews for this type of holding. Such a fund may also wish to consider the circumstances in which it would seek to obtain expedited settlement (where possible) and establish tailored policies and procedures regarding how and when it would seek expedited settlement. Funds may also wish to consider whether to obtain an additional source of financing (for example, a committed line of credit dedicated to that fund) to bridge the period until the sales would settle.

We believe that the new requirement to take into account market, trading, and investment-specific considerations, as well as to consider market depth, in identifying illiquid investments responds to the concern that the way illiquid investments are currently defined has only limited effects on funds' liquidity risk management and the liquidity of their portfolios.[418] We understand that, to the extent a fund is not currently taking into account market, trading, and investment-specific considerations or market depth when assessing the illiquidity of its investments, the new regulatory requirements regarding the process for determining that certain investments are illiquid under the rule are likely to result in the fund determining that a greater percentage of its holdings are illiquid than under the guidelines. In extreme circumstances, this—in combination with the limitation on funds' illiquid investment holdings to 15% of its net assets discussed at section III.E below—could cause certain funds to have to modify their investment strategies or reconsider their structure as open-end funds. We also understand that these requirements will entail additional operational costs, to

[410] Rule 22e–4(b)(1)(ii).

[411] *See infra* III.C.3.b.

[412] *See* Investment Company Institute, *Valuation and Liquidity Issues for Mutual Funds* (Feb. 1997), at 42.

[413] *See supra* footnote 401 and accompanying text.

[414] When a fund sells an asset (even if the transaction has not yet settled), the fund has a receivable on its books, and any potential loss from the sale of that asset will be reflected in the fund's NAV. If the fund has an asset it cannot sell, however, the fund continues to be exposed to the risk of unknown potential loss until the asset can be sold.

[415] *See supra* paragraph accompanying footnote 383 (discussing less liquid investments and the extent to which less liquid investments may be available to meet redemption requests within seven days if a fund addresses certain challenges associated with their sale and settlement).

[416] *See e.g.,* Michael Mackenzie and Tracy Alloway, *Lengthy US loan settlements prompt liquidity fears,* Financial Times (May 1, 2014), *available at http://www.ft.com/cms/s/0/32181cb6-d096-11e3-9a81-00144feabdc0.html#axzz4HQiQv5wj* (noting that a quarter of new loans being issued were taking more than 30 days to settle).

[417] Such extended settlement period securities have the potential to pose heightened liquidity risks for funds, and thus policies and procedures that are reasonably designed to assess and manage the liquidity risk of a fund that holds such securities would take into account the particular liquidity risks raised by such holdings. *See* rule 22e–4(b)(1)(i).

[418] *See supra* footnote 400 and accompanying text.

the extent that funds today do not generally take into account relevant market, trading, and investment-specific considerations, or market depth, in determining whether their portfolio investments are illiquid. However, as discussed in detail in the Economic Analysis section below, we believe that these costs are justified by the investor protection benefits that we believe will result from better portfolio liquidity assessments.[419]

3. Required Classification Procedures

a. Classification Based on Asset Class

Rule 22e–4, as adopted today, generally permits a fund to, as a starting point, classify the liquidity of its portfolio investments according to their asset class.[420] Notwithstanding this general approach, a fund will be required to separately classify any investment if the fund or its adviser, after reasonable inquiry, has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class.[421] For example, if the fund or its adviser were to know that particular large-capitalization equity was affected by adverse events at the issuer that caused it to have different liquidity characteristics than the asset class as a whole, it would be required to treat that investment as an exception and classify it separately. As another example, a fund could decide that high credit quality corporate bonds generally fall into a particular liquidity category, but if the fund or its adviser had information that certain bonds' bid-ask spreads are significantly wider or more volatile than those of their peers, it would be required under rule 22e–4 to separately assess these bonds and potentially classify them into a less-liquid category than the fund's other holdings within the same asset class. We expect that, based on a fund's responsibility under the rule to classify each of its investments after reasonable inquiry and taking into account relevant market, trading, and investment-specific considerations, there are some asset classes, such as those encompassing some bespoke complex derivatives or complex structured securities,[422] that have such a range of liquidity characteristics that each position would need to be classified individually.

Rule 22e–4 as proposed would not have allowed a fund to, as a starting point, classify its portfolio investments according to asset class. The proposed rule instead would have required a fund to classify each of its positions in a portfolio asset (or portions of a position) according to the liquidity categories included in the rule.[423] In the Proposing Release, we requested comment on whether the proposed classification requirement and associated liquidity categories reflected the manner in which funds currently assess and categorize the liquidity of their portfolio holdings as part of their portfolio and risk management.

Many commenters objected to the proposed position-level classification requirement, arguing that it does not reflect recognized liquidity risk management practices and does not reflect industry best practices.[424] Commenters likewise maintained that, instead of assessing portfolio liquidity on a position-by-position basis, asset managers tend to focus on the liquidity of certain asset classes and/or generally view liquidity at the portfolio level based on a ''top-down'' analysis.[425] On the other hand, some commenters acknowledged that certain asset managers may classify the liquidity of individual portfolio positions within a range of categories, albeit not at the level of detail suggested by the proposal, or for all classes of portfolio assets.[426]

Commenters stated that considering portfolio liquidity on the basis of asset class, at least as a starting point, has practical, operational, and conceptual benefits compared to considering the liquidity of each portfolio position individually.[427] Commenters stated that assets with certain similar characteristics are often ''highly comparable and substitutable from a liquidity perspective,'' [428] and liquidity assessments based on asset class would permit a fund manager to account for differences in market structure and portfolio management objectives among asset classes.[429] Commenters also argued that evaluating and classifying each portfolio asset individually would be ''overly burdensome and near-impossible to manage,'' as a fund complex may collectively hold hundreds of thousands of individual portfolio assets,[430] and the data required to classify each asset individually may not be readily available for all asset types (particularly for fixed income or other OTC assets).

Relatedly, multiple commenters suggested alternative liquidity classification schemes that would be based on an ''asset-type mapping with exceptions'' analysis.[431] These alternatives used an approach where a fund's portfolio assets' liquidity generally would be classified by asset class—with exceptions to the extent a particular portfolio asset demonstrates liquidity characteristics that differ from the liquidity of its asset class generally and that are deemed to make the position substantially more or less liquid.[432] Assets treated on an exception basis could be placed in a different liquidity category than the rest of their asset class, which could be either higher or lower.[433] The asset class analysis provisions of final rule 22e–4 generally take this approach. The primary difference between commenters' ''asset-type mapping with exceptions'' suggested approaches and the approach incorporated in final rule 22e–4 is that commenters' suggested approaches would rely on the Commission (or an industry group) assigning default liquidity categories to each asset class, whereas the approach we are adopting would depend on each fund performing this exercise based on its adviser's individual experience in the markets.

We believe that this approach strikes an appropriate balance between lessening operational burdens associated with classification and recognizing that many investments within an asset class may be considered interchangeable from a liquidity perspective, on one hand, and providing reasonably precise liquidity classifications that appropriately reflect investments' liquidity characteristics, on the other hand. This approach also should leverage fund managers' current practices to a greater degree than under the proposal. A fund's asset-class-based classification procedures should incorporate sufficient detail to meaningfully distinguish between asset

[419] *See infra* section 0.C.

[420] *See* rule 22e–4(b)(1)(ii)(A).

[421] *Id.*

[422] *See* 2015 Derivatives Proposing Release, *infra* footnote 222 (discussing bespoke complex derivatives).

[423] Proposed rule 22e–4(b)(2)(i).

[424] *See, e.g.,* Credit Suisse Comment Letter; Dodge & Cox Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[425] *See, e.g.,* Dodge & Cox Comment Letter; ICI Comment Letter III; IDC Comment Letter; Charles Schwab Comment Letter.

[426] *See* CFA Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Wellington Comment Letter.

[427] *See, e.g.,* Dechert Comment Letter; HSBC Comment Letter; ICI Comment Letter I; Wellington Comment Letter.

[428] *See* ICI Comment Letter I.

[429] *See* Vanguard Comment Letter.

[430] *See* Fidelity Comment Letter.

[431] *See* SIFMA Comment Letter III; *see also* BlackRock Comment Letter; T. Rowe Comment Letter.

[432] *See, e.g.,* SIFMA Comment Letter III.

[433] *Id.*

classes and sub-classes. For example, a fund may wish to distinguish how it classifies its equity securities based on factors such as the market(s) in which the security's issuer is based, market capitalization, and whether the security is common or preferred stock. As another example, a fund may wish to distinguish its fixed income securities based on factors such as issuer type, the market(s) in which the issuer is based, seniority, age, and credit quality, and to distinguish its holdings of structured products based on tranche seniority and credit quality. We do not consider it appropriate for a fund to use very general asset class categories (*e.g.,* ''equities,'' ''fixed income,'' and ''other'') in classifying the liquidity of its portfolio investments, as these broad categories would likely not permit a fund to identify investments with fungible liquidity characteristics. A fund's asset-class-based classification procedures also should include procedures for updating default asset-class liquidity classifications as relevant market, trading, and investment-specific considerations warrant.[434]

A fund would be required to separately classify any investment within an asset class if the fund or its adviser were to have information about any market, trading, or investment specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class (its ''exception processes'').[435] Rule 22e–4 does not specify precisely how a fund must identify investments that should be classified separately as part of its exception processes. However, reasonably designed policies and procedures would likely include specifying the sources of inputs that inform its exception processes (for example, inputs from the fund's portfolio management, risk management, and/or trading functions), as well as particular variables that could affect the fund's classification of certain investments. For example, a fund could determine that a particular investment should be classified differently than other investments within its asset class if the market for that particular investment were exceptional in terms of size, breadth, or depth, or if the investment's typical bid-ask spreads were generally wider, narrower, or more volatile than the bid-ask spreads of other assets within the asset class. A fund could incorporate an assessment of the liquidity classification guidance factors discussed below, as the fund determines appropriate, in its exception processes.[436]

b. Required Procedures for Considering Market Depth

Under rule 22e–4 as adopted today, a fund would be required to determine whether trading varying portions of a position in a particular portfolio investment, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect the liquidity characteristics of that investment.[437] To the extent that the fund determines that trading varying portions of a position *is* reasonably expected to significantly affect the liquidity characteristics of that investment—that is, the market depth for the investment is reasonably expected to significantly affect its liquidity—the fund would need to take this into account in classifying the liquidity of that investment.[438] As discussed in more detail below, this requirement would have a fund consider portions of a portfolio position that are larger than a single trading lot, but not necessarily the position's full size, in assessing its portfolio investments' liquidity.

These market depth-related requirements are meant to substitute for, and modify, the language of proposed rule 22e–4 that would have effectively required a fund to consider position size in classifying the liquidity of its portfolio investments. As discussed above, proposed rule 22e–4 would have had a fund consider, for each portfolio position, the amount of time it would take to convert the entire position, or portions thereof, to cash.[439] Under this proposed requirement, if a fund were to conclude that it would take the fund longer to convert its entire position in an asset to cash, it could determine, for example, that 50% of the position should be classified in one liquidity category, and the remaining 50% should be classified in another category.

This aspect of the proposed requirement arose from our belief that a fund should consider its ability to trade larger portions of a portfolio asset than a single trading lot in assessing its portfolio investments' liquidity. The ability to quickly trade larger portions of a particular position is a reflection of market depth for a particular asset, which is a well-recognized aspect of assessing liquidity.[440] In the Proposing Release, we responded to arguments that because a fund will not likely need to sell its entire position in a particular asset under normal market conditions, liquidity determinations should be based on the sale of a single trading lot for that asset, except in unusual circumstances.[441] We noted that, although we agreed that a fund not being able to convert its entire position in an asset to cash at a price that does not materially affect the value of that asset should not, by itself, be dispositive of a portfolio asset's liquidity, assessing liquidity only on the basis of the ability to sell and receive cash for a single trading lot of an asset ignores the fact that a fund may need to sell all (or a significant portion) of its position.[442]

Multiple commenters expressed concern about the proposed requirement to consider full position size in classifying the liquidity of a fund's portfolio assets.[443] Commenters argued that many industry participants currently assess asset liquidity by trading lot (as opposed to evaluating whether a fund can exit an entire position within a certain time period), reflecting that a fund generally would not need to liquidate an entire large position unexpectedly.[444] Commenters also contended that this aspect of the proposal could result in large funds' portfolio liquidity appearing artificially low compared to smaller funds because large funds are more likely to hold larger positions and determine that they could not quickly liquidate these positions entirely without a value impact.[445] Commenters argued that it could be misleading for large funds to

[434] *See* rule 22e–4(b)(1)(ii) (requiring funds to classify their investments taking into account relevant market, trading, and investment-specific considerations and to review their portfolio investments' classifications if changes in these considerations are reasonably expected to materially affect one or more of their investments' classifications).

[435] *See* rule 22e–4(b)(1)(ii)(A).

[436] *See infra* section III.C.4.

[437] *See* rule 22e–4(b)(1)(ii)(B).

[438] *Id.*

[439] *See* proposed rule 22e–4(b)(2)(i); *see also supra* section III.C.2.d.

[440] *See infra* footnote 526 and accompanying text.

[441] *See* Proposing Release, *supra* footnote 9, at n.177 and accompanying text.

[442] *See id.,* at paragraph accompanying n.177. For example, a fund needing to sell certain assets in order to meet redemptions may need to sell more than one trading lot of a particular asset. In addition, a fund may determine to dispose of an entire position because of deteriorating credit quality or other portfolio management factors. Similarly, an index fund may need to sell an entire position in an asset if that asset falls out of the tracked index.

[443] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[444] *See, e.g.,* ICI Comment Letter I; Charles Schwab Comment Letter; Vanguard Comment Letter.

[445] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Oppenheimer Comment Letter; SIFMA Comment Letter I.

appear to be less liquid than smaller funds, because large funds' portfolios might actually entail less liquidity risk compared to smaller funds (because each position, while large in absolute size, is a smaller portion of the overall portfolio than may be the case in smaller funds), and large funds may have greater resources than smaller funds to manage liquidity effectively.[446] For example, one commenter stated that large funds often have more diversified holdings than smaller funds and may wield more negotiating power with broker-dealers.[447]

The market depth approach we are adopting takes commenters' concerns into account, although as discussed above we continue to believe that an investment strategy involving large positions in particular issuers—particularly if the fund's portfolio is relatively concentrated—is relevant to assessing liquidity risk.[448] We appreciate that, in many cases, a fund may not have to trade large portions of its portfolio holdings in relatively short time periods in order to meet redemptions, or to otherwise manage its liquidity risk. For example, a fund may not need to often quickly convert large portions of its portfolio investments to cash, based on its cash flow projections (*e.g.,* if the fund's investors are known to be primarily long-term investors) and other liquidity risk assessment factors.[449] We also recognize that there could be situations in which the requirement to consider entire position size in classifying a fund's portfolio investments, regardless of the size of trades a fund typically engages in, could make a fund appear to be less liquid than the fund's actual trading experiences in light of its portfolio investments' market depth. This could be misleading if the fund were actually able to trade a large percentage of its holdings fairly quickly without the fund's trades significantly moving the investments' prices. We believe that the required market depth considerations incorporated into the final classification requirement will permit a fund to more realistically assess the liquidity of its portfolio investments because they allow a fund to classify and review its portfolio investments taking into account position sizes that the fund would reasonably anticipate trading.

We believe that if a fund reasonably anticipates trading sizeable portions of its portfolio positions, the fund's portfolio liquidity could be adversely affected by a lack of market depth for its portfolio investments. A fund could reasonably anticipate trading sizeable portions of its portfolio positions if it often trades relatively large portions of its portfolio positions. Likewise, a fund may not trade larger portions of its portfolio positions on a regular basis, but could reasonably anticipate, based on past flow patterns or current market conditions that it could encounter larger-than-typical redemptions that would necessitate larger portfolio trades. In both of these examples, such a fund could conclude that it may be difficult to find trading partners for a particular portfolio investment, or may be difficult to sell the investment within a particular time frame without this sale causing a significant value impact. For this reason, rule 22e–4 requires a fund to consider the sizes of a particular investment that the fund would reasonably anticipate trading and whether trading in such sizes could significantly affect the investment's liquidity. If so, the fund would be required to take this into account in classifying the liquidity of that portfolio investment.[450] If the fund determined, after conducting the required market depth analysis, that a downward adjustment in the liquidity classification of a particular investment is appropriate, the new liquidity classification that the fund assigns to this investment would apply to the entirety of the fund's position in that investment (not, as proposed, to portions of that position). This approach is meant to lessen burdens on funds, as well as respond to commenters' concerns, by focusing a fund's market depth considerations on circumstances in which a fund's practices in trading varying portions of its portfolio positions could have a disproportionate effect on its portfolio investments' liquidity.

Rule 22e–4 directs a fund to consider sizes that the fund would reasonably anticipate trading in assessing the impact of market depth on an investment's liquidity.[451] Depending on the liquidity risk factors that a fund must consider under rule 22e–4(b)(1)(i), as well as other factors including the fund's size, a fund could reasonably anticipate selling various portions of its position in a particular portfolio investment, or various dollar amounts or block sizes of a particular portfolio investment.[452] For example, it may be appropriate for a fund with a highly liquid portfolio, with very stable and minimal cash flow projections and significant cash holdings and operating in very stable market conditions, to adopt policies and procedures that consider whether trading relatively small fractions of each of the fund's portfolio holdings would result in significant liquidity impacts. On the other hand, we would generally consider it appropriate for a fund whose holdings are relatively illiquid and/or fairly concentrated, with unpredictable cash flow projections or deteriorating market conditions in the markets in which it invests, to consider whether trading larger portions of its portfolio holdings would result in significant liquidity impacts.

c. Classification Issues Arising With Respect to Derivatives Transactions

Rule 22e–4 requires that the liquidity classification and review requirements cover each of the fund's investments, including derivatives transactions, and that a fund take into account relevant market, trading, and investment-specific considerations in classifying the liquidity of its investments.[453] The rule also states that for derivatives transactions that a fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, the fund must identify the percentage of its highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories.[454] A fund also will be required to disclose these percentages on its Form N–PORT filings.[455] We believe a fund's disclosure of this percentage will permit

[446] *See, e.g.,* SIFMA Comment Letter I; *see also* BlackRock Comment Letter; Oppenheimer Comment Letter; Vanguard Comment Letter; Wellington Comment Letter.

[447] *See* BlackRock Comment Letter.

[448] *See supra* footnotes 210–212 and accompanying text.

[449] *See* rule 22e–4(b)(1)(i).

[450] *See* rule 22e–4(b)(1)(ii)(B).

[451] *Id.*

[452] *See, e.g.,* Kapil Phadnis, *Block Trading in Today's Electronic Markets,* Bloomberg Tradebook (May 20, 2015), *available at http://www.bloombergtradebook.com/blog/block-trading-in-todays-electronic-markets/* (discussing block trading in the equity markets and noting that New York Stock Exchange Rule 72 defines a ''Block'' as at least 10,000 shares or $200,000, whichever is less); *Got Liquidity?,* BlackRock Investment Institute (Sept. 2012) (''Got Liquidity?''), at 6, *available at https://www.blackrock.com/investing/literature/whitepaper/got-liquidity-us-version.pdf* (indicating that, from 2010–2012, block trades of over $5 million represented between approximately 30%–45% of the U.S. investment grade corporate bond market's trading volume).

[453] Rule 22e–4(b)(1)(ii).

[454] Rule 22e–4(b)(1)(ii)(C). Because, as discussed below, a fund generally will segregate certain liquid assets in order to cover the fund's obligations under its derivatives transactions, rule 22e–4 assumes that a fund would not segregate any of its assets identified as illiquid investments to cover its derivatives transactions. *See infra* footnote 462 and accompanying text.

[455] *See infra* section III.C.6.b.

the Commission and its staff to understand what percentage of a fund's highly liquid investment minimum is composed of encumbered assets, and will allow the public to better understand that a certain percentage of a fund's highly liquid investments may not be immediately available for liquidity risk management purposes. The final rule does not require the fund to determine or disclose the percentage of the fund's moderately liquid investments or less liquid investments that the fund has segregated to cover, or pledged in connection with, its derivatives transactions, because we understand that funds are less likely to post moderately or less liquid investments as margin or collateral. We also expect that investors and others will find most valuable information regarding the extent to which the fund's highly liquid investments are segregated or pledged in connection with derivatives transactions because understanding that percentage may give investors a better understanding of whether such assets are truly available to make redemptions.

These requirements replace the proposed requirement for a fund to consider the ''relationship of [an] asset to another portfolio asset'' in classifying and reviewing the liquidity of its portfolio assets,[456] as well as the derivatives-focused guidance that the Commission provided in the Proposing Release regarding this proposed classification factor.[457] The Commission's guidance was meant to give direction to funds' liquidity classification of derivatives transactions and the assets that a fund may segregate to cover its obligations under these transactions.[458] As discussed below, we are not adopting the proposed factors that a fund would have had to consider in classifying the liquidity of its portfolio holdings, including the ''relationship of [an] asset to another portfolio asset'' factor.[459] However, we are adopting new classification provisions in rule 22e–4 that will apply to derivatives transactions[460] as well as a provision that will address assets segregated to cover derivatives transactions[461] so that funds consistently consider certain unique aspects of these transactions, and also to respond to commenters' concerns stemming from the treatment of derivatives under the proposal.

In the Proposing Release, we noted that when funds enter into certain transactions that implicate section 18 of the Investment Company Act, they generally will maintain, in a segregated account, certain liquid assets in order to ''cover'' the fund's obligation under the transactions.[462] We applied this framework to certain financing transactions in Release 10666, issued in 1979,[463] and also understand that funds today apply this framework to certain derivatives, based on the guidance we provided in Release 10666 and on no-action letters issued by our staff.[464] We explained in Release 10666 that ''[a] segregated account freezes certain assets of the investment company and renders such assets unavailable for sale or other disposition.''[465] We also stated in Release 10666 that only certain types of liquid assets should be placed in a segregated account.

Thus, we noted in the Proposing Release that, although assets used by a fund to cover derivatives and other transactions should be liquid when considered in isolation, when evaluating their liquidity for purposes of proposed rule 22e–4, the fund would have to consider that they are being used to cover other transactions and, consistent with our position in Release 10666, are ''frozen'' and ''unavailable for sale or other disposition.''[466] We stated that because these assets are only available for sale to meet redemptions once the related derivatives position is disposed of or unwound, a fund should classify the liquidity of these segregated assets using the liquidity of the derivative instruments they are covering. We also provided guidance that, when a formerly segregated asset is no longer segregated, a fund generally should assess, as part of the proposed ongoing liquidity classification review requirement, whether the liquidity classification given to the portfolio asset when it was segregated continues to be appropriate. Finally, we noted in the Proposing Release that in addition to the liquidity of a fund's derivatives positions themselves, assessing a fund's liquidity risk generally may include an evaluation of the potential liquidity demands that may be imposed on the fund in connection with its use of derivatives, including any variation margin or collateral calls the fund may be required to meet.[467]

The Proposing Release included a request for comment on the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor, which included asking whether rule 22e–4 should explicitly require a fund to classify the liquidity of a position (or portions of a position in a particular asset) used to cover a derivative position using the same liquidity classification category as it assigned to the derivative, and whether the Commission should provide additional guidance regarding the circumstances in which a fund should consider the liquidity of a particular portfolio asset in relation to the liquidity of another asset.[468] Multiple commenters raised concerns about the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor and accompanying guidance in the Proposing Release.[469] Many stated that the Commission's guidance as to classifying segregated assets using the liquidity of the derivative instrument they are covering would be unworkable and would raise costly operational burdens, because funds currently do not identify individual liquid assets to cover specific derivatives transactions.[470] Instead,

[456] *See* proposed rule 22e–4(b)(2)(ii)(I).

[457] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[458] *Id.*

[459] Instead, we are requiring that a fund must take into account market, trading, and investment-specific considerations in classifying the liquidity of its portfolio investments. *See* rule 22e–4(b)(1)(ii); *see also supra* section III.C.1.b. We provide guidance below on specific factors that a fund may find appropriate to consider in furtherance of this requirement. *See infra* section III.C.4.

[460] *See* rule 22e–4(b)(1)(ii).

[461] *See* rule 22e–4(b)(1)(ii)(C). This provision also applies to assets pledged to satisfy margin requirements in connection with derivatives transactions.

[462] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[463] Release 10666, *supra* footnote 220. In December 2015, the Commission proposed a new exemptive rule, rule 18f–4, which would permit funds to enter into derivatives transactions and financial commitment transactions notwithstanding section 18 of the Investment Company Act, provided that the funds comply with the conditions of the proposed rule. In proposing rule 18f–4, the Commission noted that, should the rule be adopted, it would rescind Release 10666 and relevant staff no-action letters. *See* 2015 Derivatives Proposing Release, *supra* footnote 222, at section III.I.

[464] *See generally* 2015 Derivatives Proposing Release, *supra* footnote 222, at section II.B (providing background information on the application of section 18 and Release 10666 to derivatives and certain other transactions).

[465] *See also* Dear Chief Financial Officer Letter from Lawrence A. Friend, Chief Accountant, Division of Investment Management (Nov. 7, 1997) (staff letter taking the position that a fund could segregate assets by designating such assets on its books, rather than establishing a segregated account at its custodian).

[466] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[467] *See id.,* at n.309 and accompanying text.

[468] *See id.,* at section III.B.2.j.

[469] *See, e.g.,* Dechert Comment Letter; Milliman Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[470] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; Invesco Comment Letter; Vanguard Comment Letter. *But see* Nuveen Comment Letter (suggesting that, for purposes of the alternative liquidity classification approach that it recommends, a security used specifically to cover a derivatives transaction that cannot be unwound

Continued

commenters noted that it is common in the fund industry for a fund to review its outstanding obligations under its derivatives positions on a portfolio basis and determine an aggregate amount of liquid assets that must be segregated in connection with the transactions requiring coverage.[471] One commenter suggested that, instead of the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor, the Commission alternatively could require funds to assign liquidity classifications to cover assets on an aggregate portfolio basis in amounts corresponding to the aggregate amount of derivatives exposure in each liquidity category.[472]

Some commenters also argued that the guidance provided in the proposal could make an otherwise liquid but segregated asset appear to be less liquid than it actually is when considered in isolation.[473] For example, if a cash equivalent security were used to cover a derivative that the fund determined to be convertible to cash within 8–15 days, under the Commission's guidance, the cash equivalent also would be classified as an asset that could be converted to cash within 8–15 days. However, the fund would be able to replace the cash equivalent as a coverage asset with another liquid asset at any time, which would immediately unencumber the cash equivalent (but would encumber other liquid assets with the same value).

Finally, commenters generally discussed features of derivatives transactions informing the way that their liquidity would be classified under proposed rule 22e–4. One commenter noted that the proposal seemed to suggest that derivatives are inherently more risky and present greater liquidity risk than other, more traditional assets.[474] This commenter maintained that, in some situations, derivatives may be more liquid than more traditional assets. Another commenter stated that, while the liquidity of a derivatives transaction depends on the derivative's underlying reference asset to some degree, its liquidity also largely stems from the needs of other market participants for that kind of derivative.[475]

The requirements in rule 22e–4 regarding the classification of a fund's derivatives transactions are meant to clarify and simplify the application of the classification requirements to derivatives transactions and respond to commenters' concerns. First, rule 22e–4 specifies that the liquidity classification and review requirements apply to each of the fund's investment transactions (including derivatives) and requires a fund to take into account relevant market, trading, and investment-specific considerations in classifying derivatives' liquidity.[476] In addition, we have modified rule 22e–4 from the proposal to require a fund to classify each of the fund's portfolio *investments*.[477] We have made this change to clarify that the classification requirement (and the other requirements of rule 22e–4) applies to all of a fund's investment positions, regardless of whether they are assets or liabilities, as the proposal intended.[478] The proposed classification requirement, which would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset), could potentially have been read to exclude certain derivatives and other transactions that are classified as liabilities on the fund's balance sheet.[479] Final rule 22e–4 thus requires the liquidity of all derivatives transactions to be classified, regardless of if they are classified as assets or liabilities on a fund's balance sheet, for the sake of operational simplicity, completeness (*e.g.,* to help reduce confusion regarding a fund's liquidity profile as disclosed on Form N–PORT), and because all derivatives transactions could implicate portfolio liquidity insofar as other assets are segregated to cover these derivatives and derivatives in a liability position involve transactions for which a fund would be required to pay fund assets to exit the transaction.[480]

Besides specifying that the liquidity of a derivatives transaction must be classified taking into account relevant market, trading, and investment-specific considerations, rule 22e–4 provides no derivatives-specific factors that a fund would have to evaluate in classifying a derivatives transactions' liquidity. We generally agree with commenters' suggestions that the liquidity of a derivatives transaction may depend on market demand for that kind of derivative, as well as the liquidity of the derivative's underlying reference asset.[481] Whether a derivatives transaction is centrally cleared also could indicate that the transaction is more liquid than an equivalent transaction that is not cleared.[482] In classifying and reviewing the liquidity of a derivatives transaction, like classifying the liquidity of any portfolio investment, a fund should consider the guidance factors discussed in this Release, to the extent the factors are applicable and the fund deems their

within seven days (and thus the derivative would be classified as ''illiquid'' under the commenter's recommended approach) also would be considered to be ''illiquid'' under that approach).

[471] *See* Dechert Comment Letter.

[472] *See id.; see also* ICI Comment Letter I (suggesting that the Commission add an item to Form N–PORT's Schedule of Portfolio Investments that permits a fund to note whether an asset (or portion thereof) is encumbered or linked to other assets as of the reporting date, without separately tying to or identifying a ''linked'' asset).

[473] *See* ICI Comment Letter I; T. Rowe Comment Letter.

[474] *See* T. Rowe Comment Letter.

[475] *See* Milliman Comment Letter.

[476] Rule 22e–4(b)(1)(ii). As with other portfolio investments, funds may classify derivatives transactions by asset class, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of a particular derivative that would require a different classification for that derivative. Rule 22e–4(b)(1)(ii)(A).

[477] We note that in the Proposing Release, we requested comment on whether the rule should ''focus not just on the liquidity of the fund's assets but also more specifically and prominently on its liabilities, such as derivatives obligations, that may affect the liquidity of the fund.'' *See* Proposing Release, *supra* footnote 9, at text following n.155.

[478] We note that use of the term ''investments'' is consistent with other reporting requirements on Form N–PORT, and reflects the proposal's discussions of the classification requirement applying to all of a fund's portfolio positions, not just those that are assets. *See, e.g., id.,* at section III.B. (''[W]e are proposing new requirements for classifying and monitoring the liquidity of funds' *portfolio positions*.''; ''The proposed liquidity categorization process would be in addition to the existing 15% guideline (which would be retained, as discussed below) and would require a fund to assess the liquidity of its *portfolio positions* individually, as well as the liquidity profile of the fund as a whole.'' [emphasis added]). *See also* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[479] We note, however, that no commenters suggested that the proposal's use of the terms ''assets'' and ''positions'' interchangeably would lead to derivatives or other investments that are liabilities not being subject to the rule, and that many commenters discussed the impact of the classification requirement on a variety of derivatives and other transactions that could be liabilities. *See, e.g.,* ICI Comment Letter (discussing classifications of derivatives and TBA transactions); HSBC Comment Letter (noting that ''[T]o the extent that this is possible, Asset Managers should attempt to take all liabilities into account when trying to calculate liquidity for a given fund.''). Nonetheless, to eliminate any potential confusion, we are changing the term ''assets'' to ''investments'' throughout rule 22e–4, related reporting items and definitions on Form N–PORT and Form N–LIQUID.

[480] *See* rule 22e–4(b)(1)(ii) (requiring funds to classify each of the portfolio investments, including each of the fund's derivatives transactions). We have made corresponding changes to each of the liquidity categories to account for the classification of all portfolio investments (*i.e.,* the liquidity categories under rule 22e–4 as adopted are highly liquid investments, moderately liquid investments, less liquid investments, and illiquid investments).

[481] *See supra* footnotes 474–475 and accompanying text.

[482] *See, e.g.,* Deutsche Bank Research, *Liquidity Is Key for the Central Clearing of Derivatives* (Mar. 12, 2015), *available at https://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000352403/Liquidity_is_key_for_the_central_clearing_of_deriv.pdf*; *see also infra* footnote 552.

consideration to be appropriate.[483] The provision in rule 22e–4 stating that a fund may generally classify its portfolio investments according to their asset class applies to the fund's derivatives transactions,[484] as do the rule's market depth provisions.[485] The definitions of ''highly liquid investment,'' ''moderately liquid investment,'' and ''less liquid investment'' that refer to the ability to convert an investment to cash or dispose of an investment within a specified period, with respect to derivatives transactions that the fund classifies as liabilities on its balance sheet,[486] should be read to refer to the time period in which the fund reasonably expects to be able to exit a transaction.

Along with classifying the liquidity of each of its derivative transactions, final rule 22e–4 requires a fund to identify, for derivatives transactions that a fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, the percentage of the fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the transactions in each of these classification categories.[487] When a fund's assets are segregated or pledged in connection with derivatives transactions, they are only available for sale to meet redemptions once the related derivatives position is disposed of or unwound (or if other assets are segregated or pledged in their place). Thus, even if the segregated or pledged assets would, on their own, be considered extremely liquid, they would effectively not be able to be used to meet redemption requests or to rebalance or otherwise adjust a portfolio's composition in order to manage liquidity risk. As discussed below, we believe that it is important, for purposes of transparency regarding a fund's portfolio liquidity, to provide clarity that certain percentages of a fund's investments may not be functionally available to meet redemptions or for other liquidity risk management purposes.[488]

We believe that requiring a fund to determine the percentage of highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, its derivatives transactions classified in each of the ''moderately liquid,'' ''less liquid,'' and ''illiquid'' classification categories strikes an appropriate balance between providing this transparency and reducing burdens on funds. Under this approach, a fund generally would not need to specifically identify particular assets that are segregated or pledged to cover specific derivatives transactions, but instead a fund will calculate the percentage of highly liquid investments segregated or pledged to cover derivatives transactions that include derivatives transactions classified in each of the other three classification categories. For purposes of calculating these percentages, a fund that has segregated or pledged non-highly liquid investments as well as highly liquid investments to cover derivatives transactions, should first use segregated or pledged assets that are highly liquid investments to cover derivatives transactions classified in the three lower liquidity classification categories.[489] This approach should promote consistency and comparability across funds. In the absence of such an instruction, some funds might instead take the opposite approach, and assume that segregated non-highly liquid investments first cover these less liquid derivatives transactions, creating inconsistencies between funds.

The approach in the final rule responds to commenters' concerns that funds rarely identify and segregate a specific liquid asset against an individual derivative on a one-for-one relationship,[490] and would reduce burdens that could result if the Commission's liquidity classification rules were to require a fund to do so. It also responds to commenters' concerns that linking the liquidity of specific segregated assets to the liquidity of a fund's derivatives transactions could understate the liquidity of those segregated assets, since a fund may be able to readily substitute another liquid asset for the segregated asset.[491] However, the Commission's approach also would provide the basis for needed transparency for the Commission, its staff, and the public into the way that a fund's segregated or pledged assets may affect the fund's overall portfolio liquidity. Rule 22e–4, which requires a fund only to determine percentages of segregated or pledged assets comprising the fund's highly liquid investments, reflects our belief that this transparency is especially important with respect to funds' highly liquid investments. As noted above, a fund's disclosure of percentages of its highly liquid investments that are segregated or pledged assets would permit the Commission and its staff to understand what percentage of a fund's highly liquid investment minimum is composed of encumbered assets, and would allow the public to better understand that a certain percentage of a fund's highly liquid investments may not be immediately available for liquidity risk management purposes.

While a fund will not need to identify which of its particular assets are segregated in connection with particular derivatives transactions, it will need to identify the percentage of its highly liquid investments that are segregated or pledged with respect to derivatives transactions classified in each of the moderately liquid, less liquid, and illiquid classification categories. We recognize that these requirements will likely entail additional evaluation of the liquidity character of a fund's segregated assets compared to what a fund might do today as part of its current asset segregation procedures.[492] We believe these burdens are justified, however, by the important transparency benefits of identifying the percentages of highly liquid investments that are segregated or pledged assets.

We also note that these burdens are further reduced because under the rule a fund need not identify the percentage of segregated or pledged assets covering derivatives that are highly liquid investments, or the percentage of segregated or pledged assets that are moderately liquid investments or less liquid investments.[493] A fund would be permitted to exclude its derivatives transactions that are classified as highly liquid investments in determining the percentages of highly liquid investments that are segregated or pledged assets since the fund could dispose of or exit these derivatives transactions within three business days and the segregated or pledged assets also would be available to the fund for liquidity risk management purposes within three business days. Furthermore, as described in the preceding paragraph, the rule's requirement to identify the percentages of a fund's highly liquid investments that are also segregated or

[483] *See infra* section III.C.4.

[484] Rule 22e–4(b)(1)(ii)(A).

[485] Rule 22e–4(b)(1)(ii)(B).

[486] *See supra* footnote 480 and accompanying text.

[487] Rule 22e–4(b)(1)(ii)(C).

[488] *See infra* section III.C.6.

[489] *See* note to rule 22e–4(b)(1)(ii)(C). However, if a fund has specifically identified individual assets that are not highly liquid investments as being segregated to cover such derivatives transactions, the fund may match those specific segregated assets to specific derivatives transactions and need not assume that segregated highly liquid assets cover those derivatives.

[490] *See supra* footnote 470 and accompanying text.

[491] *See supra* footnote 473 and accompanying paragraph. We note, however, that the ability to substitute may not improve the overall liquidity of the portfolio.

[492] *See infra* section IV.C.1.

[493] *See* rule 22e–4(b)(1)(ii)(C).

pledged assets reflects our belief that asset segregation or margin transparency is most important with respect to a fund's highly liquid investments.

4. Guidance on Liquidity Classification Factors

Unlike rule 22e–4 as proposed, final rule 22e–4 does not include an enumerated list of factors that a fund would be specifically required to consider in classifying and reviewing the liquidity of its portfolio investments. The rule instead generally requires a fund to take into account ''relevant market, trading, and investment-specific considerations'' in classifying and reviewing its portfolio investments' liquidity.[494] In contrast, under the proposed rule a fund would have been required to take the following nine factors into account, to the extent applicable, when classifying the liquidity of each portfolio position in a particular asset:

- Existence of an active market for the asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants;
- Frequency of trades or quotes for the asset and average daily trading volume of the asset (regardless of whether the asset is a security traded on an exchange);
- Volatility of trading prices for the asset;
- Bid-ask spreads for the asset;
- Whether the asset has a relatively standardized and simple structure;
- For fixed income securities, maturity and date of issue;
- Restrictions on trading of the asset and limitations on transfer of the asset;
- The size of the fund's position in the asset relative to the asset's average daily trading volume and, as applicable, the number of units of the asset outstanding; and
- Relationship of the asset to another portfolio asset.[495]

The Proposing Release requested comment generally on whether the Commission should codify a list of liquidity classification factors (as discussed above)[496] and also requested comments relating to the usefulness of the proposed factors generally, as well as specific comments on the proposed factors.[497] With respect to the general usefulness of the proposed factors, multiple commenters suggested that the proposed factors would be largely informative in assessing assets' relative liquidity,[498] but others advised that the proposed factors would not be useful in assisting fund management in making liquidity determinations.[499] Some who objected to the proposed factors argued that their usefulness would be limited by the fact that they would be based on backward-looking data and thus may not reflect future conditions.[500] Some commenters also argued that some of the proposed factors (*e.g.,* frequency of trades or quotes for an asset and average daily trading volume of an asset) are generally more appropriate for assessing the liquidity of exchange-traded securities than securities that are traded over-the-counter (''OTC'') and that evaluating certain OTC securities using the proposed factors may make these securities appear to be less liquid than they actually are.[501] For example, multiple commenters contended that certain fixed income securities tend to trade infrequently on any given day, but these securities' liquidity is nevertheless quite high because a fund would generally be able to sell them fairly quickly.[502] As discussed specifically below, commenters also expressed more granular concerns about certain of the proposed factors (specifically, frequency of trades or quotes for an asset, trading price volatility, position size, and relationship of an asset to another portfolio asset[503]).

As discussed above, we are not codifying the proposed factors in part because we understand that certain factors would be more informative to some funds than others, depending on the fund's investment strategy and liquidity risk profile. We also are concerned that codifying the factors, particularly if applied in a ''check-the-box'' fashion, could lead funds to adopt classification processes that do not reflect the extent of a fund's ability to sell its portfolio investments to meet redemptions within a given time period without a market impact, or do not otherwise result in an accurate picture of a fund's liquidity profile.[504] However, we continue to believe that the proposed classification factors could be useful and relevant as aspects of the general market, trading, and investment-specific considerations that a fund must take into account under the final rule. Thus, in this section III.C.4, we discuss each of the factors that funds could consider in evaluating portfolio investments' liquidity characteristics and managing liquidity risk.[505] Based on staff outreach across the fund industry, we understand that certain of these factors reflect certain common considerations that funds often take into account in evaluating their portfolio investments' liquidity.[506] Moreover, as discussed above, multiple commenters stated that the proposed rule included factors that, largely, are useful for assessing a fund's assets' relative liquidity.[507] For example, some

[494] *See supra* section III.C.1.b.

[495] Proposed rule 22e–4(b)(2)(ii).

[496] *See supra* section III.C.1.b.

[497] *See* Proposing Release, *supra* footnote 9, at section III.B.2.j.

[498] *See, e.g.,* CRMC Comment Letter; ICI Comment Letter I; J.P. Morgan Comment Letter; Nuveen Comment Letter.

[499] *See, e.g.,* Cove Street Comment; GFOA Comment Letter; MFS Comment Letter; Vanguard Comment Letter.

[500] *See, e.g.,* Cove Street Comment; Dodge & Cox Comment Letter; Vanguard Comment Letter.

[501] *See, e.g.,* Banks Comment Letter; LSTA Comment Letter; Milliman Comment Letter; Wells Fargo Comment Letter.

[502] *See, e.g.,* GFOA Comment Letter; MFS Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[503] For a discussion of commenters' concerns about this proposed factor in the context of derivatives transactions, *see supra* section III.C.3.c.

Commenters also expressed concerns about this proposed factor in the context of assets used for hedging or risk mitigation purposes. In the Proposing Release, we stated that, when a fund purchases an asset (a ''hedging asset'') in order to hedge or mitigate the risks associated with another asset (a ''hedged asset''), the fund should consider the liquidity of the hedged asset when evaluating the liquidity of the hedging asset. Commenters stated that current industry practice often involves hedging aggregate portfolio exposures, not specific securities. *See, e.g.,* ICI Comment Letter I; Milliman Comment Letter; Oppenheimer Comment Letter; T. Rowe Comment Letter. These commenters argued that the Commission's guidance instructing a fund to classify the liquidity of hedging assets in consideration of the hedged asset's liquidity classification would therefore be unworkable and would raise costly operational burdens, because funds do not currently link hedging assets and hedged assets on a one-for-one basis.

Unlike in the context of derivatives transactions, in which we have stated that a fund must segregate assets to cover derivatives transactions, and this renders the segregated assets ''frozen'' and ''unavailable for sale or other disposition'' (*see supra* footnote 465 and accompanying text), we have not previously stated that purchasing assets with the intent to hedge or mitigate the risks associated with another asset makes those hedging assets unavailable for sale. We thus do not view the linkages between hedging and hedged assets to be directly analogous with the linkages between derivatives transactions and assets segregated to cover those derivatives transactions, and we are not stating in this Release the guidance we included in the Proposing Release regarding the proposed ''relationship of an asset to another portfolio asset'' in the context of assets used for hedging or risk mitigation purposes.

[504] *Cf. supra* paragraph accompanying footnote 322.

[505] Our discussion of factors that could be considered by funds does not include the proposed ''relationship of [an] asset to another portfolio asset'' factor because guidance on this factor, as discussed above, has been replaced by requirements in rule 22e–4 regarding classification issues that arise with respect to derivatives transactions. *See supra* footnotes 456–461 and accompanying text; *see also supra* footnote 503 (discussing this proposed factor in the context of assets used for hedging or risk mitigation purposes).

[506] *See* Proposing Release, *supra* footnote 9, at text preceding n.200.

[507] *See supra* footnote 498 and accompanying text.

commenters agreed that factors such as those incorporated in the proposal are generally relevant considerations to use when evaluating asset liquidity and would help promote effective liquidity risk assessments,[508] and that portfolio assets' liquidity should be evaluated using a variety of inputs such as those that the proposed factors represent.[509] Some suggested that the Commission discuss the factors as guidance accompanying its adoption of rule 22e–4.[510] Overall, we believe this approach provides flexibility that should facilitate meaningful liquidity analyses, and encourages funds to consider relevant information.

We acknowledge, as stated by some commenters, that certain of these factors may involve consideration of backward-looking data and thus may not account for ways in which changing market conditions could affect the liquidity of certain asset classes or investments.[511] But we believe analyzing past data, while considering how that data may change in the future, is an inherent aspect of all risk management and does not render such analysis fruitless. In addition, the review requirements embedded in the classification framework, when combined with the liquidity risk assessment requirement to consider portfolio liquidity during normal and reasonably foreseeable stressed periods, further responds to this critique. We also are cognizant that, for certain fixed income or other OTC assets or asset classes, certain of the proposed liquidity classification factors, if considered standing alone, may appear to make these assets or classes to appear less liquid than they actually are. In the guidance below, we discuss special concerns that may be relevant to funds' consideration of the liquidity characteristics of fixed income or other OTC assets.[512]

As discussed above, a fund generally is permitted to classify the liquidity of its portfolio investments according to their asset class. Thus, a fund may wish to consider the guidance discussed below in assessing the general liquidity characteristics of the asset classes in which it invests. For investments that the fund determines must be treated as an ''exception'' and classified separate from their asset class,[513] the guidance provided below could assist funds in identifying and classifying those investments that may demonstrate liquidity characteristics that are distinct from the fund's other portfolio holdings within that same asset class.

The guidance we provide below is not meant to cover an exhaustive list of considerations that a fund may take into account in evaluating its portfolio investments' liquidity. Also, we recognize that specific liquidity concerns appropriate for consideration could vary depending on the issuer and the particular investment.[514] Even if a fund's liquidity classification policies and procedures were to incorporate all of the guidance factors discussed below, a fund may decide that it is appropriate to focus more heavily on certain factors and less on others in evaluating its portfolio investments' liquidity.

In the following sections, we discuss certain factors that a fund could consider in assessing the liquidity of its portfolio investments and provide guidance on specific issues associated with each of these factors. We also discuss comments we received on the proposed classification factors.

a. Existence of Active Market for an Asset Class or Investment; Exchange-Traded Nature of an Asset Class or Investment

We continue to believe that the manner in which a fund may sell an asset class (or particular portfolio investment), including whether an asset class or investment is generally listed on an exchange, may affect the liquidity of that asset class or investment.[515] While in general, being listed on a developed and recognized exchange may increase an investment's liquidity,[516] we note, as certain commenters mentioned,[517] the fact that an investment is exchange-traded does not necessarily mean that a fund would be able to sell or convert that investment to cash within a relatively short period.[518] For example, a small-cap equity stock might be listed on an exchange but trade quite infrequently, which would tend to decrease its relative liquidity. Conversely, as commenters discuss, we agree that certain securities that are traditionally traded in OTC markets, such as corporate bonds, may not typically be designed to be traded frequently and instead are more often ''bought and held,'' but certain of these securities nevertheless may be readily saleable without the conversion to cash (or in some cases, sale or disposition) significantly changing their market value.[519] Additionally, securities issued (or guaranteed as to principal and interest) by the U.S. government do not trade on exchanges, but are typically considered to be quite liquid.[520]

In assessing the effect that being traded on an exchange could have on an asset class's or investment's liquidity, a fund generally should evaluate how this consideration informs the liquidity characteristics of any ETF shares in which it invests. We understand that certain funds, particularly funds with

[508] *See, e.g.,* CRMC Comment Letter; Fidelity Comment Letter; J.P. Morgan Comment Letter; Nuveen Comment Letter.

[509] *See, e.g.,* HSBC Comment Letter; MSCI Comment Letter.

[510] *See, e.g.,* IDC Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; SIFMA Comment Letter I.

[511] *See supra* footnote 500 and accompanying text.

[512] *See, e.g.,* text accompanying *infra* footnotes 536–538 and 545–558.

[513] *See* rule 22e–4(b)(1)(ii)(A).

[514] *See, e.g.,* Fidelity Comment Letter; LSTA Comment Letter; Nuveen Comment Letter; T. Rowe Comment Letter (each suggesting that the Commission clarify that not every factor is required to be considered to evaluate the liquidity of each of a fund's portfolio assets).

[515] *See* Proposing Release, *supra* footnote 9, at section III.B.2.a (discussing the proposed requirement for a fund to consider, to the extent applicable, the existence of an active market for an asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants, in classifying the liquidity of each portfolio position in a particular asset).

[516] *See, e.g.,* Basel Committee on Banking Supervision, *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools* (Jan. 2013), at part 1, section II.A.1, *available at http://www.bis.org/publ/bcbs238.pdf*; *see also* Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (''While securities that trade on exchanges . . . or in deep principal/over-the–counter (''OTC'') markets (*e.g.,* U.S. Treasuries) are generally liquid even in stressed markets, other securities that trade on an OTC basis . . . have faced increasing liquidity challenges in normal markets and can be subject to insufficient quality bids in times of stress as market makers pull back their capital. This can make it not only more difficult to sell these securities, but also to accurately value those assets that are retained.'').

[517] *See, e.g.,* ICI Comment Letter I.

[518] We note that in certain cases the exchange on which an investment is listed may not be the primary market for that security. For example, we understand that certain bonds that are exchange listed trade predominantly in the OTC markets. *See, e.g.,* Types of Bonds, How Big Is the Market, and Who Buys?, *available at http://www.investinginbonds.com/learnmore.asp?catid=5&subcatid=18&id=174* (''[T]he vast majority of bond transactions, even those involving exchange-listed issues, take place in [OTC] market.'').

[519] See id.

[520] *See* rule 15c3–1(c)(2)(vi)(A)(1) under the Exchange Act (describing securities haircuts for securities issued or guaranteed as to principal or interest by the United States or any agency thereof); *see also* Liquidity Coverage Ratio: Liquidity Risk Measurement Standards (Sept. 9, 2014) [79 FR 61440 (Oct. 10, 2014)] (''Liquidity Coverage Ratio Release'') (in liquidity coverage ratio rule adopted by the Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation, ''Level 1 Liquid Assets'' are described as securities issued or unconditionally guaranteed as to timely payment of principal and interest by the U.S. Department of the Treasury, and liquid and readily-marketable securities issued or unconditionally guaranteed as to the timely payment of principal and interest by any other U.S. government agency (provided that its obligations are fully and explicitly guaranteed by the full faith and credit of the U.S. government)).

investment strategies involving relatively less liquid portfolio securities (such as micro-cap equity funds, high-yield bond funds, and bank loan funds), may invest a portion of their assets in ETFs with strategies similar to the fund's investment strategy because they view ETF shares as having characteristics that enhance the liquidity of the fund's portfolio.[521] Specifically, in discussions with Commission staff, funds that invest in ETF shares have suggested that they find that these shares are more readily tradable, are less expensive to trade, and have shorter settlement periods than other types of portfolio investments.[522] In addition, unlike investments in cash, cash equivalents, and other highly liquid instruments, funds also have suggested to Commission staff that investing in ETFs with the same (or a similar) strategy as the fund's investment strategy permits the fund to remain fully invested in assets that reflect the fund's investment concentrations, risks, and performance potential.[523]

While we appreciate that ETFs' exchange-traded nature could make these instruments useful to funds in managing purchases and redemptions under certain conditions (for example, ETFs' settlement times could more closely reflect the time in which a fund has disclosed that it will typically redeem fund shares), funds should consider the extent to which relying substantially on ETFs to manage liquidity risk is appropriate. The liquidity of an ETF, particularly in times of declining market liquidity, is limited by the liquidity of the market for the ETF's underlying securities and, in fact, may be impaired based on factors not directly related to the liquidity of the underlying securities.[524] Thus, shares of an ETF whose underlying securities are relatively less liquid may not be able to be counted on to provide liquidity to a fund investing in these shares during times of stress. In the case of a significant decline in market liquidity, if authorized participants were unwilling or unable to trade ETF shares in the primary market, and the majority of trading took place among investors in the secondary market, the ETF's shares could trade continuously at a premium or a discount to the value of the ETF's underlying portfolio securities. This could frustrate the expectations of secondary market participants who count on the creation and redemption process to align the prices of ETF shares and their underlying portfolio securities. We therefore encourage funds to assess the liquidity characteristics of an ETF's underlying securities, as well as the characteristics of the ETF shares themselves, in classifying the liquidity of ETF shares under rule 22e–4(b)(1)(ii).

Other Trading Mechanism Considerations

The means of trading a particular asset class or investment can affect its liquidity regardless of whether the investment is a security traded on an exchange. For example, whether an asset class or investment is generally traded in a bilateral transaction with a single dealer, or through an electronic auction mechanism where a trader can simultaneously contact multiple counterparties, can have different effects on its liquidity.[525] The liquidity effects associated with choice of trading mechanism may differ depending on the asset class or investment being traded and other market conditions, and therefore it is difficult to make general statements regarding the correlation between a particular trading mechanism and the liquidity of the asset class or investment being traded. For this reason, a fund may wish to consider past experience in using different trading mechanisms to sell a certain asset class or investment.

Diversity and Quality of Market Participants

In addition, the diversity and quality of market participants for a particular asset class or investment also could contribute to the liquidity of that asset class or investment. A fund may wish to consider the number of market makers on both the buying and selling sides of transactions. A fund also may wish to consider the quality of market participants purchasing and selling a particular asset class or investment, and may wish to assess, in particular: The market participant's capitalization; the reliability of the market participant's trading platform(s); and the market participant's experience and reputation transacting in various types of assets. We believe that the diversity and quality of market participants may be meaningful in assessing a portfolio investment's liquidity because it is common for relatively liquid asset classes and investments to have active sale or repurchase markets at all times with diverse market participants.[526] The presence of multiple active market makers may be a sign that a market is liquid.[527] Diversity of market participants, on both the buying and selling sides of transactions, may also be a significant point for a fund to consider because it tends to reduce market concentration and may facilitate a

[521] *See, e.g.,* Katy Burne, *Institutions Pour Cash Into Bond ETFs,* Wall Street Journal (Mar. 1, 2015), *available at http://www.wsj.com/articles/institutions-pour-cash-into-bond-etfs-1425250969.* Funds' investments in ETFs are subject to the Investment Company Act's limitations on investments in shares issued by other registered investment companies. *See* section 12(d)(1)(A) of the Act. Currently, these practices do not concern ETMFs.

The Commission's 2015 Request for Comment on Exchange-Traded Products requested comment on whether investors' expectations of the nature of the liquidity of an exchange-traded product (including an ETF) holding relatively less liquid portfolio securities differ from their expectations of the liquidity of the underlying portfolio securities. *See* 2015 ETP Request for Comment, *supra* footnote 29, at Question 49. Commenters expressed a range of views on the question. *See, e.g.,* Comment Letter of Vanguard on the 2015 ETP Request for Comment (Aug. 17, 2015) (stating that the disclosures made by ETFs in prospectuses, shareholder reports, and Web sites ''ensures that investors and market participants have the necessary information to make informed investment decisions''); Comment Letter of ETF Radar on the 2015 ETP Request for Comment (Aug. 8, 2015) (stating that investor expectations of liquidity depend on the skill of the investor); Comment Letter of Danny Reich on the 2015 ETP Request for Comment (July 2, 2015) (stating that there is a ''false assumption'' that underlying assets have the same liquidity as the ETP, particularly with respect to bond ETPs).

[522] *See* Proposing Release, *supra* footnote 9, at section III.C.6.b.

[523] *See id.*

[524] *See* ETF Proposing Release, *supra* footnote 27, at section III.A.1; *see also* Tyler Durden, *What Would Happen if ETF Holders Sold All at Once? Howard Marks Explains,* Zero Hedge (Mar. 26, 2015), *available at http://www.zerohedge.com/news/2015-03-26/what-would-happen-if-etf-holders-sold-all-once-howard-marks-explains* (''Thus we can't get away from depending on the liquidity of the underlying high yield bonds. The ETF can't be more liquid than the underlying, and we know the underlying can become highly illiquid.''). *But see, e.g.,* Shelly Antoniewicz, *Plenty of Players Provide Liquidity for ETFs,* ICI Viewpoints (Dec. 2, 2014), *available at http://www.ici.org/viewpoints/view_14_ft_etf_liquidity* (stating that most of the trading activity in bond ETF shares is done in the secondary market and not through creations and redemptions with authorized participants).

[525] *See, e.g.,* Terrence Hendershott & Ananth Madhavan, *Click or Call? Auction versus Search in the Over-the-Counter Market.,* 70 J. of Fin. 419 (Feb. 2015), *available at http://faculty.haas.berkeley.edu/hender/Click_Call_OTC.pdf.*

[526] *See, e.g.,* Abdourahmane Sarr & Tonny Lybek, *Measuring Liquidity in Financial Markets,* IMF Working Paper (Dec. 2002), *available at http://www.imf.org/external/pubs/ft/wp/2002/wp02232.pdf* (''Liquid markets tend to exhibit five characteristics: (i) Tightness (ii) immediacy, (iii) depth, (iv) breadth, and (v) resiliency.'').

[527] *See, e.g.,* Sunil Wahal, *Entry, Exit, Market Makers, and the Bid-Ask Spread,* 10 Rev. of Fin. Stud. 871 (1997), *available at https://www.acsu.buffalo.edu/~keechung/MGF743/Readings/H1.pdf* (''Large-scale entry (exit) is associated with substantial declines (increases) in quoted end-of-day inside spreads, even after controlling for the effects of changes in volume and volatility. The spread changes are larger in magnitude for issues with few market makers; however, even for issues with a large number of market makers, substantial changes in quoted spreads take place.'').

market remaining liquid during periods of stress.[528]

b. Frequency of Trades or Quotes; Average Daily Trading Volume

In general, we continue to believe that a high frequency of trades or quotes for a particular asset class or investment tends to indicate that a particular asset class or investment has relatively high liquidity.[529] However, as many commenters raised and as discussed below, low trading frequency and trading volume does not necessarily indicate low liquidity, particularly for asset classes and investments that are not exchange-traded.[530] Also, we note that the frequency of trades or quotes for a particular asset class or investment is not a perfect or complete measure of liquidity, and a fund may wish to also consider trade size in assessing the relationship between trade frequency and liquidity.[531] In evaluating the frequency of trades (and bid and ask quotes) for an asset class or investment, a fund may wish to generally consider, among other relevant factors, the number of dealers quoting prices for that asset class or investment, the number of other potential purchasers and sellers, and dealer undertakings to make a market in the asset class or investment.

High average trading volume also tends to be correlated with greater liquidity, particularly for exchange-traded asset classes and investment. In general, high average daily trading volume for a particular asset class or investment indicates a deep market for that asset class or investment, which in turn indicates that a fund may be able to convert its holdings in that asset class or investment to cash without the conversion (or in some cases, sale or disposition) significantly changing the market value.[532] Especially for exchange-traded asset classes or investments, a fund may wish to consider the number of days of zero or very low trading volume during the prior month, year, or other relevant period, as this could indicate particularly limited liquidity. As one commenter suggested, and we agree, a fund may wish to consider not only the historical average trading volume of the asset class or assets in which its invests, but also whether trading volume is likely to change under different or stressed market conditions.[533] High trading volume is not always indicative of available liquidity for a particular asset class or investment, however. For example, high trading volumes might be associated with high selling pressure on the asset class or investment, and trades at that time may have a high value impact.[534] Also, as one commenter suggested, even if a particular asset class or investment were to exhibit high trading volume, the ability to convert the asset class or investment to cash without the conversion (or in some cases, sale or disposition) significantly changing the market value may also depend on other factors such as investors' appetite for risk and the perceived ''safety'' of specific securities in ''risk-off'' flight-to-quality market conditions.[535]

Multiple commenters stressed that, particularly for fixed income and other typically OTC asset classes and assets, relatively low trading volume does not necessarily correlate with low liquidity. For example, many commenters discussed the low turnover of the corporate bond market, which is driven by factors such as the buy-and-hold nature of bond investing, the distribution of an issuer's borrowing across many different bond issues, and the fact that portfolio managers may deem many bonds to be substitutes for one another based on common characteristics such as issuer, sector, credit quality, and maturity.[536] Commenters argued that, despite the relatively low turnover that is typical in the corporate bond market, these assets are commonly considered to be readily tradable at market-clearing prices.[537] Commenters made similar arguments about the dynamics of the municipal bond market, noting that municipal securities' trading volume is not normally high, particularly during stable financial periods, but municipal securities (especially those that are investment grade) are commonly considered to be easily saleable.[538] We generally agree with commenters' concerns that the consideration of trading volume as a liquidity indicator should not by itself imply that low trading volume necessarily indicates low liquidity. Rather, it may indicate that other information needs to be assessed to make a liquidity determination. For asset classes and investments that typically demonstrate low trading volume, funds may wish to consider how the other liquidity characteristics of those asset classes and investments, including but not limited to other guidance factors discussed in this Release, may affect the time period and value impact associated with the class's or investment's ability to be converted to cash. Analysis of capital structure and credit quality of a particular asset class or investment, as well as bid-ask spreads and maturity/date of issue, may be particularly useful in considering the liquidity of investments whose trading volume is normally low.

[528] *See, e.g.,* Amir Rubin, *Ownership Level, Ownership Concentration, and Liquidity,* 10 J. Fin. Markets 219 (Aug. 2007), *available at http://www.sciencedirect.com/science/article/pii/S1386418107000134* (''We examine the link between the liquidity of a firm's stock and its ownership structure, specifically, how much of the firm's stock is owned by insiders and institutions, and how concentrated is their ownership. We find that the liquidity-ownership relation is mostly driven by institutional ownership rather than insider ownership. Importantly, liquidity is positively related to total institutional holdings but negatively related to institutional block holdings.'').

[529] *See* Proposing Release, *supra* footnote 9, at section III.B.2.b (discussing the proposed requirement for a fund to consider, to the extent applicable, the frequency of trades or quotes for a particular asset, as well as the asset's average daily trading volume (regardless of whether the asset is a security traded on an exchange), in classifying the liquidity of each portfolio position in a particular asset).

[530] *See infra* footnotes 536–538 and accompanying text.

[531] For example, 100 trades at $100 might or might not signify greater liquidity than 50 trades at $200, although they are likely to suggest better liquidity than one trade at $10,000. *See* Erik Banks, *Liquidity Risk: Managing Funding and Asset Risk* (2nd ed. 2013), at 169.

[532] *See id.; see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . shrinking transaction volumes which exacerbate the impact cost for additional trading'').

We note that double-counting of trades is a potential issue to consider when assessing average trading volume. Double-counting occurs because of differences between dealer and auction markets. In a dealer market, trades are ''double-counted'' because the dealer buys from person A and then sells to person B. In an auction market, person A and B trade directly. *See, e.g.,* Anne M. Anderson & Edward A. Dyl, *Trading Volume: NASDAQ and the NYSE,* 63 Fin. Analysts J. 79 (May/June 2007), *available at http://www.cfapubs.org/doi/abs/10.2469/faj.v63.n3.4693.*

[533] *See* Interactive Data Comment Letter (suggesting that the Commission consider requiring a fund to consider the *potential* daily trading volume of its portfolio assets instead of, as proposed, the *average* daily trading volume of its assets).

[534] *See, e.g.,* HSBC Comment Letter; *see also e.g.,* Jennifer Huang & Jiang Wang, *Liquidity and Market Crashes,* 22 Rev. of Fin. Stud. 2607 (2009), *available at http://rfs.oxfordjournals.org/content/22/7/2607.full* (discussing how there can be high selling pressure (and high volume) along with low liquidity and how this can create market crashes); Mark Carlson, *A Brief History of the 1987 Stock Market Crash with a Discussion of the Federal Reserve Response,* Federal Reserve Board Working Paper 2007–13 (Nov. 2006), *available at http://www.federalreserve.gov/pubs/feds/2007/200713/200713pap.pdf* (discussing how the 1987 stock market crash had both high volume and low liquidity).

[535] *See* HSBC Comment Letter.

[536] *See, e.g.,* Nuveen Comment Letter; Vanguard Comment Letter.

[537] *See, e.g.,* Nuveen Comment Letter; Vanguard Comment Letter.

[538] *See, e.g.,* GFOA Comment Letter; Nuveen Comment Letter.

c. Volatility of Trading Prices

We continue to believe that trading price volatility is potentially a valuable metric to consider in evaluating an asset class's or investment's liquidity.[539] In general, there is an inverse relationship between liquidity and volatility,[540] as lack of liquidity in a particular investment tends to amplify price volatility for that asset.[541] Additionally, the Commission understands that certain funds and fund groups have historically experienced liquidity disruptions during periods of extreme market volatility, such as the June 2013 ''taper tantrum'' [542] and the October 2014 ''flash crash.'' [543] As one commenter suggested, and we agree, if a fund holds asset classes or investments that are thinly traded, the fund may wish to consider volatility of evaluated pricing information in assessing the liquidity of those asset classes or investments.[544]

d. Bid-Ask Spreads

Bid-ask spreads—the difference between bid and offer prices for a particular investment—have historically been viewed as a useful measure for assessing the liquidity of assets,[545] and we continue to believe that a fund may consider this factor useful in classifying the liquidity of a particular asset class or investment.[546] The bid-ask spread of a particular investment is related to the riskiness of that investment, as well as the length of time that a broker-dealer believes it will have to hold the investment before selling it.[547] In general, high bid-ask spreads for a particular asset class or investment correlate with a lack of liquidity in that asset class or investment. For example, when liquidity was significantly constricted during the 2007–2009 financial crisis, bid-ask spreads on U.S. investment grade bonds were notably elevated.[548] However, bid-ask spreads alone do not necessarily provide a comprehensive understanding of an investment's liquidity. For instance, bid-ask spreads are often constrained by the increments in which prices are quoted.[549] Additionally, as one commenter noted, bid-ask spreads do not take into account the volume and scale of a portfolio manager's intended buy and sell transactions.[550]

e. Standardization and Simplicity of Asset Class's or Investment's Structure

We continue to believe that whether an asset class or investment has a relatively standardized and simple structure is generally relevant to a fund's evaluation of an asset class's or investment's liquidity.[551] Investments that trade OTC with terms set at issuance such as sizes, maturities, coupons, and payment dates may be relatively more liquid compared to similarly situated investments without standardized terms. Standardization can increase liquidity by simplifying the ability to quote and trade securities, enhancing operational efficiency to execute and settle trades, and improving secondary market transparency. Some types of OTC-traded securities exhibit a relatively high level of standardization, such as government and agency bonds, futures contracts, and certain swap contracts. Central clearing of certain OTC-traded securities, which generally requires the terms of these securities to be highly standardized, has been associated with an increase in these investments' liquidity, as measured by factors such as the bid-ask spreads for these investments and the number of dealers providing quotes for these

[539] *See* Proposing Release, *supra* footnote 9, at section III.B.2.c (discussing the proposed requirement for a fund to consider, to the extent applicable, the volatility of trading prices for its portfolio assets, in classifying the liquidity of each portfolio asset).

[540] *See, e.g.,* Tarun Chordia, Asani Sarkar & Avanidhar Subrahmanyam, *An Empirical Analysis of Stock and Bond Market Liquidity,* Federal Reserve Bank of New York Staff Reports, No. 164 (Mar. 2003), *available at http://www.newyorkfed.org/research/staff_reports/sr164.pdf* (finding that unexpected liquidity and volatility shocks are positively and significantly correlated across stock and bond markets).

[541] *See, e.g.,* Prachi Deuskar, *Extrapolative Expectation: Implications for Volatility and Liquidity* (Aug. 2007), *available at https://business.illinois.edu/pdeuskar/Deuskar_Extrapolative_Liquidity_Volatility.pdf* (''Illiquidity amplifies supply shocks, increasing realized volatility of prices, which feeds into subsequent volatility forecasts.''); *see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 21 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . increasing market- and security-specific volatility.'').

[542] In May 2013, Ben Bernanke, then Chairman of the Federal Reserve Board, announced that the Federal Reserve may start scaling back its asset purchase program—in which the Federal Reserve purchased approximately $85 billion worth of bonds and mortgage-backed securities each month—sooner than investors expected. This caused interests rates on fixed income products to spike, and bond prices to fall dramatically. This market dislocation came to be known as the ''taper tantrum. *See* Christopher Condon & Jeff Kearns, *Fed Worried About Triggering Another 'Taper Tantrum',* Bloomberg (Oct. 8, 2014), *available at http://www.bloomberg.com/news/articles/2014-10-08/fed-worried-about-triggering-another-taper-tantrum-.*

[543] *See* Joint Staff Report: The U.S. Treasury Market on October 15, 2014 (July, 13, 2015), *available at https://www.treasury.gov/press-center/press-releases/Documents/Joint_Staff_Report_Treasury_10-15-2015.pdf* (''On October 15, 2014, the market for U.S. Treasury securities, futures, and other closely related financial markets experienced an unusually high level of volatility and a very rapid round-trip in prices. Although trading volumes were high and the market continued to function, liquidity conditions became significantly strained.'').

[544] *See* Interactive Data Comment Letter (suggesting that the Commission consider replacing the proposed ''volatility of trading prices for the asset'' classification factor with ''volatility of traded or evaluated pricing information,'' to make this proposed factor more applicable to fixed income assets and other asset classes that may be thinly traded).

[545] *See, e.g.,* Michael J. Fleming, *Measuring Treasury Market Liquidity,* Federal Reserve Bank of New York Economic Policy Review (Sept. 2003), *available at https://www.newyorkfed.org/medialibrary/media/research/epr/03v09n3/0309flempdf.pdf* (providing a literature review of studies analyzing bid-ask spreads in relation to Treasury market liquidity); *see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 21 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . heightened market impact costs (as indicated by widening bid/ask spreads)'').

[546] *See* Proposing Release, *supra* footnote 9, at section III.B.2.d (discussing the proposed requirement for a fund to consider, to the extent applicable, its portfolio assets' bid-ask spreads when assessing its portfolio assets' liquidity).

[547] *See* MarketAxess, The MarketAxess Bid-Ask Spread Index (BASI): A More Informed Picture of Market Liquidity in the U.S. Corporate Bond Market (2013), *available at http://www.marketaxess.com/pdfs/research/marketaxess-bid-ask-spread-index-BASI.pdf* (discussing methodology for developing an index that tracks bid-ask spreads of U.S. corporate bonds).

[548] *See, e.g.,* Got Liquidity?, *supra* footnote 452, at 7; *see also* Rich Estabrook, *Diminished Liquidity in the Corporate Bond Market: Implications for Fixed Income Investors,* Oppenheimer (Mar. 16, 2015), at 1, *available at http://www.opco.com/trend-analysis/final_liquidity_report-031615.pdf.*

[549] *See, e.g.,* Michael A. Goldstein & Kenneth A. Kavajecz, *Eighths, Sixteenths, and Market Depth: Changes in Tick Size and Liquidity Provision on the NYSE,* 56 J. Fin. Econ. 125 (2000), *available at https://www.researchgate.net/publication/4978467_Eighths_Sixteenths_and_Market_Depth_Changes_in_Tick_Size_and_Liquidity_Provision_on_the_Nyse* (''Using limit order data provided by the NYSE, we investigate the impact of reducing the minimum tick size on the liquidity of the market. While both spreads and depths (quoted and on the limit order book) declined after the NYSE's change from eighths to sixteenths, depth declined throughout the entire limit order book as well. The combined effect of smaller spreads and reduced cumulative limit order book depth has made liquidity demanders trading small orders better off; however, traders who submitted larger orders in lower volume stocks did not benefit, especially if those stocks were low priced.''); Hendrik Bessembinder, *Tick Size, Spreads, and Liquidity: An Analysis of Nasdaq Securities Trading Near Ten Dollars,* 9 J. of Fin. Intermediation 213 (July 2000), *available at http://www.acsu.buffalo.edu/~keechung/MGF743/Readings/G4.pdf* (''There is no evidence of a reduction in liquidity with the smaller tick size. The largest spread reductions occur for stocks whose market makers avoid odd-eighth quotes. This finding provides support for models implying that changes in the tick size can affect equilibrium spreads on a dealer market and indicates that the relation between tick size and market quality is more complex than the imposition of a constraint on minimum spread widths.'').

[550] *See* HSBC Comment Letter.

[551] *See* Proposing Release, *supra* footnote 9, at section III.B.2.e (discussing the proposed requirement for a fund to consider, to the extent applicable, the standardization and simplicity of structure of its portfolio assets when assessing its portfolio assets' liquidity).

investments.[552] However, standardization alone may not be indicative of an investment's liquidity. For example, corporate bond issuers commonly have large numbers of bonds outstanding, and trading can be fragmented among that universe of bonds.[553] However, as discussed above, we understand that market participants may consider many corporate bonds to be highly comparable and substitutable from a liquidity perspective, to the extent that they share common characteristics such as issuer, sector, credit quality, and maturity.[554]

f. Maturity and Date of Issue of Fixed Income Securities

We continue to believe that, with respect to the fixed income investments a fund holds in its portfolio, those investments' maturity, as well as their date of issue, are significant indicators of their liquidity.[555] In general, a fixed income asset trades most frequently in the time directly following issuance, and its trading volume decreases in the asset's remaining time to maturity.[556] Thus ''on-the-run'' securities (that is, bonds or notes of a particular maturity that were most recently issued) tend to trade significantly more frequently than their ''off-the-run'' counterparts (that is, bonds or notes issued before the most recently issued bond or note of a particular maturity).[557] Because high trading volume generally suggests relatively high liquidity,[558] a fixed income asset's date of issuance and maturity, which in turn are generally correlated with the trading volume of a fixed income asset, together are important liquidity indicators. We understand, based on staff outreach and industry knowledge, that remaining time to maturity is a key factor that fixed income funds commonly consider in assessing the liquidity of their portfolio positions.

g. Restrictions on Trading; Limitations on Transfer

We continue to believe that restrictions on trading certain investments, as well as limitations on an investment's transfer, may adversely affect those investments' liquidity.[559] For example, although we are replacing existing Commission guidance on identifying illiquid assets (including the specific factors listed in the Rule 144A Release regarding the liquidity of a rule 144A security)[560] with new regulatory requirements regarding the process for determining that certain investments are illiquid, we believe that the restricted nature of a rule 144A security is one factor that generally should be considered by a fund in evaluating the liquidity of a rule 144A security.[561] Regardless of whether a portfolio investment is a restricted security, it may nevertheless be subject to other limitations on transfer. For example, for securities that are traded in certain foreign markets, government approval may be required for the repatriation of investment income, capital, or the proceeds of sales of securities by foreign investors.[562] Portfolio investments furthermore may be subject to certain contractual limitations on transfer.[563] Securities subject to transfer limitations in general are less liquid than securities without such limitations.

[552] See, *e.g.,* Yee Cheng Loon & Zhaodong (Ken) Zhong, The Impact of Central Clearing on Counterparty Risk, Liquidity, and Trading: Evidence from the Credit Default Swap Market, 112 J. of Fin. Econ. 91 (Apr. 2014), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2176561* (analyzing the impact of central clearing on credit default swaps and finding that cleared reference entities experience an improvement in both liquidity and trading activity relative to non-cleared entities); Joshua Slive, Jonathan Witmer & Elizabeth Woodman, Liquidity and Central Clearing: Evidence from the CDS Market, Bank of Canada Working Paper 2012–38 (Dec. 2012), *available at http://www.bankofcanada.ca/wp-content/uploads/2012/12/wp2012-38.pdf* (analyzing ''the relationship between liquidity and central clearing using information on credit default swap clearing at ICE Trust and ICE Clear Europe,'' and finding that ''the introduction of central clearing is associated with a slight increase in the liquidity of a contract'' (but noting that the effects of central clearing on liquidity must be viewed in light of the fact that the central counterparty chooses the most liquid contracts for central clearing, consistent with liquidity characteristics being important in determining the safety and efficiency of clearing)). *But see* Manmohan Singh, Collateral, Netting and Systemic Risk in the OTC Derivatives Market, IMF Working Paper 10/99 (Apr. 1, 2010), *available at https://www.imf.org/external/pubs/cat/longres.cfm?sk=23741.0* (arguing that large increases in collateral posted for the centrally cleared trades negatively affect market liquidity given that most large banks will be reluctant to offload their positions to central counterparties).

[553] For example, while each of the top ten largest issuers in the United States had one common equity security outstanding as of April 2014, these issuers collectively had more than 9,000 bonds outstanding. *See* BlackRock, *Corporate Bond Market Structure: The Time for Reform Is Now,* Viewpoint (Sept. 2014), at 7, *available at https://www.blackrock.com/corporate/en-mx/literature/whitepaper/viewpoint-corporate-bond-market-structure-september-2014.pdf.*

[554] *See supra* footnote 536 and accompanying text.

[555] *See* Proposing Release, *supra* footnote 9, at section III.B.2.f (discussing the proposed requirement for a fund to consider, with respect to fixed income assets, these assets' maturity and date of issue when assessing their liquidity).

[556] *See, e.g.,* Sugato Chakravarty & Asani Sarkar, Liquidity in U.S. Fixed Income Markets: A Comparison of the Bid-Ask Spread in Corporate, Government and Municipal Bond Markets, Federal Reserve Board of New York Staff Report No. 73 (Mar. 1999), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=163139.*

[557] The on-the-run phenomenon refers to the fact that, in fixed income markets, securities with nearly identical cash flows trade at different yields and with different liquidity. In particular, most recently issued (*i.e.,* on-the-run) government bonds of a certain maturity are generally more liquid than previously issued (*i.e.,* off-the-run or old) bonds maturing on similar dates. *See, e.g.,* Paolo Pasquariello & Clara Vega, *The on-the-run liquidity phenomenon,* 92 J. of Fin. Econ. 1–24 (Apr. 2009), *available at http://webuser.bus.umich.edu/ppasquar/onofftherun.pdf* (analyzing the liquidity differentials of on-the-run and off-the-run U.S. Treasury bonds and finding, among other things, that on-the-run and off-the-run liquidity differentials are economically and statistically significant—showing that on-the-run bonds tend to be more liquid than their off-the-run counterparts—even after controlling for certain intrinsic characteristics of the bonds); Michael Barclay, Terrence Hendershott & Kenneth Kotz, *Automation versus Intermediation: Evidence from Treasuries Going Off the Run,* 61 J. of FIN. 2395 (Oct. 2006), *available at http://faculty.haas.berkeley.edu/hender/on-off.pdf* (discussing how ''when Treasury securities go 'off the run' their trading volume drops by more than 90%'').

[558] *See supra* section III.C.4.b.

[559] *See* Proposing Release, *supra* footnote 9, at section III.B.2.g (discussing the proposed requirement for a fund to consider restrictions on trading and limitations on transfer in classifying the liquidity of each portfolio asset).

[560] *See* Rule 144A Release, *supra* footnote 37, at text following n.62.

[561] *See id.* While we are withdrawing the guidance in the Rule 144A Release, including the guidance that boards are responsible for determining if a security is liquid or illiquid, we note that the guidance factors discussed in the Rule 144A Release are consistent with certain of the guidance factors discussed in this Release.

[562] *See, e.g.,* HSBC Comment Letter; HSBC Global Research, Emerging Markets Currency Guide 2012 (Dec. 2011), *available at https://www.hsbcnet.com/gbm/attachments/rise-of-the-rmb/currency-guide-2012.pdf?WT.ac=CIBM_gbm_pro_rmbrise_pbx01_On; see also* Liquidity Coverage Ratio Release, *supra* footnote 520, at section II.B.3.iv (discouraging banking entities from holding a disproportionate amount of their eligible highly qualified liquid assets in locations outside the United States where unforeseen impediments may prevent timely repatriation of such assets during a liquidity crisis).

[563] *See, e.g.,* Stephen H. Bier, Julien Bourgeois & Joseph McClain, *Mutual Funds and Loan Investments,* The Investment Lawyer: Covering Legal and Regulatory Issues of Asset Management, Vol. 22, No. 3 (Mar. 2015), at 2, *available at http://www.dechert.com/files/Uploads/Documents/FSG/Mutual%20Funds%20and%20Loan%20Investments%20-%20The%20Investment%20Lawyer.pdf* (''[M]any loans and assignment trades remain bespoke transactions that require consents from borrowers or key syndicate members, and loan documents are still negotiated written documents that require human review. As a result . . . the mechanics of loan trades and certain trade settlement times cause funds to carefully monitor liquidity considerations surrounding loan investments. . . . [In making such determinations, funds] typically consider factors common to general liquidity determinations, as well as factors specific to the loan markets, which can include: (i) The legal limitations on the transferability or sale of a loan including the requirement to obtain consents from borrowers or syndicate agents and members prior to assignment; (ii) the existence of a trading market for the loans and the estimated depth of the market; (iii) the frequency of trades or quotes for the loan; (iv) the estimated length of the settlement period; and (v) the borrower's health.'').

5. Liquidity Classification Review Requirement

Under rule 22e–4 as adopted today, a fund would be required to review its portfolio investments' classifications at least monthly in connection with reporting the liquidity classification for each portfolio investment on Form N–PORT, as well as more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.[564] A fund generally could classify and review the liquidity classifications of its portfolio investments according to their asset class; however, the fund must separately classify and review any investment within an asset class if the fund or its adviser, after reasonable inquiry, has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to other securities within that asset class.[565]

As discussed in the Proposing Release, the Commission has previously stated that it ''expects funds to monitor portfolio liquidity on an ongoing basis to determine whether, in light of current circumstances, an adequate level of liquidity is being maintained.'' [566] Some have interpreted this statement to mean that the Commission does not intend for a fund to reassess the liquidity status of *individual* securities on an ongoing basis, but instead to monitor whether a fund *portfolio's* overall liquidity profile is appropriate in light of its redemption obligations.[567] While we agree that a fund should monitor the liquidity of its portfolio holistically, we note that the decreased liquidity of individual portfolio components can directly affect the ability of a fund to meet its redemption obligations without significant dilution of remaining investors' interests in the fund.[568] We thus believe that specifically requiring a fund to review the classifications of its portfolio investments made under rule 22e–4 would reduce the risk that a fund would be unable to meet its redemption obligations without significant investor dilution.

As proposed, rule 22e–4 would have required a fund to review its liquidity classifications on an ongoing basis.[569] Also, like the proposed classification requirement, the proposed review requirement would have required a fund to take into account a list of specified factors, as the fund determines applicable, in reviewing its portfolio assets' liquidity.[570] In the Proposing Release, we stated that a fund may wish to determine the frequency of ongoing review of portfolio positions' liquidity classifications based in part on the liquidity of its portfolio holdings, as well as the timing of its portfolio acquisitions and turnover.[571] In addition, we noted in the Proposing Release that, at a minimum, a fund would review its liquidity classifications at least monthly in order to accurately report this information on proposed Form N–PORT.[572] Proposed rule 22e–4 did not include provisions that would permit a fund to review its portfolio assets' liquidity on an asset-class basis.

We sought comment in the Proposing Release about the proposed ongoing review requirement. Several commenters suggested that the Commission adopt a general liquidity classification review requirement, without incorporating specific factors that a fund would be required to consider during the course of its review.[573] One commenter argued that the frequency of the proposed review requirement was unclear and recommended that the Commission adopt more specific standards associated with review frequency.[574] Multiple commenters expressed concerns about the potential burden associated with an ''ongoing'' review requirement [575] and suggested that these concerns could be mitigated by replacing the proposed requirement to classify the liquidity of each portfolio position with a ''top-down'' requirement permitting funds to classify their portfolio assets' liquidity on an asset-class basis.[576]

We believe that the review requirement we are adopting, together with the rule provision specifying that a fund would generally be permitted to review its liquidity classifications with reference to its holdings' asset classes, advances our goal of requiring funds to appropriately re-evaluate the liquidity of their portfolio holdings, while responding to commenters' concerns. As discussed in the Proposing Release, we understand that some funds currently may not review the liquidity of their portfolio investments on a continuing basis after they are acquired.[577] In particular, we understand that certain funds may initially determine that certain investments are liquid or illiquid but will not regularly re-evaluate these initial classifications, even in light of changing market conditions. We understand that some funds, on the other hand, currently reassess the liquidity of their portfolio investment regularly based on market-wide developments, as well as events affecting particular securities or asset classes.[578]

Rule 22e–4 as adopted requires a fund to review its liquidity classifications at least monthly, in connection with reporting its liquidity classifications monthly on Form N–PORT.[579] This requirement responds to the recommendation that the Commission adopt more specific standards associated with review frequency. Moreover, in order to determine whether its holdings are consistent with the fund's highly liquid investment minimum, as well as the rule 22e–4 limitation on illiquid investments, a fund would have to determine whether its initial classification determinations have changed based on market conditions or other developments. Therefore, rule 22e–4 also includes the requirement for a fund to review its liquidity classifications more frequently than monthly if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investment classifications.[580] For example, relevant market-wide developments could include changes in interest rates or other macroeconomic events, market-wide volatility, market-wide flow changes, dealer inventory or capacity changes, and extraordinary

[564] *See* rule 22e–4(b)(1)(ii).

[565] *See* rule 22e–4(b)(1)(ii)(A).

[566] *See* Proposing Release, *supra* footnote 9, at nn.246–248 and accompanying text (citing Guidelines Release, *supra* footnote 38, at section II).

[567] *See id.,* at n.247 (citing Investment Company Institute, *Valuation and Liquidity Issues for Mutual Funds* (Feb. 1997), at 45).

[568] *See, e.g.,* Third Avenue Temporary Order, *supra* footnote 12 (''On December 9, 2015, after considering the environment the Fund was in and the likelihood that incremental sales of portfolio securities to satisfy additional redemptions would have to be made at prices that would unfairly disadvantage all remaining shareholders, the Board determined that the fairest action on behalf of all shareholders would be to adopt a plan of liquidation.''); *see also* Heartland Release, *supra* footnote 80.

[569] Proposed rule 22e–4(b)(2)(i).

[570] Proposed rule 22e–4(b)(2)(ii).

[571] *See* Proposing Release, *supra* footnote 9, at text accompanying n.252.

[572] *See id.,* at n.253.

[573] *See, e.g.,* CFA Comment Letter; Vanguard Comment Letter.

[574] *See* Better Markets Comment Letter.

[575] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; LSTA Comment Letter; T. Rowe Comment Letter.

[576] *See, e.g.,* LSTA Comment Letter.

[577] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.250.

[578] *See id.,* at n.250 and accompanying text; *see also* ICI Comment Letter I.

[579] *See* rule 22e–4(b)(1)(ii).

[580] *See id.*

events such as natural disasters or political upheaval.[581] Asset-class and investment-specific developments that a fund may wish to consider include, among others, regulatory changes affecting certain asset classes and corporate events (such as bankruptcy, default, pending restructuring, or delisting, as well as reputational events). We believe that the rule's requirement that a fund review its liquidity classifications at least monthly, as well as more frequently in light of market-related and other changes that could materially affect a fund's investment classifications, will provide funds with more direction as to the frequency of their classification reviews, as well as circumstances that could lead to a classification review, than the proposed ongoing review requirement.

We believe that the review requirement we are adopting, as opposed to the proposed ongoing review requirement, permits funds to tailor their review of liquidity classifications in light of the liquidity character of a fund's portfolio investments. The modifications to rule 22e–4 clarify that we do not expect a fund to constantly reassess all of its portfolio investments' liquidity. Also, the review requirement that we are adopting would not require a fund to consider a detailed list of specific factors in the course of conducting its liquidity classification reviews. Instead, as discussed above, it would require a fund to take into account ''relevant market, trading, and investment-specific considerations'' in reviewing its investments' liquidity.[582]

Finally, the review requirement that we are adopting, like the rule 22e–4 classification requirement, would permit a fund to generally review its portfolio investments' liquidity according to their asset class (provided that the fund must identify, and separately review, any investment within an asset class that the fund determines should be reviewed separately based on its liquidity characteristics).[583] We believe that this approach will permit funds to increase their efficiency in classifying and reviewing portfolio investments' liquidity.

6. Liquidity Classification Reporting and Disclosure Requirements

In connection with the liquidity classification requirement of rule 22e–4, we are requiring, largely as proposed and with certain modifications in response to comments, a fund to report the liquidity classification assigned to each of the fund's portfolio investments on Form N–PORT.[584] Position-level liquidity classification information will be reported to the Commission in a structured data format on a confidential basis rather than released every three months to the public.[585] Under the final rules, a fund will also be required to publicly report on Form N–PORT the aggregated percentage of its portfolio investments that falls into each of the four liquidity classification categories outlined above.[586] This aggregate information will be disclosed to the public only for the third month of each fiscal quarter with a 60-day delay. While we acknowledge that liquidity classification determinations may be to some extent subjective and that such information reported on Form N–PORT may be non-standardized, we believe that, on balance, our staff, investors, and other potential users would benefit from the information that will be reported on Form N–PORT that currently may not be reported or disclosed by funds. We believe that this greater transparency about liquidity at the fund-level will provide our staff, investors, and other potential users with a helpful picture of the general liquidity characteristics of funds and help them better understand the liquidity risks associated with a particular fund. We also believe that this information will help investors make more informed investment decisions.

As part of this public disclosure, a fund would publicly disclose the percentages of its highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the fund's derivatives transactions that the fund has classified in the moderately liquid, less liquid, and illiquid investments classification categories in light of the requirement in rule 22e–4 that the liquidity classification cover each of the fund's derivatives transactions, discussed above.[587] This derivatives transactions information will also be made public for the third month of each fiscal quarter with a 60-day delay.

Most commenters opposed the proposed Form N–PORT reporting requirement, and particularly objected to having position-level liquidity information reported on Form N–PORT made public.[588] We believe that the additions to Form N–PORT adopted today in this Release address many of these concerns. We discuss these additions, the comments we received on the proposal, as well as modifications we made to the proposal in response to comments, in more detail below.

a. Reporting Liquidity Classification of Portfolio Investments

We proposed to require a fund to report on Form N–PORT the liquidity classification of each of the fund's positions (or portions of a position) in a portfolio asset using the proposed classification system of rule 22e–4.[589] As discussed above, most commenters opposed the proposed classification regime, and many offered varied classification alternatives for fund liquidity risk management and reporting purposes. As discussed previously, we are today adopting a liquidity classification requirement under rule 22e–4 based on a ''days-to-cash'' framework as proposed, but with a number of modifications informed by commenter recommendations that we believe address many commenters' concerns about the classification process itself.

A number of commenters supported reporting liquidity classifications to the Commission on Form N–PORT, provided that it was not publicly disclosed.[590] For example, one

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[581] *See, e.g.,* 2014 Fixed Income Guidance Update, *supra* footnote 94.

[582] *See* rule 22e–4(b)(1)(ii).

[583] *See* rule 22e–4(b)(1)(ii)(A).

[584] Rather than report the liquidity classification among six categories as under the proposal, funds will be required to report liquidity classifications among four liquidity categories, which may be based on asset type to the extent discussed above. *See* Item C.7. of Form N–PORT. We have modified the numbering convention for items within Form N–PORT from the proposal to be consistent with Form N–PORT as adopted in the Investment Company Reporting Modernization Adopting Release.

[585] *See* General Instruction F of Form N–PORT.

[586] Item B.8.a. of Form N–PORT. We note that such reporting is designed to serve as a snapshot of a fund's liquidity on the last business or calendar day of the month. *See* rule 30b1–9 under the Investment Company Act (requiring reporting on Form N–PORT to be current as of the last business day, or last calendar day, of the month). Accordingly, the aggregate percentage of portfolio investments in each of the four liquidity classification categories need not reflect pending transactions, but instead should reflect the balance of investments in each category on the last business or calendar day of the month.

[587] Item B.8.b. of Form N–PORT. This derivatives transactions reporting requirement corresponds to the modification in rule 22e–4(b)(1)(ii)(C), discussed above.

[588] *See, e.g.,* Cohen & Steers Comment Letter; NYC Bar Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[589] *See* Proposing Release, *supra* footnote 9, at section III.G.2.a.

[590] *See, e.g.,* Dechert Comment Letter; Interactive Data Comment Letter; J.P. Morgan Comment Letter; Nuveen Comment Letter. Some commenters suggested that the Commission evaluate reported classification data for a period of time to determine whether the information is appropriate for public disclosure. *See* BlackRock Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter III.

commenter expressed support for reporting position-level liquidity classifications to the Commission, noting that the Commission should have the data it needs to monitor fund holdings and liquidity determinations, examine potential outliers, and, if an unexpected market event occurs (*e.g.,* the default of a significant institution), quickly assess the potential impact on mutual funds it supervises.[591] Another commenter expressed the belief that the proposed liquidity classifications data could be appropriate for Commission oversight purposes.[592]

On the other hand, a few commenters objected to reporting liquidity classifications, as proposed, even if such information is disclosed only to the Commission.[593] Some commenters stated that there is limited utility in the proposed classification information for the Commission since the information would be subjective and methodology-specific, which would lead to results that would preclude comparisons across funds, limiting the utility of this information for the Commission's monitoring of industry-wide data.[594] In addition, one commenter expressed concerns about the security of sensitive information filed with the Commission due to recent high-profile cybersecurity breaches both in the governmental and private sectors.[595]

We continue to believe that requiring funds to report the liquidity classification of their portfolio investments is vital to our ongoing monitoring and oversight efforts. A key goal of the rulemaking is to allow us to monitor funds' liquidity profiles (both on a fund-by-fund basis and across funds) over time, and respond as appropriate. Absent the required reporting on Form N–PORT, our ability to engage in such efforts would be limited and less efficient. We believe that the changes made to the classification system discussed above should serve to mitigate commenters' concerns about the difficulties of making comparisons across the industry, in light of the reduced number of categories for classification. We recognize that there is still likely to be variation between funds in how they classify certain asset classes and investments, and believe that despite any variations, this liquidity information will be useful and valuable to us. We will be able to identify different fund liquidity classification practices, and use that information to gain insight into how different funds view liquidity in the market, and whether there are any identifiable liquidity concerns. We also note that despite any concerns about variation of practices across funds limiting comparability, we expect that the reported information will allow us to generally monitor specific funds' liquidity on a consistent basis across time, and identify how their views of the liquidity of their investments change.

We believe that such information will assist us in better assessing liquidity risk in the open-end fund industry, which can inform our policy and guidance. We also believe that this information will assist us in monitoring for compliance with rule 22e–4 and identifying potential outliers in fund liquidity classifications for further inquiry, as appropriate. We recognize that liquidity classifications, similar to valuation- and pricing-related matters, inherently involve judgment and estimations by funds. We also understand that the liquidity classification of an asset class or investments may vary across funds depending on the facts and circumstances relating to the funds and their trading practices.[596] We do not believe that data based on estimations of market conditions on a fund-by-fund basis is uninformative or of limited utility because of the information's sometimes fund-specific, subjective nature.[597] Rather, we believe that even with potential variances in determinations, the liquidity information reported will be informative to the Commission. Furthermore, we believe that members of the fund industry are generally in the best position to provide current information on the conditions of fund liquidity since they are in the markets every day trading securities and observe how markets are evolving and related liquidity characteristics are changing.

In sum, we believe that the modified reporting requirements on Form N–PORT will provide the Commission with meaningful data concerning the liquidity of portfolio investments across the fund industry and at the same time lessen burdens on funds classifying and reporting liquidity information (compared to the proposal). Accordingly, we are adopting the requirement for funds to report the liquidity classification of their portfolio investments to the Commission.

b. Non-Public Disclosure of Liquidity Classification Information Reported on Form N–PORT

We proposed that liquidity classification information reported on Form N–PORT at the portfolio position level be disclosed to the public for the third month of each fiscal quarter with a 60-day delay. One commenter expressed general support for regulatory initiatives aimed at improving transparency.[598] Several commenters expressed support for public disclosure of liquidity information if the framework for classification was modified from the proposed six-category liquidity classification framework to alternative frameworks proposed by commenters that generally measured the liquidity of portfolio positions based on asset type and included less classification categories.[599]

On the other hand, most commenters opposed the proposed public disclosure of the liquidity classification. Some commenters expressed concerns that the value to the public of the position-level liquidity classification information on Form N–PORT, as proposed, would be limited.[600] Many other commenters expressed concerns that the public disclosure of the position-level liquidity classification information could be potentially misleading to investors for various reasons. For example, many commenters contended that, while the position-by-position information reported would be subjective, the numeric days-to-settlement presentation proposed on Form N–PORT could imply a false sense of precision of the data to

[591] *See* J.P. Morgan Comment Letter.

[592] *See* State Street Comment Letter.

[593] *See* Federated Comment Letter; Fidelity Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

[594] *See, e.g.,* BlackRock Comment Letter; Fidelity Comment Letter; Wellington Comment Letter.

[595] *See* Invesco Comment Letter.

[596] *See, e.g.,* Comment Letter of the Investment Company Institute on Investment Company Reporting Modernization Release (Aug. 11, 2015) (''These [liquidity] judgments may differ among personnel and certainly among fund complexes.''); Comment Letter of Invesco Advisers, Inc. on Investment Company Reporting Modernization Release (Aug. 11, 2015) (''Invesco and other fund complexes could reasonably differ in their assessments of the liquidity of a particular security, even though both complexes have a sound method for determining liquidity and follow their own reasonable procedures.'').

[597] *See supra* footnote 594 and accompanying text.

[598] *See* Interactive Data Comment Letter.

[599] *See, e.g.,* Charles Schwab Comment Letter; FSR Comment Letter; Nuveen Comment Letter; Vanguard Comment Letter.

[600] *See, e.g.,* Better Markets Comment Letter (expressing concerns that the proposal's three-day liquid asset minimum and 15% standard assets are determined by the fund and that the liquidity classifications reported on Form N–PORT would be stale information for the public); Morningstar Comment Letter (also stating concerns that the information available to the public under the proposal would be stale and expressing the belief that investors could find it difficult to compare the liquidity characteristics of portfolios from different funds).

fund investors.[601] Many of these commenters also argued that providing subjective, position-level liquidity classification information to the public could potentially result in misleading comparisons across funds,[602] with some commenters noting that such comparisons could disadvantage certain funds over others.[603] While reports on Form N–PORT would be submitted to the Commission within 30 days after month end, some commenters voiced concerns that the liquidity data presented on Form N–PORT would be stale for the public given that the reports, as proposed, would be available every third month of a fund's fiscal quarter with a 60-day delay, adding to the risk of misleading investors about the real-time state of a portfolio's liquidity.[604]

Many commenters also expressed concerns that public disclosure of the proposed position-level liquidity classification information would ultimately harm fund shareholders and the fund market for a variety of reasons. Some commenters argued that public reporting would facilitate predatory trading practices, particularly during periods of liquidity stress, ultimately harming fund investors.[605] Commenters expressed the belief that public reporting of liquidity classifications at the position-level exacerbates these concerns, noting, for example, that in the event a fund experiences a liquidity issue, public information about its portfolio-level liquidity classifications may expose the fund to predatory trading.[606] In addition, several commenters expressed concern that public reporting of position-level liquidity classifications could be harmful to the fund market, arguing that such reporting would incentivize homogenized liquidity determinations and comparative liquidity ''ratings'' from third-party service providers,[607] as well as ''window dressing'' at period ends prior to disclosure, increasing the potential for systemic risks in the fund industry. [608] Other commenters suggested that the Commission evaluate reported classification data for a period of time to determine whether the information is appropriate for public disclosure.[609]

While many of these commenters objected to the proposed position-level public disclosure of liquidity classifications, several commenters did not object to making more aggregated portfolio-level disclosure of liquidity data available to the public.[610] These commenters suggested that, while position-level liquidity data may pose concerns as discussed above, providing the public a portfolio-level ''roll up'' of the liquidity levels of the fund may provide useful data and would be unlikely to raise the same kind of issues.[611]

We recognize that the level of position-level detail necessary for the Commission and our staff to effectively monitor fund liquidity may not be necessary for other users. We understand that some data collectors would prefer to use information reported on Form N–PORT proposed under the Investment Company Reporting Modernization proposal (which we are adopting concurrently), such as monthly portfolio holdings data, rather than the classification information proposed in the liquidity proposal.[612] Furthermore, we understand that for many investors, the proposed specific position-level liquidity data would be likely unnecessarily detailed, and that aggregated or ''rolled up'' portfolio-level information about fund liquidity may be more easily understandable and usable. As discussed below, such aggregated information will likely result in more user friendly and digestible portrayals of fund liquidity, and at the same time we expect will avoid many of the potential harms suggested by commenters that might result from position-level disclosure to the public. Such a layered reporting and disclosure regime should allow the Commission and investors each to access the liquidity information likely most useful for their purposes.

We also appreciate the limitations and subjectivity of the liquidity classification process, and thus understand the risks of investors potentially giving too much weight to a fund manager's individual liquidity classification choices. The classification of portfolio investments at the position-level under the days-to-cash framework involves a number of assumptions and methodologies that could result in classifications that vary from fund to fund. As a result, the liquidity classification information reported for the same or similar asset classes and investments could vary because of complex differences in methodologies and assumptions that may not be reported on Form N–PORT nor easily explained to investors but would be available to the Commission in inspections.[613]

We appreciate the concerns raised by commenters that reporting publicly position-level data could imply a false sense of precision about the liquidity profile of a fund and that, given the delay in the public reporting of portfolio-level classification information (60 days after quarter-end), the position-level information will likely be out of date when reviewed by investors. While we can take these potential variances in liquidity classifications of assets into account in evaluating and using the data for the Commission's purposes in observing potential trends in liquidity profiles across the fund industry, it may be more difficult to explain them to investors. Furthermore, the Commission would receive portfolio-level classification information within 30 days of month-end, thereby increasing the utility of the classification information for Commission purposes. We expect that providing only aggregated liquidity classification information on the funds' portfolio assets publicly may mitigate some of these concerns. This level of detail should appropriately focus investors on the fund's general liquidity profile and general trends in fund liquidity rather than individual security-level liquidity decisions, in light of the concerns discussed above.

Some commenters also raised concerns that public reporting of

[601] *See, e.g.,* Dechert Comment Letter; Eaton Vance Comment Letter I; Federated Comment Letter; LSTA Comment Letter; Morningstar Comment Letter.

[602] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; J.P. Morgan Comment Letter; Voya Comment Letter.

[603] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; ICI Comment Letter I; Wellington Comment Letter.

[604] *See, e.g.,* FSR Comment Letter; LSTA Comment Letter; Morningstar Comment Letter (noting that given public disclosure on N–PORT would be provided infrequently, the information might well be very out of date when an investor reviews it, thereby providing little benefit to investors); NYC Bar Comment Letter.

[605] *See* BlackRock Comment Letter (stating that publicly available position-level data exacerbated Third Avenue's troubles as other market participants knew of the holdings of the Focused Credit Fund and used that information to the detriment of the fund). *See also e.g.,* Federated Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; Voya Comment Letter.

[606] *See, e.g.,* SIFMA Comment Letter I.

[607] *See, e.g.,* Charles Schwab Comment Letter; Wellington Comment Letter; Comment Letter of Wellington Management Company LLP (June 10, 2016) (''Wellington Comment Letter II''); Wells Fargo Comment Letter.

[608] *See, e.g.,* Dechert Comment Letter; LSTA Comment Letter; NYC Bar Comment Letter; Oppenheimer Comment Letter.

[609] *See, e.g.,* BlackRock Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter I.

[610] *See, e.g.,* Nuveen Comment Letter; T. Rowe Comment Letter.

[611] *See, e.g.,* Nuveen Comment Letter; T. Rowe Comment Letter.

[612] *See* Morningstar Comment Letter.

[613] A fund has the option of providing explanatory notes related to its filing to explain any of its methodologies, including related assumptions, in Part E of Form N–PORT. *See* Instruction G to Form N–PORT.

liquidity classifications at the position level could potentially expose investors to harm, including, for example, potentially exposing a fund to predatory trading, particularly during periods of liquidity stress.[614] We believe, however, that the aggregated public disclosure on Form N–PORT once each quarter with a 60-day lag would alleviate these predatory trading concerns given that those engaged in predatory trading would not have information about a fund's own assessment of its liquidity characteristics in real-time and would not have the detailed position-level information in real time necessary to pursue such strategies.

For these reasons, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make liquidity classification information for each portfolio investment publicly available.[615] We also are adopting amendments to Form N–PORT to require a fund to publicly disclose the aggregated percentage of its portfolio assets representing each of the four classification categories outlined in Form N–PORT and related rule 22e–4,[616] as discussed in more detail below. We believe that providing liquidity classification data attributable to each portfolio investment to the Commission and fund-level data to investors is an efficient approach to present liquidity information in a manner that both satisfies the Commission's need for position-level liquidity data for its regulatory oversight purposes and provides useful fund liquidity information to investors.

In addition, the Commission recognizes the importance of sound data security practices and protocols for non-public information, including information that may be competitively sensitive. The Commission has substantial experience with storage and use of non-public information reported on Form PF and delayed public disclosure of information on Form N–MFP (although the Commission no longer delays public disclosure of reports on Form N–MFP), as well as other non-public information that the Commission handles in its ordinary course of business. Commission staff is carefully evaluating the data security protocols that will apply to non-public data reported on Form N–PORT in light of the specific recommendations and concerns raised by commenters. Drawing on its experience, the staff is working to design controls and systems for the use and handling of Form N–PORT data in a manner that reflects the sensitivity of the data and is consistent with the maintenance of its confidentiality.[617] In advance of the compliance date, we expect that the staff will have reviewed the controls and systems in place for the use and handling of non-public information reported on Form N–PORT.

c. Public Fund-Level Aggregate Liquidity Profile Reporting

As previously discussed, we are adopting, with modifications, the proposed requirement that funds report to the Commission on a non-public basis the liquidity classification assigned to each portfolio position on Form N–PORT. Some commenters expressed concerns that the value to the public of the position-level liquidity classification information on Form N–PORT, as proposed, would be limited.[618] Other commenters recommended that, as an alternative to the proposal, the Commission make available to the public a general assessment of the liquidity of the portfolio at the fund level, rather than the individual security level,[619] with more detailed information, including the fund's assessment of the liquidity of each asset at the individual security level, provided to the Commission but kept confidential.[620]

We appreciate these comments and recognize that position-level liquidity classification data, while valuable for Commission purposes, may be of limited use for everyday investors. We find persuasive commenters' recommendations to provide the public with a general assessment of the liquidity of a portfolio at the fund level as an approach to provide everyday investors useful information on fund liquidity. As a result, we are adopting amendments to Form N–PORT to require a fund to publicly report for the third month of each fiscal quarter with a 60-day delay the aggregate percentage of its portfolio representing each of the four classification categories outlined in Form N–PORT and related rule 22e–4.[621] For purposes of this reporting item, a fund would report the aggregate percentage of investments that are assets in each liquidity category compared to total portfolio investments that are assets (not including liabilities) of the fund.[622]

In order to avoid misleading investors about the actual availability of highly liquid investments to meet redemptions, a fund also will be required to publicly report on Form N–PORT the percentage of its highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions that are classified as moderately liquid, less liquid, or illiquid investments.[623] As discussed above, we proposed to require a fund to consider the relationship of an asset to another portfolio asset in classifying the liquidity of its portfolio assets reported on Form N–PORT and to consider guidance that a fund should classify the liquidity of assets segregated to cover derivatives obligations using the liquidity of the derivative instruments such assets are covering.[624] One commenter suggested that the Commission add an item to the Schedule of Portfolio Investments on Form N–PORT that permits a fund to note whether an asset (or portion thereof) is encumbered or linked to other assets as of the reporting date.[625] Another commenter suggested that the Commission require funds to assign liquidity classifications to cover assets on an aggregate portfolio basis in amounts corresponding to the aggregate amount of derivatives exposure in each liquidity category.[626]

In consideration of the commenters' recommendations, we believe that our modification to the proposal to require a fund to report publicly the percentage of the fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the fund's derivatives

[614] *See, e.g.,* ICI Comment Letter; Cohen and Steers Comment Letter; Dechert Comment Letter; Nuveen Comment Letter.

[615] *See* section 45(a) of the Investment Company Act, which requires information in investment company forms to be made available to the public, unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors. *See also* General Instruction F of Form N–PORT.

[616] *See* Item B.8. of Form N–PORT.

[617] *See* Reporting by Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF, Investment Advisers Act Release No. 3308 (Oct. 31, 2011) [76 FR 71228 (Nov. 16, 2011)]. We recognize that there are differences between the N–PORT reporting requirements and the Form PF reporting requirements, such as frequency, granularity, and registration status, and our recognition of these differences guides our evaluation of appropriate measures for preservation of data security for reported information.

[618] *See, e.g.,* Better Markets Comment Letter; Morningstar Comment Letter.

[619] *See, e.g.,* Dechert Comment Letter; Federated Comment Letter; LSTA Comment Letter; NYC Bar Comment Letter.

[620] *See, e.g.,* SIFMA Comment Letter I; Charles Schwab Comment Letter.

[621] *See* Item B.8.a. of Form N–PORT.

[622] *See id.*

[623] *See* Item B.8.b. of Form N–PORT; *see also supra* section III.C.3.c.

[624] *See* Proposing Release, *supra* footnote 9, at section III.B.2; *see also supra* section III.C.3.c.

[625] *See* ICI Comment Letter I; *see also supra* section III.C.3.c.

[626] *See* Dechert Comment Letter; *see also supra* section III.C.3.c.

transactions that are classified in each liquidity category strikes an appropriate balance between providing investors with useful information about the impact of derivatives coverage obligations on the percentage of a fund's highly liquid investments and lessening operational burdens associated with classifying investments. Since the public will only receive asset liquidity classification information on an aggregate level and only the Commission will receive liquidity classifications on an investment-by-investment basis, we believe that the suggested alternative to add an item to the Schedule of Portfolio Investments on Form N–PORT linking an asset encumbered to other assets in connection with derivatives transactions would not be a helpful means to inform investors about the connection between derivatives obligations and the availability of highly liquid investments to meet redemptions. We believe that without public reporting of the percentage of a fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, a fund's derivatives transactions that are not themselves highly liquid investments, the reported percentage of a fund's highly liquid investments could be potentially misleading to investors if a portion of highly liquid investments are not available to meet redemptions due to derivatives transactions obligations.

Overall, we continue to believe that investors currently have limited information about the liquidity of fund investments and would benefit from enhanced information to evaluate funds and assess the potential for returns and risks of a particular fund. We expect that many investors will use liquidity reporting information to better understand the liquidity risks associated with a particular fund for purposes of making more informed investment decisions and will benefit from aggregate information about a fund's overall liquidity. Moreover, we believe that requiring a fund to publicly disclose only the aggregate percentage of its portfolio assets representing each of the four classification categories balances commenters' concerns about certain adverse effects that could arise from public reporting of detailed portfolio liquidity information with investors' need for improved information about funds' liquidity risk profiles.

d. Illiquid Investments

As discussed above, rule 22e–4, as adopted, combines a fund's illiquid investment determinations with the general liquidity classification framework reported on Form N–PORT.[627] In the Proposing Release, in connection with the codification of the 15% guideline that an open-end fund may not invest in the aggregate more than 15% of its net assets in ''illiquid securities,'' we proposed to require funds to report on Form N–PORT whether each portfolio asset is a ''15% standard asset,'' as defined under the proposal,[628] in addition to reporting the liquidity of each of the fund's positions (or portions of a position) in a portfolio asset using six proposed categories.[629] One commenter opposed requiring reporting of the 15% standard asset at the individual portfolio asset level, raising concerns that public disclosure could have adverse effects on funds.[630] Another commenter opposed reporting of the 15% standard asset at the individual portfolio asset level if publicly disclosed in addition to the proposed six liquidity classification categories, stating that the distinction between the two pieces of data would make sense to industry experts but would be confusing and potentially misleading to typical investors.[631]

After considering these comments, we agree that presenting to the public liquidity classification information and the 15% standard asset designation separately could potentially confuse investors. As discussed in more detail in section III.C previously, we believe that it is more appropriate to harmonize the rule 22e–4 limit on illiquid investments, referred to as 15% standard assets under the proposal, with the rule's broader liquidity classification requirement by incorporating an illiquid investment category into the classification requirement. Likewise, we believe that this harmonization should be reflected in reports on Form N–PORT. Thus, we are adopting, modified from the proposal, an illiquid investment category into Form N–PORT that corresponds with rule 22e–4's broader classification requirement.[632] By doing this, a fund's exposure to illiquid investments may be viewed as part of the fund's overall liquidity profile in a more clear and concise manner. Furthermore, we are persuaded by some of the concerns raised by commenters regarding the unintended adverse effects that public disclosure of illiquid investment information on the portfolio position level could have on funds and fund investors. As adopted, liquidity classification information reported on the portfolio position level will be non-public on Form N–PORT, as discussed in more detail above.

We expect to use this information to monitor fund compliance with the prohibition of acquiring illiquid investments if the fund would have invested more than 15% of its net assets in illiquid investments that are assets and analyze liquidity trends in the fund industry. Overall, we believe that maintaining this information on illiquid investments as part of the liquidity classification information reported on Form N–PORT will provide the Commission with meaningful data, including information regarding exposure to illiquid investments across the fund industry.

D. Highly Liquid Investment Minimum

Today we are adopting a requirement that each fund determine its ''highly liquid investment minimum,'' or the minimum amount of the fund's net assets that the fund invests in highly liquid investments that are assets.[633] In determining its highly liquid investment minimum, a fund will be required to consider the factors the fund also has to consider, as applicable, in assessing its liquidity risk under rule 22e–4.[634] Additionally, in determining whether a fund is meeting its highly liquid investment minimum, the fund will look only to its investments that are assets of the fund.[635] Rule 22e–4 as adopted today also requires a fund to adopt and implement policies and procedures for responding to a shortfall in a fund's highly liquid investments below its highly liquid investment minimum.[636] These policies and procedures must include reporting to the fund's board of directors, no later than the board's next regularly scheduled meeting, regarding any shortfall of the fund's highly liquid investments compared to its minimum. A fund is required to report to its board

[627] *See supra* section III.C.2.d.

[628] *See* Proposing Release, *supra* footnote 9, at section III.G.2.b.

[629] *See* Proposing Release, *supra* footnote 9, at section III.G.2.a.

[630] *See* Cohen & Steers Comment Letter.

[631] *See* Federated Comment Letter.

[632] *See* Item C.7. of Form N–PORT.

[633] Rule 22e–4(a)(7). Rule 22e–4(a)(7) refers to highly liquid investments that are ''assets'' to make clear that when evaluating whether a fund is meeting its highly liquid investment minimum, the fund should look to its investments with positive values. Highly liquid investments that have negative values should not be netted against highly liquid investments that have positive values when calculating whether the fund is meeting its highly liquid investment minimum. Thus, only highly liquid investments that have positive values (*i.e.*, ''assets'') should be used in the numerator. *Cf. infra* footnote 744 (discussing the use of the term ''assets'' in the 15% limit on illiquid investments).

[634] Rule 22e–4(b)(1)(iii)(A)(1).

[635] Rule 22e–4(a)(7).

[636] Rule 22e–4(b)(1)(iii)(A)(3).

within one business day, and submit a non-public report to the Commission, if its highly liquid investment minimum shortfall lasts more than seven consecutive calendar days.[637] A fund's board of directors is not normally required to specifically approve the fund's highly liquid investment minimum, although during a time that a fund's highly liquid investments are below the fund's determined minimum level, a fund's highly liquid investment minimum can be changed only with board approval.[638] Additionally, a discussion of the fund's minimum must be included in the written annual report to the board on the adequacy and effectiveness of the fund's liquidity risk management program. Funds whose portfolio assets consist primarily of highly liquid investments, as well as In-Kind ETFs, are not subject to the highly liquid investment minimum requirement.[639]

As described in more detail below, this requirement is a modification of the proposed ''three-day liquid asset minimum,'' which also would have required a fund to determine the percentage of the fund's net assets to be invested in relatively liquid assets (under the proposal, ''three-day liquid assets,'' or cash and any asset convertible to cash within three business days at a price that does not materially affect the value of that asset immediately prior to sale).[640] In determining its three-day liquid asset minimum, the proposed rule would have required a fund to consider the factors the fund would have to consider, as applicable, in assessing its liquidity risk under rule 22e–4.[641] Under the proposal, a fund would have been prohibited from acquiring any asset other than a three-day liquid asset if, after acquisition, the fund would hold fewer three-day liquid assets than the percentage specified under its three-day liquid asset minimum.[642] Also under the proposal, a fund's board would have had to approve the fund's three-day liquid asset minimum and any changes thereto.[643]

The goal of the proposed three-day liquid asset minimum requirement was to increase the likelihood that a fund would hold adequate liquid assets to meet redemption requests without materially affecting the fund's NAV.[644] The proposed three-day liquid asset minimum also was intended to be structured in a way that would foster consistency in funds' consideration of relevant liquidity risk factors, while permitting flexibility in implementing this liquidity risk management tool as appropriate given the diverse range of funds it would cover.[645] It was intended to work together with other aspects of the proposed liquidity risk management program designed to help ensure that while funds would consider the spectrum of liquidity in their portfolios (in part through the proposed classification requirement), they would pay particular attention to the most liquid and least liquid ends of this spectrum.[646]

Many commenters agreed that a requirement for a fund to determine a minimum—or, per some commenters' suggestions, a target—amount of relatively liquid assets would assist funds in effectively meeting redemption requests under a variety of market conditions.[647] Some, on the other hand, suggested that a minimum or target requirement would not necessarily enhance a fund's ability to meet shareholder redemptions because the amount of liquid assets a fund may need is dynamic and unpredictable, and in extraordinary stressed market conditions no particular amount of liquid assets may end up being sufficient to meet redemptions.[648] Commenters also objected to the structure of the proposed minimum requirement, particularly the fact that the requirement would not permit a fund to acquire relatively less liquid assets if the fund were to fall below its minimum, arguing that the requirement could actually increase shareholder redemptions during times of stress.[649] In addition, commenters expressed concerns that the proposed requirement could prevent funds from meeting their principal investment strategies[650] and that it could effectively prevent funds from holding or acquiring favorable, but relatively less liquid, assets under certain circumstances, which could intensify market stress as well as adversely affect a fund's NAV.[651] Finally, some commenters expressed concerns about the potential operational burdens associated with the proposed three-day liquid asset minimum requirement.[652]

Some commenters also suggested alternatives to the proposed three-day liquid asset minimum. As discussed further below, a number of commenters suggested requiring funds to maintain a ''target'' or threshold amount of certain liquid assets.[653] Other commenters suggested requiring funds to consider whether to maintain a target amount of liquid assets[654] or to adopt policies and procedures to address shareholder redemptions, which could include targets or ranges.[655] As discussed below, we believe the highly liquid investment minimum requirement we are adopting strikes an appropriate balance in promoting the benefits intended by the proposed three-day liquid asset minimum requirement, including consistency in funds' consideration of certain factors relevant to their liquidity risk management procedures, while at the same time lessening the likelihood of certain adverse consequences identified by commenters.

1. Anticipated Benefits of Highly Liquid Investment Minimum

Like the proposed three-day liquid asset requirement, we believe that the highly liquid investment minimum requirement will increase the likelihood that a fund would be prepared to meet redemption requests without significant dilution of remaining investors' interests in the fund. Some commenters noted that it is common for funds to assess how much liquidity they may need under various market conditions in order to meet redemptions over a relatively short time horizon and suggested that targeting a certain level of relatively liquid assets is an appropriate way for a fund to manage its liquidity

[637] *Id. See also* Item D.1 of new Form N–LIQUID.

[638] Rule 22e–4(b)(1)(iii)(A)(1).

[639] Rule 22e–4(b)(1)(iii)(A); *see also* rule 22e–4(a)(5) (excluding money market funds and In-Kind ETFs from the definition of ''fund'').

[640] Proposed rule 22e–4(a)(8); proposed rule 22e–4(b)(2)(iv)(A)–(C).

[641] Proposed rule 22e–4(b)(2)(iv)(A).

[642] Proposed rule 22e–4(b)(2)(iv)(C).

[643] Proposed rule 22e–4(b)(3)(i).

[644] *See* Proposing Release, *supra* footnote 9, at section III.C.3.

[645] *Id.*

[646] *See id.,* at sections III.B.1, III.C and III.C.3.

[647] *See, e.g.,* AFR Comment Letter; Charles Schwab Comment Letter; CRMC Comment Letter; Wells Fargo Comment Letter.

[648] *See, e.g.,* Dechert Comment Letter; HSBC Comment Letter; Invesco Comment Letter; MFS Comment Letter.

[649] *See, e.g.,* BlackRock Comment Letter; SIFMA Comment Letter I.

[650] *See, e.g.,* Invesco Comment Letter; Oppenheimer Comment Letter; Cohen & Steers Comment Letter; ICI Comment Letter I.

[651] *See, e.g.,* BlackRock Comment Letter; Credit Suisse Comment Letter; ICI Comment Letter I; NYC Bar Comment Letter.

[652] *See, e.g.,* Federated Comment Letter; ICI Comment Letter I.

[653] *See, e.g.,* Invesco Comment Letter (suggesting that funds be required to maintain a ''target'' range of three-day and/or seven-day liquid assets); PIMCO Comment Letter (suggesting that a minimum cash target could be established by the investment manager); BlackRock Comment Letter (suggesting that funds could be required to take several steps to ensure an appropriate level of Tier 1 and Tier 2 assets, which could be articulated as a range or target); Credit Suisse Comment Letter.

[654] *See, e.g.,* SIFMA Comment Letter I; Oppenheimer Comment Letter.

[655] *See, e.g.,* Dechert Comment Letter; IDC Comment Letter.

risk.[656] To the extent that a fund already aims to invest a specified portion of its portfolio in relatively liquid assets, we anticipate that such funds may already be substantially in compliance with the highly liquid investment minimum requirement we are adopting today. More importantly, it would require those funds that do not currently consider what an appropriate baseline level of liquidity might be to do so.

As with the proposal, we believe that the final highly liquid investment minimum requirement will help encourage consistency in funds' consideration of certain factors relevant to their liquidity risk management procedures. This is an important benefit compared to some commenters' suggestions that funds simply be required to have policies and procedures to address shareholder redemptions (which could include liquid asset minimums or targets), but not to specify any particular procedures within this general requirement.[657] As with the proposal, we believe that the approach we are adopting appropriately encourages regularity and thoroughness in funds' consideration of certain risk factors, while at the same time promoting flexibility in funds' management of this risk. Under rule 22e–4 as adopted, a fund will be able to determine its own highly liquid investment minimum, as well as (within a fairly broad range) the assets it will hold to satisfy its minimum.[658] We believe that the requirement we are adopting provides important additional flexibility to funds' liquidity risk management practices in that a fund will be required to adopt policies and procedures, but would be permitted to design them as appropriate to respond to shortfalls in highly liquid investments relative to the fund's minimum.

As noted above, some commenters suggested that a minimum requirement would not necessarily enhance funds' ability to meet shareholder redemptions. We agree that the highly liquid investment minimum requirement we are adopting, standing alone, may not be a sufficient safeguard for funds to manage liquidity risk under all market conditions. However, we believe that, together with the rest of the liquidity risk management program requirements we are adopting, it is a central tool to help put a fund in a solid position to meet redemption requests without significant dilution of remaining investors' interests. The highly liquid investment minimum requirement, together with the classification requirement and the 15% limitation on a fund's investments in illiquid investments that are assets, is meant to be a primary component of a fund's overall approach to liquidity risk management. While the classification requirement would illustrate the spectrum of a fund's portfolio liquidity, the highly liquid investment minimum requirement and the 15% limitation on illiquid investments would focus the fund's attention on each end of that liquidity spectrum—the fund's most liquid and least liquid investments, respectively.

Based on a fund's liquidity risk assessment, the fund could determine what additional liquidity risk management tools, if any, together with the highly liquid investment minimum requirement and the 15% limitation on illiquid investments, would best permit the fund to meet redemptions and help prevent significant investor dilution. We also believe that the highly liquid investment minimum requirement will be a useful liquidity risk management tool because we understand, based on staff outreach and comments that we received on the proposal, that the requirement we are adopting is similar to liquidity risk management strategies that many funds currently use.[659]

While certain commenters expressed concern that the proposed three-day liquid asset minimum requirement could unduly encourage funds to use only their most liquid assets in meeting redemptions (which commenters argued could lead to additional redemptions from funds in stressed periods),[660] we note that the minimum requirement—both as proposed and as adopted—was never meant to suggest that a fund should only, or primarily, use its most liquid investments to meet shareholder redemptions.[661] Nor is it meant, as commenters argued, to suggest that funds should hold cash-like buffers that investors may inappropriately assume will eliminate funds' liquidity risk.[662] Indeed, we noted in the Proposing Release that assets eligible for inclusion in a fund's three-day liquid asset minimum holdings could include a broad variety of securities, as well as cash and cash equivalents.[663] Moreover, because the final highly liquid investment minimum requirement would not prohibit a fund from acquiring investments other than highly liquid investments if a fund were to fall below its minimum, we believe that the final requirement may convey more effectively than the proposal that a fund is not guaranteed to hold a certain level of cash or highly liquid investments at all times.

As with the proposed three-day liquid asset minimum requirement, we believe an important feature of the highly liquid investment minimum requirement we are adopting is the flexibility it provides for a fund to determine an appropriate highly liquid investment minimum considering its particular risk factors, as well as (within a fairly broad range) the assets it will hold to satisfy its minimum. We acknowledge that, for certain funds that currently have relatively less liquid portfolios, the highly liquid investment minimum requirement could cause a fund to modify its investment strategy if, after consideration of the required factors, the fund were to determine it is appropriate to invest in higher amounts of highly liquid investments. In these circumstances, we believe such a modification would be appropriate. We discuss the costs associated with any modifications to funds' investment strategies that could result from the final highly liquid investment minimum requirement in the Economic Analysis section below.

2. Consideration of Liquidity Risk Factors

Rule 22e–4 requires a fund to consider the liquidity risk factors set forth in the rule, as applicable, in determining its highly liquid investment minimum.[664] Under the proposed rule, a fund likewise would have been required to consider the proposed rule's liquidity risk assessment factors in determining its three-day liquid asset minimum.[665] Several commenters suggested that these factors should be guidance that funds *may* consider in setting a minimum or target for relatively liquid assets, but should not be mandatory considerations a fund would be required to assess.[666] Commenters also objected to the requirement that funds determine their three-day liquid asset minimum based

[656] *See, e.g., supra* footnote 653.

[657] *See supra* footnote 655*; see also infra* section IV (discussing other reasonable alternatives to the highly liquid investment minimum requirement).

[658] *See* rule 22e–4(b)(1)(iii)(A)(1).

[659] *See supra* footnote 656 and accompanying text.

[660] *See, e.g.,* BlackRock Comment Letter.

[661] *See, e.g.,* Proposing Release, *supra* footnote 9, at section II.B.2 (discussing how funds may choose to sell assets in ''strips'' or in a range of liquidity).

[662] *See, e.g.,* CFA Comment Letter.

[663] *See* Proposing Release, *supra* footnote 9, at paragraph following n.343.

[664] Rule 22e–4(b)(1)(iii)(A)(1).

[665] Proposed rule 22e–4(b)(2)(iv)(A)–(B).

[666] *See, e.g.,* Oppenheimer Comment Letter; Charles Schwab Comment Letter; SIFMA Comment Letter I.

on liquidity risk under both normal and reasonably foreseeable stressed conditions, arguing that this requirement would result in funds being forced to maintain artificially high levels of three-day liquid assets.[667] Some commenters also discussed more granular objections to certain of the proposed factors to be used in determining a fund's three-day liquid asset minimum, such as certain aspects of the proposed requirements to consider a fund's shareholder concentration[668] and borrowing arrangements.[669]

We continue to believe it is appropriate for a fund to be required—not only permitted—to consider a specified set of liquidity risk factors in determining its highly liquid investment minimum. We believe requiring every fund to consider multiple aspects of its history, policies, strategy, and operations in determining its highly liquid investment minimum will lead to a general industry-wide baseline for the minimum requirement. However, we are making certain modifications to the proposed liquidity risk factors, including only requiring funds to consider applicable factors, to respond to commenters' concerns about this aspect of the requirement.

a. Modifications to Proposed Requirement To Consider Liquidity Risk Factors

As discussed above, the liquidity risk factors we are adopting today incorporate certain modifications to the proposed factors,[670] and thus these modifications flow through with respect to a fund's consideration of these factors in determining its highly liquid investment minimum. We believe that the guidance that we provide in section III.B.2 regarding a fund's consideration of these factors in assessing its liquidity risk also is appropriate for a fund to take into account when determining its highly liquid investment minimum. With the exception of the recommendations about specific factors or guidance discussed below, we did not receive comments on the proposed factors or the guidance provided in the Proposing Release regarding these factors.

Some commenters recommended that the Commission confirm that funds may consider and weigh the factors as they deem appropriate and relevant for purposes of the proposed minimum requirement,[671] and we agree that a fund should give the most weight to the factors that it deems most relevant for determining its highly liquid investment minimum. Moreover, to the extent any liquidity risk assessment factor is not applicable to a particular fund, the fund would not be required to consider that factor in determining its highly liquid investment minimum. We have therefore added the words ''as applicable'' in the rule,[672] and we note that, in this context, the phrase ''as applicable'' is meant to refer to those factors that are relevant to a fund's particular facts and circumstances. For example, a fund would not be required to consider the use of borrowings for investment purposes, as specified under rule 22e–4(b)(1)(i)(A), if that fund does not engage in borrowing.[673] Conversely, however, a fund that maintains borrowing sources for investment purposes would be required to consider the use of borrowings for investment purposes as specified under the rule. The addition of ''as applicable'' should help respond to commenters' concerns that codifying a list of required factors as a provision of the proposed minimum requirement would ''create an overly rigid structure and a one-size-fits-all approach that may result in unnecessary focus on factors that are irrelevant to certain funds.''[674]

We continue to believe that a fund should consider both normal and reasonably foreseeable stressed conditions in determining the amount of highly liquid investments it will hold, based on the liquidity risk assessment factors. However, in a change from the proposal, the rule specifies that only those stressed conditions that are reasonably foreseeable *during the period until the next review of the highly liquid investment minimum* (emphasis added) should be considered when a fund determines its highly liquid investment minimum.[675] As discussed above, some commenters expressed concern that the requirement for funds to consider normal and reasonably foreseeable stressed conditions in determining their three-day liquid asset minimum could suggest that all funds should hold a high level of cash or other highly liquid assets at all times, which could in turn encourage funds to maintain portfolio liquidity levels that are disproportionate relative to their liquidity risk.[676] We believe that requiring consideration of only those stressed conditions that are reasonably foreseeable during the period until the next review of the highly liquid investment minimum should address commenters' concerns and should help ensure that the highly liquid investment minimum requirement leads funds to hold levels of portfolio liquidity that are appropriate in light of their reasonably anticipated liquidity risk.

This change also responds to commenters' concerns about perceived ambiguity in the length of time over which the proposed rule would have required funds to forecast the effect of stressed conditions on the liquidity risk factors.[677] Under the final rule, funds are required to periodically review, no less frequently than annually, their highly liquid investment minimum. Thus, the requirement to consider stressed conditions only to the extent they are reasonably foreseeable *during the period until the next review of the highly liquid investment minimum,* limits consideration of stressed conditions to whatever time frame the fund has determined for review of its highly liquid investment minimum, but no longer than one year. We note that if a fund encounters extremely stressed market conditions, beyond those that were reasonably foreseeable during the period until the next review of the highly liquid investment minimum, that could increase its liquidity risk to unusual levels, the fund should consider adjusting its highly liquid investment minimum at that time, and indeed a fund should generally review its highly liquid investment minimum more frequently than annually if circumstances warrant.

[667] *See, e.g.,* NYC Bar Comment Letter; SIFMA Comment Letter I.

[668] *See* SIFMA Comment Letter I.

[669] *See* Cohen & Steers Comment Letter.

[670] *See supra* section III.B.2.

[671] *See, e.g.,* Oppenheimer Comment Letter; SIFMA Comment Letter I.

[672] *See* rule 22e–4(b)(1)(iii)(A)(1); *see also supra* footnote 192 and accompanying text.

[673] *See supra* section III.B.2.

[674] *See* SIFMA Comment Letter I; *see also e.g.,* Charles Schwab Comment Letter; Oppenheimer Comment Letter (suggesting that it is critically important that funds be afforded a certain amount of flexibility in setting the fund's three-day liquid asset minimum).

[675] *See* rule 22e–4(b)(1)(iii)(A)(1); *see also* rule 22e–4(b)(1)(iii)(A)(2) (requiring funds to periodically review, no less frequently than annually, the highly liquid investment minimum).

[676] *See supra* footnote 667 and accompanying text. Commenters argued that this, in turn, could lead to declines in fund performance, which shareholders would experience in the form of lower returns. *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Wells Fargo Comment Letter.

[677] *See, e.g.,* MFS Comment Letter (noting that the proposal fails to indicate the period of time over which the estimate of foreseeable redemptions is to be calculated); *see also* SIFMA Comment Letter I (''We do not agree, however, that in making their Highly Liquid Asset Target determinations, funds should be required to forecast the timing, severity or potential impact of stressed market conditions or other events affecting the fund that have occurred in the past but for which there is no reasonable way to accurately predict their recurrence.'').

b. Role of Liquidity Risk Factors in Determining the Highly Liquid Investment Minimum

As noted above, rule 22e–4 requires a fund to consider the liquidity risk factors set forth in the rule, as applicable, in determining its highly liquid investment minimum. In summary, a fund must consider, as applicable, its: (i) Investment strategy and portfolio liquidity during normal conditions, and during stressed conditions to the extent such conditions are reasonably foreseeable during the period until the next review of the highly liquid investment minimum; (ii) short-term and long-term cash flow projections during normal conditions, and during stressed conditions to the extent such conditions are reasonably foreseeable during the period until the next review of the highly liquid investment minimum; and (iii) holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[678] In addition to these factors, an ETF also must consider, as applicable: (i) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and (ii) the effect of the composition of baskets on the overall liquidity of the ETF's portfolio.[679]

With respect to a fund's consideration of its investment strategy and portfolio liquidity in determining its highly liquid investment minimum, we continue to believe that the less liquid a fund's overall portfolio investments are, the higher a fund may want to establish its highly liquid investment minimum. Similarly, funds with certain investment strategies that typically have had greater volatility of flows than other investment strategies—such as alternative funds and emerging market debt funds—would generally need highly liquid investment minimums that are higher than funds whose strategies tend to entail less flow volatility. For funds that use borrowings for investment purposes and derivatives, we continue to believe that, all else equal, a fund with a leveraged strategy (*e.g.,* a fund with leverage through bank borrowings or that has significant fixed obligations to derivatives counterparties) generally would need a highly liquid investment minimum that is higher than a fund that does not.[680] Similarly, when setting the fund's highly liquid investment minimum, we believe a fund that has or expects to have a significant amount of highly liquid investments segregated to cover derivatives transactions or pledged to satisfy margin requirements in connection with derivatives transactions should take into account the fact that such segregated or pledged highly liquid investments may not be available to meet redemptions. However, this guidance is not meant to suggest that a fund should only, or primarily, use highly liquid investments to meet shareholder redemptions. Rather, in the examples provided in this paragraph, we believe that holding a relatively high level of assets that are highly liquid investments would *both* support a fund in meeting redemption requests in a manner that does not dilute non-redeeming shareholders, and assist the fund in readjusting its portfolio as necessary to handle stressed conditions, weathering periods of heightened volatility, and managing its obligations to derivatives counterparties.

Regarding a fund's cash flow projections, we continue to believe that the Commission's cash flow guidance considerations could be useful to a fund in setting its highly liquid investment minimum.[681] We generally expect that a fund would evaluate the Commission's guidance on these considerations and determine whether each would be useful and relevant in setting the fund's highly liquid investment minimum. In addition, a fund may wish to consider employing some form of stress testing[682] or consider specific historical redemption scenarios in determining its highly liquid investment minimum.

Each of the cash flow guidance considerations—either standing alone, but especially viewed in combination with one another—are potentially significant features that could materially affect the risk of significant redemptions and thus could influence a fund's determination of its highly liquid investment minimum. For example, a fund with a concentrated shareholder base has a high risk that only one or two shareholders deciding to redeem can cause the fund to sell a significant amount of assets, which depending on the liquidity of the fund's portfolio and how it meets those redemptions, can dilute remaining shareholders. Similarly, a fund whose redemption policy is to satisfy all redemptions on a next business day basis (T + 1) or that is sold through distribution channels that historically attract investors with more volatile and/or unpredictable flows also should consider setting a higher minimum level for its assets that are highly liquid investments than a fund that, all else equal, does not face these risks.

In setting a highly liquid investment minimum, a fund should consider the degree of certainty associated with the fund's short-term and long-term cash flow projections. Projections may only be as good as the extent and quality of information that informs them. For example, if a fund does not have substantial visibility into its shareholder base (*e.g.,* because the fund's shares are principally sold through intermediaries that do not provide shareholder transparency) or if a fund is uncertain about changing market conditions which are likely to materially affect the fund's level of net redemptions, it may make projections but be quite uncertain about the reliability of those projections. In these circumstances, a fund should consider setting its highly liquid investment minimum to reflect this uncertainty, for example, by providing a cushion or multiple of its cash flow projections in the event realized net redemptions are significantly higher.

One commenter objected that shareholder ownership concentration, which is discussed in this Release as a guidance factor that could be used in evaluating cash flows (but in the proposal would have been *required* to be considered in analyzing a fund's cash flow projections), should not be a

[678] Rule 22e–4(b)(1)(i)(A)–(C); rule 22e–4(b)(1)(iii)(A)(1).

[679] Rule 22e–4(b)(1)(i)(D); rule 22e–4(b)(1)(iii)(A)(1); *see also infra* section III.J. (discussing liquidity risk management program elements tailored to ETFs).

[680] *See* Proposing Release, *supra* footnote 9, at paragraphs accompanying n.339. As discussed in the Proposing Release, we believe that a leveraged fund has an increased risk that it will be unable to meet redemptions and an increased risk of investor dilution compared to an equivalent fund with no leverage. For example, a fund with leverage through bank borrowings may have to meet margin calls if a security the fund provided to the bank to secure the loan declines in value. Such margin calls can render highly liquid portfolio assets unavailable to meet investor redemptions, which can increase dilution and the risk the fund will be unable to meet redemptions.

Similarly, a fund that has significant fixed obligations to derivatives counterparties (for example, from a total return swap or writing credit default swaps) must pay out on these obligations when due, even if it means selling the fund's more liquid, high quality assets to raise cash. *See, e.g.,* OppenheimerFunds Release, *supra* footnote 223.

[681] *See supra* section III.B.2.b. These five guidance considerations include: (i) The size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed periods; (ii) the fund's redemption policies; (iii) the fund's shareholder ownership concentration; (iv) the fund's distribution channels; and (v) the degree of certainty associated with the fund's short-term and long-term cash flow projections.

[682] *See supra* footnote 196 and accompanying text.

determinative consideration for a fund in establishing its appropriate level of relatively liquid assets.[683] This commenter expressed concern that ''accentuating the significance of this sub-factor in the context of new or recently launched funds, which may have a small number of shareholders relative to more established funds, could have a severe anti-competitive effect and create an unwarranted barrier to the introduction of new funds.'' We agree that emphasizing shareholder concentration could lead new funds to increase their holdings of relatively liquid investments. However, we note that substantial shareholder concentration, even for new or recently launched funds, could give rise to significant liquidity risk, and thus this consideration should not be discounted when a fund whose investor base is significantly concentrated determines its highly liquid investment minimum.[684] New or recently launched funds that have a concentrated shareholder base should consider disclosing the risk of redemption by one or more such shareholders in the fund's prospectus.[685] To the extent that a new fund's shareholder base becomes significantly less concentrated as the fund matures, the fund may wish to take this into consideration in reviewing its highly liquid investment minimum and adjusting it as it determines appropriate.

With respect to a fund's consideration of its holdings of cash and cash equivalents in determining its highly liquid investment minimum, we continue to believe that these holdings may provide funds with important flexibility to manage their liquidity risks. Our staff has observed that it is relatively common for fund complexes to target a minimum amount of cash or cash equivalent holdings in the fund, with the assumption that cash and cash equivalent holdings would allow the fund to meet redemptions in a stressed period without realizing significant discounts to its holdings' carrying values when they are sold. Holding cash or cash equivalents also could readily permit funds to rebalance or otherwise adjust a portfolio's composition in order to manage liquidity risk. Similarly, the availability of a line of credit or other funding sources to meet redemptions could assist a fund in managing liquidity risk, although as discussed below, depending on the nature of use, the use of a line of credit could raise other issues.[686] To the extent that a fund determines that any of these considerations could indicate decreased liquidity risk, these considerations could provide important inputs regarding the level that the fund deems appropriate for its highly liquid investment minimum.

Certain commenters indicated that the Commission should permit a fund to reduce its required holdings of relatively liquid assets by the amount of other sources of liquidity available to the fund, such as a committed line of credit.[687] Under these commenters' views, if a fund were to determine that its highly liquid investment minimum would typically be x% of the fund's net assets, a fund with a committed line of credit representing y% of the fund's net assets should be able to reduce its highly liquid investment minimum to x% minus y% of the fund's net assets. We disagree with this approach for several reasons. First, we believe that a mechanical subtraction of the amount of a credit line available to a fund from the fund's highly liquid investment minimum is inappropriate under circumstances in which all or part of the line of credit is not guaranteed to be available to a fund—for example, because it is a committed line of credit that may be shared among other members of the fund family. Even if the credit facility was committed just to the fund, the amount ultimately available could depend on the financial health of the institution providing the facility, as well as the terms and conditions of the facility. Finally, as discussed in the Proposing Release, while a line of credit can facilitate a fund's ability to meet unexpected redemptions and can be taken into consideration when determining its highly liquid investment minimum, we continue to believe that liquidity risk management is better conducted primarily through construction of a fund's portfolio.[688]

As with the proposed three-day liquid asset minimum requirement, a fund would be required to maintain a written record of how its highly liquid investment minimum was determined, including an assessment of each of the factors.[689] This would permit our examination staff to ascertain that funds are indeed considering the required factors, as applicable. As discussed in the Proposing Release, we continue to generally believe that it would be extremely difficult to conclude, based on the factors that a fund would be required to consider, that a highly liquid investment minimum of zero would be appropriate.[690]

3. Highly Liquid Investment Minimum Shortfall Policies and Procedures

Under rule 22e–4, a fund will be required to adopt specific policies and procedures for responding to a shortfall in the fund's assets that are highly liquid investments below its highly liquid investment minimum (for purposes of this section, a fund's ''shortfall policies and procedures''). A fund's shortfall policies and procedures, as described in more detail below, must include reporting to the fund's board of directors no later than the board's next regularly scheduled meeting with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response.[691] Also, a fund's shortfall policies and procedures must include reporting within one business day to the fund's board if a shortfall lasts more than seven consecutive calendar days, including an explanation of how the fund plans to restore its minimum within a reasonable period of time.[692]

a. Shortfall Policies and Procedures Requirement

Rule 22e–4 as proposed did not include the requirement for a fund to adopt shortfall policies and procedures. This requirement replaces the proposed prohibition against acquiring any asset

[683] *See* SIFMA Comment Letter I.

[684] As discussed above, a fund may also take into account the types of shareholders in the fund and whether those shareholders share common investment goals affecting redemption frequency and timing. Additionally, a fund may take into account other liquidity risk management tools available to it, such as redemption fees, when determining its highly liquid investment minimum.

[685] *See* SIFMA Comment Letter I (suggesting that the Commission encourage such prospectus disclosure). We recognize that other factors, such as the size of a fund's positions and the liquidity of those positions, could impact the extent to which this risk could affect the fund.

[686] *See infra* footnote 688 and accompanying text.

[687] *See, e.g.,* Cohen & Steers Comment Letter; Oppenheimer Comment Letter.

[688] *See* Proposing Release, *supra* footnote 9, at section III.C.3; *see also, e.g.,* HSBC Comment Letter (''The degree to which a fund employs leverage can have a material impact on its liquidity demands, particularly during periods of market stress. As such, attempts to model liquidity risk should incorporate an assessment of leverage and the extent to which this might intensify liquidity demands for a given fund during different scenarios compared to unleveraged funds.''); Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (''Funds without credit lines face the possibility of not being able to sell sufficient assets to raise cash to fund redemption requests, or having to sell assets at significantly discounted values. To the extent that a fund draws on a credit line to meet net redemptions (and thus temporarily leverages itself), it increases its market risk at a time when markets are stressed. While this can be potentially beneficial to long-term performance if the asset class recovers, it increases the risk of loss to remaining shareholders if markets continue to weaken.'').

[689] *See* rule 22e–4(b)(3)(iii); *see also infra* section III.I.

[690] *See* Proposing Release, *supra* footnote 9, at paragraphs accompanying and following n.341.

[691] *See* rule 22e–4(b)(1)(iii)(A)(3).

[692] See id.

other than a three-day liquid asset if a fund's holdings of three-day liquid assets were to drop below its three-day liquid asset minimum (for purposes of this section, the ''proposed acquisition limit'').[693] As discussed above, commenters expressed concerns that the proposed acquisition limit could have adverse effects on funds, their shareholders, and the markets in which funds operate. Specifically, commenters cautioned that shareholder redemptions could increase if shareholders observe that a large redemption has taken place and assume that the fund will not be able to effectively employ its investment strategy due to the proposed prohibition on acquiring any assets that are not three-day liquid assets.[694] Commenters suggested that this, in turn, could incentivize shareholders to redeem quickly in times of stress, which could spark additional redemptions from funds in stressed periods. Some commenters also argued that the proposed acquisition limit could lead index funds to hold a level of relatively liquid assets that causes them to deviate from the construction of their indices[695] and could cause funds that are managed relative to a benchmark to experience higher tracking error.[696] Commenters also maintained that the proposed acquisition limit could impair actively managed funds to the extent that it could limit portfolio managers' discretion to purchase assets that they believe would maximize funds' returns.[697]

In addition, commenters argued that the proposed acquisition limit could effectively prevent funds from holding or acquiring favorable, but relatively less liquid, assets under certain circumstances, which could intensify market stress as well as adversely affect a fund's NAV.[698] For example, some commenters suggested that a fund whose three-day liquid asset holdings were to fall below its minimum could feel pressure to sell less liquid assets in order to replenish its three-day liquid assets, which could lead to excessive sales of less liquid assets during times of market stress that could adversely affect the fund's NAV.[699] Relatedly, commenters suggested that the proposed acquisition limit could produce harmful market effects if it were to significantly increase the demand for relatively liquid assets, which could conversely decrease demand for other asset types (making them less liquid) and exacerbate market volatility.[700] Commenters expressed concern that any ''herding'' behavior that could result from the proposed acquisition limit could become especially pronounced during stressed periods.[701] Commenters also argued that the proposed acquisition limit could prevent a fund manager from purchasing certain investments that it views as undervalued in a downturn, when the fund's holdings of three-day liquid assets are at or below the fund's minimum.[702] They contended that this in turn could reduce the fund's universe of potential investments and ability to invest in contrarian and countercyclical ways,[703] which could eliminate a potential pool of buyers and thus could exacerbate an already stressed environment.[704]

A significant number of commenters suggested that the Commission adopt a liquid asset target in lieu of the proposed three-day liquid asset minimum requirement—indeed, this was the most common alternative suggestion to the proposed three-day liquid asset minimum requirement.[705] One primary distinction between the target requirements that commenters recommended and the proposed three-day liquid asset minimum requirement is that a target requirement would not prohibit a fund from acquiring certain assets if a fund's holdings of relatively liquid assets were to fall below the target. Instead, some commenters stated that a fund should have a reasonable period to respond to a shortfall of relatively liquid assets below the fund's target, and/or that any such shortfalls must be reported to the fund's board.[706]

We continue to believe that fund shareholders' interests are generally best served when the percentage of a fund's assets invested in relatively liquid investments is at (or above) the level deemed appropriate by the fund.[707] The highly liquid investment minimum requirement we are adopting would not prohibit a fund from acquiring assets other than highly liquid investments when a fund's highly liquid investments fall below its minimum. However, we believe that the shortfall policies and procedures requirement we are adopting—which replaces the proposed acquisition limit—provides flexibility while also promoting effective liquidity management practices. We believe this requirement also responds to concerns about a flat prohibition against purchasing certain assets when the fund's assets that are highly liquid investments drop below a certain level.

Additionally, we believe that the shortfall policies and procedures requirement responds appropriately to commenters' concerns that there could be appropriate reasons for a fund to acquire an investment other than a highly liquid investment if a fund were to fall below its minimum. The final highly liquid investment minimum requirement will require that funds determine a level of assets that are highly liquid investments designed to help them manage the fund through stressed conditions or opportunistically readjust their portfolios, while permitting a fund's portfolio liquidity to fall below this level when determined appropriate from a risk management perspective or on account of extenuating circumstances. The shortfall policies and procedures requirement, including the reporting requirement, is meant to foster discussion among the fund's management (and board) if its assets that are highly liquid investments fall below the level the fund determined to be an appropriate minimum. We further believe that the final highly liquid investment minimum requirement appropriately responds to commenters' concerns that the proposed acquisition limit could restrict funds' ability to meet their principal investment strategies, to the detriment of fund investors. The final requirement provides fund managers more leeway than the proposed requirement to structure and modify their portfolios because—as would be the case in the target requirement commenters suggested—fund managers would not be prevented from purchasing certain assets when a fund's holdings of assets that are highly liquid investments drop below its highly liquid investment minimum.

The highly liquid investment minimum requirement we are adopting, together with the shortfall policies and

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[693] *See* proposed rule 22e–4(b)(2)(iv)(C).

[694] *See, e.g.,* BlackRock Comment Letter.

[695] *See, e.g.,* Invesco Comment Letter; Dechert Comment Letter; Oppenheimer Comment Letter.

[696] *See, e.g.,* HSBC Comment Letter; ICI I Comment Letter.

[697] *See, e.g.,* PIMCO Comment Letter; ICI I Comment Letter; Federated Comment Letter.

[698] *See, e.g.,* BlackRock Comment Letter; SIFMA I Comment Letter; Wells Fargo Comment Letter.

[699] *See, e.g.,* Oppenheimer Comment Letter.

[700] *See, e.g.,* Invesco Comment Letter; Cohen & Steers Comment Letter; ICI Comment Letter I; Wells Fargo Comment Letter.

[701] *See, e.g.,* ICI Comment Letter I; Wellington Comment Letter II.

[702] *See, e.g.,* ICI Comment Letter I.

[703] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Wells Fargo Comment Letter.

[704] *See, e.g.,* SIFMA Comment Letter I; Invesco Comment Letter

[705] *See, e.g., supra* footnote 653 and accompanying text; *see also infra* section IV.C (discussing other reasonable alternatives to the highly liquid investment minimum requirement).

[706] *See, e.g.,* Invesco Comment Letter; PIMCO Comment Letter; Federated Comment Letter; J.P. Morgan Comment Letter.

[707] *See* Proposing Release, *supra* footnote 9, at n.346 and accompanying text.

procedures requirement, also responds to commenters' concerns that the proposed acquisition limit could exacerbate potential market stresses and lead to other harmful market effects. Under the final rule, a fund that falls below its highly liquid investment minimum would not be restricted to acquiring only highly liquid investments, if acquiring other investments were consistent with the fund's shortfall policies and procedures. Also, as discussed above, the requirement that a fund determine its highly liquid investment minimum taking into account only those stressed conditions that are reasonably foreseeable during the period until the next review of the highly liquid investment minimum should decrease the probability that a fund could overweight its assets that are highly liquid investments relative to its liquidity risk. This also, in turn, should lessen demand for highly liquid investments compared to the possible market effects of the proposed requirement.

Finally, we believe that the final highly liquid investment minimum requirement, in conjunction with the shortfall policies and procedures requirement, will help to mitigate some of the operational burdens that commenters argued would accompany the proposal,[708] while continuing to advance the Commission's goals. We note that the highly liquid investment minimum requirement will involve monitoring a fund's portfolio investments' liquidity for compliance. We recognize that this monitoring may result in operational costs, which could be greater for funds with multiple sub-advisers to the extent that these funds would need to build or otherwise implement systems to coordinate portfolio liquidity information provided by each sub-adviser.[709] However, we expect that the operational costs associated with the final highly liquid investment minimum requirement would be significantly less compared to the proposal, which would have entailed the additional costs of building systems that would bar the purchase of less liquid investments if the fund were to fall below its minimum. We understand that some fund complexes today already track a liquid asset minimum or target, and for these funds, operational costs associated with the final minimum requirement would only entail adjustments to their current processes and not the costs of an entirely new systems build-out.

b. Operation of Shortfall Policies and Procedures Requirement

Rule 22e–4 provides flexibility as to the particular shortfall policies and procedures a fund may adopt because we believe that different facts and circumstances could result in different funds taking different approaches to address a decline in assets that are highly liquid investments.[710] We also recognize that it may be difficult to contemplate or specify all appropriate factors to consider (or their weighting) in advance of a shortfall, and that part of the decision process requires an evaluation of the current stress event and a determination of whether it is likely to persist (and for how long). Nonetheless, a fund's shortfall policies and procedures could specify some of the actions that a fund could consider taking to respond to a highly liquid investment minimum shortfall under different conditions, as well as market- and fund-specific circumstances that could shape a fund's response to a particular shortfall occasion. For example, the policies and procedures could outline some of the circumstances under which it could be appropriate for a fund to purchase assets that are *not* highly liquid investments, despite being below its minimum. If, for example, the fund reasonably expected inflows in the near future (*e.g.,* from a retirement plan platform), it may determine it is acceptable to pursue an attractive buying opportunity despite a decline below the fund's highly liquid investment minimum that it expects to be short-term. It also could be appropriate, for example, for a fund to consider selling certain relatively less liquid holdings over a period of time and investing some of the proceeds in highly liquid investments.

Similarly, as part of its shortfall policies and procedures, a fund could set forth how it would set out a time frame by which it plans to bring its assets that are highly liquid investments back up to the level of its highly liquid investment minimum.[711] If a fund encounters highly liquid investment minimum shortfalls regularly, a fund's liquidity risk management program administrator, potentially together with the fund's broader risk management function, should consider whether the fund's risk management policies and procedures should be modified. We note that a fund's shortfall policies and procedures could, but will not be required to, specify the persons who will typically determine how, if at all, to respond to a shortfall (for example, the person designated by the board to administer the fund's liquidity risk management program, in conjunction with the fund's risk managers and portfolio managers).

As discussed below, although we are not requiring a fund's board to specifically approve its highly liquid investment minimum, we continue to believe that the board should play an oversight role with respect to the minimum.[712] A requirement to inform the board when a fund drops below its highly liquid investment minimum, as well as the circumstances leading to the fund's highly liquid investment minimum shortfall and actions taken in response, will permit the board better to understand circumstances that may give rise to heightened liquidity risk. It also will provide important context for the board in evaluating the effectiveness of the fund's highly liquid investment minimum and the fund's liquidity risk management program generally. Many commenters suggested that the Commission should adopt a board reporting requirement when a fund's holdings of relatively liquid assets drop below the level that the fund has generally targeted as appropriate.[713] Rule 22e–4 as adopted generally reflects these suggestions.

As fund boards are charged with oversight and not day-to-day management of funds' liquidity risk, we

[708] *See, e.g.,* Federated Comment Letter (suggesting that the proposed requirement could present significant operational and technological challenges because a fund's trade order management system would need to maintain the liquidity classification for each security in order to accurately monitor compliance with the fund's three-day liquid asset minimum); ICI Comment Letter I (noting that the proposed requirement would raise operational difficulties for funds with multiple sub-advisers because compliance would necessitate consideration of portfolio assets' liquidity at the fund level, and thus the proposal would require a significant amount of coordination among sub-advisers).

[709] *See also infra* paragraph accompanying footnote 818 (discussing the coordination of liquidity risk management efforts undertaken by various service providers, including a fund's sub-adviser(s)).

[710] For example, a fund may handle a shortfall due to changes in market conditions differently than a shortfall due to increased redemptions.

[711] If a fund's highly liquid investment minimum shortfall lasts more than seven consecutive calendar days, reporting to the fund's board within one business day is required, including an explanation of how the fund plans to restore its minimum within a reasonable period of time. *See* rule 22e–4(b)(1)(iii)(A)(3).

[712] *See infra* section III.H.3.

[713] *See, e.g.,* J.P. Morgan Comment Letter (suggesting a breach would necessitate a report to the board); SIFMA I Comment Letter (suggesting a ''highly liquid asset target'' and noting that ''[i]nstances where a fund dipped below its target percentage [could] be reported to the fund board with an explanation from management as to why the fund dipped below its target and any resulting impact on the fund's liquidity risk profile''); Invesco Comment Letter; Dechert Comment Letter.

believe that it is appropriate not to require that the fund's board be informed that the fund has dropped below its highly liquid investment minimum immediately when this occurs. Thus, rule 22e–4 requires that a fund's board be informed of a highly liquid investment minimum shortfall at the board's next regularly scheduled meeting.[714] If a fund were to drop below its highly liquid investment minimum multiple times prior to the next regularly scheduled board meeting, fund management could provide a single report to the board at that meeting discussing each of these occurrences.

However, we believe that when a fund's assets that are highly liquid investments are below its minimum for an extended period of time, this could indicate especially heightened liquidity risk, and thus under these circumstances it is appropriate to report a highly liquid investment minimum shortfall to the board within a shorter time frame. We are therefore adopting the requirement for a fund to report to its board of directors within one business day if its shortfall lasts longer than seven consecutive calendar days. Rule 22e–4 requires that this accelerated reporting include an explanation of how the fund plans to restore the fund's highly liquid investment minimum within a ''reasonable'' period of time. Fund management generally should take into account the fund's level of liquidity risk, as well as the facts and circumstances leading to the highly liquid investment minimum shortfall, in determining a reasonable time for returning the fund's assets that are highly liquid investments to the fund's minimum level.

4. Periodic Review of Highly Liquid Investment Minimum

Rule 22e–4 requires a fund to periodically review, no less frequently than annually, the fund's highly liquid investment minimum.[715] The proposed rule also included a periodic review requirement with respect to the proposed three-day liquid asset minimum, but instead of an annual minimum review requirement, the proposed rule would have required that the periodic review be conducted at least semi-annually.[716] We requested comment on this proposed review requirement generally, including the proposed minimum frequency of a fund's review. We received few comments on the proposed review requirement separate from general comments on the proposed three-day liquid asset minimum, although we received general support for a review requirement concerning a fund's target level of liquid assets.[717]

We continue to believe, as discussed in the Proposing Release, that a periodic review is a central component of the highly liquid investment minimum requirement we are adopting.[718] Although we proposed a minimum semi-annual review requirement, we are adopting a minimum annual review requirement primarily in order to correlate the minimum period for a fund's highly liquid investment minimum review with the minimum period in which a fund's board would be required to review a written report describing the adequacy of the fund's liquidity risk management program, as described in more detail below.[719] The minimum annual review period also would correlate with the requirement for a fund to review its liquidity risk periodically, but no less frequently than annually.[720] We believe that correlating the time periods for each review requirement in rule 22e–4 will reduce compliance burdens and mitigate potential confusion that could arise from disparate review periods.

We also do not believe that extending the highly liquid investment minimum review period from a minimum of semi-annually to annually will adversely affect funds or investors as a fund generally should review its highly liquid investment minimum more frequently if circumstances warrant. Additionally, as discussed above, a fund's board will be regularly informed of any highly liquid investment minimum shortfalls. Thus, the board will be aware of any liquidity risk management issues that might warrant reconsideration of the fund's risk management procedures or its highly liquid investment minimum.

Like the requirement for a fund to periodically review its liquidity risk, the highly liquid investment minimum review requirement will permit each fund to develop and adopt its own procedures for conducting this review, taking into account the fund's particular facts and circumstances. Additionally, we believe that in developing comprehensive review procedures, a fund should generally consider including procedures for evaluating regulatory, market-wide, and fund-specific developments affecting the fund's liquidity risk. A fund also may wish to adopt procedures specifying any circumstances that would prompt more frequent review of the fund's highly liquid investment minimum in addition to the annual minimum review required by the rule (as well as the process for conducting more frequent reviews).[721]

5. Exclusion for Funds Primarily Holding Assets That Are Highly Liquid Investments

Rule 22e–4, as adopted, excludes a fund that primarily holds assets that are highly liquid investments (a ''primarily highly liquid fund'') from the requirements to determine and review a highly liquid investment minimum, and to adopt shortfall policies and procedures.[722] We sought comment in the Proposing Release about whether we should exclude certain funds from the proposed three-day liquid asset minimum, such as funds that only invest in three-day liquid assets. Commenters argued that a requirement for a fund to determine a minimum portion of assets that it will invest in relatively liquid assets is not suitable for funds that primarily invest in highly liquid investment classes, given that a significant portion of the fund's portfolio would be composed of such assets, and thus the benefits associated with the three-day liquid asset minimum requirement would not justify the burdens.[723] After considering these comments and reevaluating the costs and benefits of the proposal, we agree that a primarily highly liquid fund should not be required to determine and review a highly liquid investment minimum, or adopt shortfall policies and procedures. We agree with commenters that the benefits associated with these requirements as applied to

[714] *See* rule 22e–4(b)(1)(iii)(A)(3).

[715] *See* rule 22e–4(b)(1)(iii)(A)(2).

[716] *See* proposed rule 22e–4(b)(2)(iv)(B).

[717] *See, e.g.,* Oppenheimer Comment Letter.

[718] *See* Proposing Release, *supra* footnote 9, at paragraph following n.352.

[719] *See infra* section III.H.2.

[720] *See supra* section III.B.3.

[721] *See, e.g., supra* footnote 273 and accompanying paragraph; *see also supra* section III.D.2.a.

[722] *See* rule 22e–4(b)(1)(iii)(A).

[723] *See, e.g.,* FSR Comment Letter (''[T]he Commission should consider alternative regulatory approaches for index funds that seek to track the performance of indices that are comprised of highly liquid assets . . . .''); Dechert Comment Letter (citing Statement on Open-End Fund Liquidity Risk Management Programs and Swing Pricing, Commissioner Daniel M. Gallagher, Securities and Exchange Commission (Sept. 22, 2015) (''Furthermore, for funds that invest solely in assets that can be settled in three days or less—for example, a fund that limits its investments to equity securities of S&P 500 companies—the 'three-day bucket' has no functional value. Requiring such a fund to set its three-day bucket—whether it be at 1%, or 20% or even 90%—would be a meaningless exercise given that the entire portfolio would be comprised of assets settled in three days or less.'')).

primarily highly liquid funds would not justify the associated burdens.[724]

Under rule 22e–4, a fund whose portfolio consists primarily of assets that are highly liquid investments would be excluded from the highly liquid investment minimum requirement.[725] Thus, we anticipate that a primarily highly liquid fund would address in its liquidity risk management program how it determines that it primarily holds assets that are highly liquid investments, including, for example, how it defines ''primarily.''[726] If a fund were to modify its investment strategy or encounter strategy ''drift'' such that it no longer primarily held assets that were highly liquid investments, it would be required to adopt and review a highly liquid investment minimum, as well as adopt and implement policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its minimum. We therefore believe that if a fund's investment strategy is such that it cannot generally be predicted whether the fund would primarily hold assets that are highly liquid investments (for example, if the strategy were to entail a significant amount of volatility in terms of the fund's portfolio liquidity), it would be difficult for the fund's management to conclude that the fund should appropriately be excluded from the highly liquid investment minimum requirement.

For purposes of determining whether a fund primarily holds assets that are highly liquid investments, a fund must exclude from its calculations the percentage of the fund's assets that are highly liquid investments that it has segregated to cover derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, or pledged to satisfy margin requirements in connection with those derivatives transactions, as determined pursuant to rule 22e–4(b)(1)(ii)(C).[727] As discussed above, when a fund's assets are segregated or pledged in connection with derivatives transactions, they may not be immediately available for liquidity risk management purposes.[728] Thus, a fund whose assets that are highly liquid investments that are segregated or pledged in connection with derivatives transactions may not have the same level of liquidity risk management flexibility as a fund whose assets are highly liquid investments that are not similarly segregated or pledged. While we believe that the benefits associated with the highly liquid investment minimum requirements as applied to primarily highly liquid funds would not justify associated burdens,[729] we believe that this consideration is appropriate only to the extent a fund primarily holds assets that are highly liquid investments that are not segregated or pledged in connection with derivatives transactions. As an extreme example, if a fund were to hold only assets that were highly liquid investments that were segregated or pledged in connection with derivatives transactions and that were not themselves classified as highly liquid investments, none of its assets that were highly liquid investments would be available to meet redemptions or otherwise manage liquidity risk. Thus, we believe that such fund's assets that were highly liquid investments would likely not be commensurate with its liquidity risk profile as determined with reference to the liquidity risk factors it would be required to consider under rule 22e–4.[730]

6. Highly Liquid Investment Minimum Reporting and Disclosure Requirements

We proposed to amend Form N–PORT to add a new item that would require each fund to disclose its three-day liquid asset minimum, as such term was proposed to be defined in proposed rule 22e–4. One commenter supported reporting the three-day liquid asset minimum in a structured data format to the public as proposed.[731] Certain other commenters supported reporting the three-day liquid asset minimum in a structured data format as proposed but to the Commission only.[732] One commenter did not support public disclosure of a fund's three-day liquid asset minimum, as proposed, but said it would support public disclosure of a fund's three-day liquid asset minimum if the Commission adopted a recommended alternative to such definition.[733]

Some commenters, however, opposed public disclosure of both the three-day liquid asset minimum as proposed and recommended alternatives to the three-day liquid asset minimum. Commenters expressed concerns that public disclosure could be misleading to investors, arguing that any minimum reported on Form N–PORT would be subjective, presented without context, and may not reflect a fund's actual portfolio management approach at the time the data is being relied upon by investors.[734] Other commenters contended that public disclosure could interfere with a fund's investment strategy and promote unwarranted, and potentially destabilizing, redemption activity by fund shareholders, especially during times of stress.[735] One commenter stated that public disclosure of a liquidity minimum would also give undue emphasis to a single element of a fund's liquidity risk management program and could potentially encourage third parties to use a single numerical figure as a basis for comparing funds, further encouraging undue reliance on the liquidity minimum figure by investors.[736] Certain other commenters expressed concern that public disclosure could potentially expose a fund to predatory trading activity if the fund is seen as vulnerable to liquidity risks or is under stress.[737] In addition, one commenter contended that comparisons of three-day liquid asset minimums could result in competitive pressures for relatively

[724] For more discussion about the costs and burdens associated with the highly liquid investment minimum requirement, *see infra* section IV.C.

[725] *See* rule 22e–4(b)(1)(iii)(A). Money market funds and In-Kind ETFs also would be excluded from the highly liquid investment minimum requirement. *See* rule 22e–4(a)(5) (defining ''fund,'' for purposes of the rule as excluding money market funds and In-Kind ETFs).

[726] As noted by commenters, a highly liquid index fund would be one example of a fund whose portfolio consists primarily (in the case of these index funds, almost entirely) of assets that are highly liquid investments. *See supra* footnote 723. In our view, if a fund held less than 50% of its assets in highly liquid investments it would be unlikely to qualify as ''primarily'' holding assets that are highly liquid investments.

[727] Rule 22e–4(b)(1)(iii)(B). As described above, a fund would be permitted to exclude its derivatives transactions that are classified as highly liquid investments in determining the percentage of highly liquid investments that are segregated or pledged assets because, since the fund could dispose of or exit these derivatives transactions within three business days, the associated segregated or pledged assets also would be available to the fund for liquidity risk management purposes within three business days. *See supra* text following footnote 493.

[728] *See supra* section III.C.3.c.

[729] *See supra* footnote 724 and accompanying text.

[730] *See supra* section III.D.2 (discussing the rule 22e–4 requirement for a fund to consider certain liquidity risk factors in determining its highly liquid investment minimum).

[731] *See* Charles Schwab Comment Letter (noting that information about the fund's liquidity risk management program will be particularly helpful to investors, as will disclosure of a fund's overall liquidity picture and a fund's three-day liquid asset minimum).

[732] *See, e.g.,* CFA Comment Letter; Voya Comment Letter.

[733] *See* Vanguard Comment Letter.

[734] *See, e.g.,* Eaton Vance Comment Letter I; J.P. Morgan Comment Letter; NYC Bar Comment Letter; Voya Comment Letter.

[735] *See, e.g.,* Eaton Vance Comment Letter I; J.P. Morgan Comment Letter; Wells Fargo Comment Letter.

[736] *See* SIFMA Comment Letter I.

[737] *See, e.g.,* Eaton Vance Comment Letter I; SIFMA Comment Letter.

uniform minimums among funds with similar investment strategies, ultimately harming fund investors.[738]

We are persuaded by some of the concerns expressed by commenters regarding the potential risks to funds and fund investors of public reporting of a fund's three-day liquid asset minimum, as proposed, or any alternative formulation, including a fund's highly liquid investment minimum, as adopted today. In response to comments, we are adopting amendments to require a fund to report its highly liquid investment minimum on Form N–PORT to the Commission on a non-public basis.[739] We believe that the requirement that a fund report to its board when the fund's assets that are highly liquid investments fall below the fund's highly liquid investment minimum, discussed above, is a more appropriate tool to assist fund boards in their oversight of fund liquidity risks, thereby ultimately protecting shareholder interests in the fund.[740]

In light of the changes we are making to the way the highly liquid investment minimum is established, the final modifications to Form N–PORT require that if a fund's minimum has changed during the reporting period, any prior minimums established by the fund during the reporting period also be reported.[741] Because, as discussed previously, we are not requiring the fund's board to approve changes to the highly liquid asset minimum, we believe it is important that any changes to the minimum during a reporting period be included in Form N–PORT to help mitigate the possibility of window dressing a fund's highly liquid asset minimum at the end of the reporting period, and allow us to monitor for changes to a fund's minimum. In addition, considering the changes we have made to the way the minimum works from the proposal, and consistent with the board and Commission reporting requirements we are adopting relating to shortfalls of a fund's minimum, the final amendments to Form N–PORT also require that if a fund is below its minimum during the reporting period, a fund needs to report the number of days it is below its minimum during the reporting period.[742] We believe that this reporting requirement will enhance our monitoring of fund's compliance with the minimum and the board and Commission reporting requirements contained elsewhere in rule 22e–4. These additional reporting requirements also would be non-public, for the same reasons discussed above.

Overall, we believe that such board oversight together with confidential reporting to the Commission is a regulatory approach that balances commenters' concerns about certain adverse effects that could arise from public reporting of liquid investment minimums with the need for enhanced investor protections and meaningful information for Commission regulatory oversight responsibilities. We believe that it is neither necessary nor appropriate in the public interest or for the protection of investors to make information regarding a fund's highly liquid investment minimum publicly available at this time.[743]

E. Limitation on Funds' Illiquid Investments

Rule 22e–4 includes a limit on a fund's ability to acquire illiquid investments. Specifically, the rule prohibits a fund from acquiring any illiquid investment if, immediately after the acquisition, the fund would have invested more than 15% of its net assets in illiquid investments that are assets.[744] The rule's 15% limit on funds' illiquid investments applies to all funds (including In-Kind ETFs).[745] Additionally, as discussed below, a fund will be required to notify its board, and confidentially the Commission, when its illiquid investments that are assets exceed 15% of its net assets. Moreover, the person(s) designated to administer the liquidity risk management program must explain in a report to the board the extent and causes of the occurrence, and how the fund plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.[746] If the amount of the fund's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the board of directors, including a majority of its independent directors,[747] must assess whether the plan presented to it continues to be in the best interest of the fund.

The limitation on funds' illiquid investments is similar to the limitation on ''15% standard assets'' in proposed rule 22e–4,[748] in that both requirements would limit the acquisition of assets that cannot be sold or disposed of within seven days. However, there are several key differences between the proposed and adopted requirements. Specifically, the proposed rule would have had a fund identify 15% standard assets in a process separate from the requirement to classify portfolio assets' liquidity, whereas rule 22e–4 as adopted today generally incorporates classification of portfolio investments as illiquid into the process for classifying the liquidity of a fund's portfolio investments generally. As discussed in sections III.C.1.b and III.C.3.b above, a fund is required to take into account ''relevant market, trading, and investment-specific considerations,'' and also is required to consider market depth, in classifying an investment as illiquid. Also as discussed above in section III.C.2.d, rule 22e–4 incorporates a modified value impact standard in the definition of ''illiquid investment'' from the value impact standard reflected in

[738] *See* NYC Bar Comment Letter.

[739] *See* General Instruction F of Form N–PORT.

[740] *See supra* section III.D.3.

[741] *See* Item B.7.c. of Form N–PORT.

[742] *See* Item B.7.b. of Form N–PORT.

[743] *See* section 45 of the Act, which provides, in summary, that the information contained in any report or other document filed with the Commission pursuant to the Act shall be made available to the public, unless by rules and regulations upon its own motion, or by order upon application, the Commission finds that public disclosure is ''neither necessary nor appropriate in the public interest or for the protection of investors.''

[744] Rule 22e–4(b)(1)(iv). Rule 22e–4(b)(1)(iv) refers to investments that are ''assets'' to make clear that the 15% limit on illiquid investments applies to investments with positive values. Illiquid investments that have negative values should not be netted against illiquid investments that have positive values when calculating compliance with the 15% limit. Thus, only illiquid investments that have positive values (*i.e.,* ''assets'') should be used in the numerator.

[745] *See id.; see also* rule 22e–4(a)(5) and (9) (defining the terms ''fund'' and ''In-Kind ETF'' for purposes of the rule).

[746] Rule 22e–4(b)(1)(iv)(A).

[747] ''Independent directors'' as used herein refers to directors who are not ''interested persons'' of a fund or In-Kind ETF, as applicable, as that term is defined in section 2(a)(19) of the Investment Company Act.

[748] *See* Proposing Release, *supra* footnote 9, at section III.C.4. Under the proposed rule, ''15% standard asset'' was defined as ''an asset that may not be sold or disposed of in the ordinary course of business within seven calendar days at approximately the value ascribed to it by the fund.'' Proposed rule 22e–4(a)(4). For purposes of this definition, a fund would not have needed to consider the size of the fund's position in the asset or the number of days associated with receipt of proceeds of sale or disposition of the asset. *Id.*

We note that, as proposed, the text of rule 22e–4 would have limited the acquisition of 15% standard assets if, immediately after the acquisition, the fund would have invested more than 15% of its *total assets* (as opposed to *net assets*) in 15% standard assets. *See* proposed rule 22e–4(b)(2)(iv)(D). This reference to ''total assets'' in the proposed rule text was intended to read ''net assets,'' as was evident in the discussion of this rule provision in Proposing Release, section III.C.4 (and elsewhere in the Proposing Release), which consistently discussed the provision as limiting a fund's acquisition of 15% standard assets if, immediately after the acquisition, the fund would have invested more than 15% of its net assets in 15% standard assets. Rule 22e–4 as adopted refers to ''net assets'' instead of ''total assets.''

the proposed definition of ''15% standard asset.''

The majority of commenters supported the codification of the Commission's 15% guideline as proposed. Many commenters stated that the 15% guideline is an important investor protection measure and posited that the guideline has proven to be a highly effective safeguard against liquidity risk.[749] One commenter specifically noted that assets of open-end funds should be predominantly liquid and replacing the guideline with a formal regulatory mandate would promote investor protection.[750] Another commenter viewed the 15% guideline as a clear safeguard against liquidity risk that has the benefits of simplicity, clarity, and easy administration.[751] One commenter stated that setting reasonable controls on, and monitoring the use of, illiquid asset classes to ensure that they do not compromise the liquidity offered to investors within the fund is an important element of properly managing open-end funds.[752] Finally, one commenter suggested that the proposed codification of the 15% guideline would both increase the likelihood that funds hold adequate liquid assets to meet redemption requests without significant dilution and increase the likelihood that a fund's portfolio is not concentrated in assets whose liquidity is limited.[753]

In addition, several commenters supported a limit on the amount of illiquid assets that can be held by a fund generally, but suggested alternatives to how the 15% standard would operate or the proposed definition of 15% standard assets.[754] In fact, most commenters who expressed concerns regarding the proposed 15% limit did so in the context of suggesting alternatives to the proposal or the proposed definition of ''15% standard asset.'' Multiple commenters who discussed the proposed limit suggested that the Commission should harmonize its codification of the existing 15% guideline with the proposed requirement for a fund to classify the liquidity of its portfolio assets generally (*i.e.,* they suggested that illiquid assets be the least liquid classification category).[755] Some commenters suggested that any limit on illiquid assets should not just limit the acquisition of illiquid assets, but also should require the fund to adjust its portfolio if it exceeds the 15% limit.[756] Finally, some commenters suggested that a fund be required to notify its board and the Commission if it exceeds the 15% limit.[757] All other comments on the proposed limit were comments regarding the definition of ''15% standard asset'' and are discussed above in section III.C.2.d.

We agree with commenters who stated that codifying a limit on funds' illiquid investments should be a central element of managing open-end funds' liquidity risk, which in turn would further the protection of investors. While we believe that the highly liquid investment minimum requirement will increase the likelihood that each fund holds adequate liquid assets to meet redemption requests without significant dilution of remaining investors' interests in the fund, the limit on illiquid investments also should increase the likelihood that a fund's portfolio is not concentrated in investments whose liquidity is extremely limited, and thus will serve as an across-the-board limit on fund illiquidity. As discussed above, the Commission and staff have in the past provided guidance in connection with the 15% guideline. Today we are withdrawing this guidance along with the 15% guideline and replacing it with new requirements for determining that an investment is illiquid, as well as new guidance in this Release regarding these requirements. We believe that the limit on illiquid investments that are assets that we are adopting, together with the new definition of ''illiquid investments'' that encompasses additional elements for determining that an investment is illiquid,[758] provides a more comprehensive framework for funds to evaluate the liquidity of their investments.

We also agree, as discussed in more detail in section III.C.2.d above, that it is appropriate to harmonize the rule 22e–4 limit on illiquid investments with the rule's broader liquidity classification requirement by incorporating an illiquid investment category into the classification requirement. We believe that this harmonization will reduce confusion that could arise if we were to adopt requirements for identifying illiquid investments that differed from the requirements for classifying the liquidity of investments that are not illiquid.[759] Additionally, we believe the harmonization responds to commenter concerns that, in practice, many funds believe very few of their portfolio investments are subject to the 15% limit on illiquid securities, since funds will be required to take into account ''relevant market, trading, and investment-specific considerations'' in identifying illiquid investments and incorporate market depth considerations as part of the rule's liquidity classification requirement.[760] A fund also will be required to consider a modified value impact standard in determining if an investment is illiquid, which as discussed above, we believe will help funds make more accurate liquidity assessments, particularly for asset classes or investments that are subject to intra-day price volatility.

One commenter suggested that, if the Commission adopts requirements that would expand the set of assets that is subject to the 15% limit on illiquid assets, it could consider extending the limit beyond 15%, or extending the time-to-sale period associated with the definition of ''illiquid asset'' beyond seven days, in order to limit market disruptions.[761] We have considered this suggestion and have decided that it is not necessary.[762] We continue to believe that 15% is an appropriate limit on illiquid investments that are assets. The compliance period we are adopting for rule 22e–4 will permit funds to come into compliance with the revised 15% illiquid investment limit while minimizing market disruptions.[763]

In the proposal, we requested comment as to whether we should require a fund to divest its assets in excess of the 15% limit or whether we should limit the time period in which a fund can exceed the 15% limit. As noted above, some commenters suggested that the 15% limit should be a maintenance test, rather than an acquisition test, requiring the fund to adjust its portfolio if it exceeds the 15%

[749] *See, e.g.,* Cohen & Steers Comment Letter; Eaton Vance Comment Letter I; FSR Comment Letter; LSTA Comment Letter.

[750] *See* State Street Comment Letter.

[751] *See* Better Markets Comment Letter.

[752] *See* BlackRock Comment Letter.

[753] *See* CRMC Comment Letter.

[754] *See, e.g.,* AFR Comment Letter; Blackrock Comment Letter; Keefer Comment Letter; Wahh Comment Letter. In general, the comments we received on the 15% standard did not specifically address the amount of the limit; *cf.* footnote 761 and accompanying text.

[755] *See, e.g.,* Eaton Vance Comment Letter I; Federated Comment Letter; SIFMA Comment Letter I; Markit Comment Letter.

[756] *See, e.g.,* Fidelity Comment Letter; Keefer Comment Letter; Wahh Comment Letter. *But see* HSBC Comment Letter (arguing that imposing a fixed time period in which holdings above the 15% threshold must be divested would not be appropriate because it may force sales at depressed prices to the detriment of investors).

[757] *See* BlackRock Comment Letter; ICI Comment Letter I; SIFMA Comment Letter III.

[758] *See supra* section III.C.2.d.

[759] *See supra* footnotes 392–395 and accompanying text.

[760] *See supra* footnotes 399–401 and accompanying text.

[761] *See* AFR Comment Letter.

[762] As noted above, no other commenters specifically addressed the amount of the limit.

[763] *See infra* section III.M.1.

limit.[764] Another commenter argued that imposing a fixed time period in which holdings above the 15% threshold must be divested would not be appropriate because it may force sales at depressed prices to the detriment of investors.[765] In addition, one commenter noted the importance of ensuring oversight once a fund breaches the 15% limit and that efforts are made to reduce the fund's illiquid asset holdings (when possible).[766]

We believe that *requiring* a fund to divest illiquid investments if the fund's holdings of illiquid investments that are assets exceed 15% of net assets—which, as suggested by a commenter, could result in the fund needing to sell the illiquid investments at prices that incorporate a significant discount to the investments' stated value, or even at fire sale prices—could adversely affect shareholders and could potentially negate the liquidity risk management benefits of the illiquid investment limit. Therefore, under the final rule, a fund will be prohibited from *acquiring* any illiquid investment if, immediately after the acquisition, its illiquid investments that are assets would exceed 15% of its net assets.[767]

We further believe, however, that a fund should not be permitted to exceed the 15% limit on illiquid investments for an extended period of time without board oversight. Therefore, because we believe that if a fund's illiquid investments that are assets exceed the 15% limit it could indicate that the fund is encountering harmful liquidity pressures, the final rule requires, as suggested by commenters,[768] that a fund promptly report such occurrence to its board and the Commission.[769] Specifically, the final rule requires funds that hold more than 15% of their net assets in illiquid investments that are assets to report such an occurrence to their boards of directors within one business day, including an explanation of the extent and causes of the occurrence and how they plan to bring their illiquid investments that are assets to or below 15% of their net assets within a reasonable period of time.[770] We also anticipate that if a fund exceeds the 15% limit on illiquid investments that are assets at any point during the year, the written report to the board of directors regarding the adequacy and effectiveness of the liquidity risk management program would discuss the breach of the limit and, if the fund is still breaching the 15% limit at the time of the report, the plan to bring the fund's illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.[771] In addition, if the amount of the fund's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the fund's board of directors, including a majority of directors who are not interested persons of the fund, must assess whether the plan presented to it, as described above, continues to be in the best interest of the fund or in kind ETF.[772] We believe these requirements appropriately balance our concerns regarding the overall liquidity of the fund's portfolio with the potential adverse effects that the forced sale of illiquid investments could have on a fund and its shareholders. These requirements should not result in funds selling their illiquid investments at fire sale prices or at inopportune times because such a sale would likely not be in the best interests of a fund and its shareholders. However, we believe that board oversight is important when a fund's illiquid investments exceed 15% of its net assets for an extended period of time.

We acknowledge that requiring a board assessment of the appropriateness of the fund's plan to decrease its level of illiquid investments every 30 days a fund holds illiquid assets in excess of 15% of its net assets may impose burdens on boards and funds. Nonetheless, we believe that such a requirement is appropriate in light of the serious consequences that can result when a fund's liquidity becomes impaired or further deteriorates, particularly for extended periods of time.[773] We expect that this requirement will appropriately focus boards and funds on resolving liquidity impairments in a reasonable period of time and in the best interests of the fund and its shareholders. In light of the risks attendant in holding larger proportions of illiquid investments, we believe it is important that the board is provided sufficient information and regular updates so that it can make an informed judgment. Accordingly, we believe this periodic reassessment requirement in the rule is appropriate.

Additionally, as discussed in section III.M.2 below, a fund will be required to confidentially notify the Commission when its illiquid investments that are assets exceed 15% of its net assets. As discussed below, reporting of this information will assist Commission staff in its monitoring efforts of liquidity, including monitoring not only the reporting fund but also funds that may have comparable characteristics to the reporting fund and may be similarly affected by market events. The percentage of the fund's holdings invested in illiquid investments that are assets also will be disclosed on Form N–PORT to the public on a quarterly basis, with a 60-day delay, as discussed in section III.C.6 above, which will lead to increased transparency of the fund's profile regarding holdings of illiquid investments at particular points in time.

F. Policies and Procedures Regarding Redemptions in Kind

Many funds reserve the right to redeem their shares in-kind instead of with cash.[774] Mutual funds that reserve the right to redeem in kind may use such redemptions to manage liquidity risk under exceptional circumstances.[775] While many funds

[764] *See supra* footnote 756 and accompanying text.

[765] *See* HSBC Comment Letter.

[766] *See* BlackRock Comment Letter; *cf.* PIMCO Comment Letter (suggesting that, with respect to the proposed three day liquid asset minimum, if a fund breaches the minimum, its manager should be afforded a reasonable period of time to reposition the portfolio).

[767] We recognize that some index funds currently implement their strategies by using a full replication technique—*i.e.,* by investing in all of the component securities of an index. To the extent an index tracked by an index fund would require a fund using a full replication technique to invest more than 15% of its net assets in illiquid investments that are assets, such fund could not make those investments and would need to consider whether it should continue to seek to track the performance of such index or whether it should use a different investment technique, such as sampling, to track the index.

[768] *See supra* footnote 757.

[769] *See infra* section III.H.4 (discussing board oversight of the illiquid investment limit).

[770] Rule 22e–4(b)(1)(iv)(A); *see also infra* section III.H.4.

[771] *See infra* section III.H.2 (discussing the written report to the board on the adequacy and effectiveness of the liquidity risk management program); *see also* rule 22e–4(b)(2)(iii).

[772] *See* rule 22e–4(b)(1)(iv)(A) and (B).

[773] *See, e.g.,* Discussion of liquidity issues associated with the Third Avenue Focused Credit fund at n. 81.

[774] *See, e.g.,* Rule 18f–1 and Form N–18F–1 Adopting Release, *supra* footnote 24 (stating that the definition of ''redeemable security'' in section 2(a)(32) of the Investment Company Act ''has traditionally been interpreted as giving the issuer the option of redeeming its securities in cash or in kind.'').

[775] *See* Karen Damato, *'Redemptions in Kind' Become Effective for Tax Management,* Wall Street Journal (Mar. 10, 1999), *available at http://www.wsj.com/articles/SB921028092685519084* ('''Redemptions in kind' are typically viewed by fund managers as an emergency measure, a step they could take to meet massive redemptions in the midst of a market meltdown.''). Besides using in-kind redemptions as an emergency measure to manage liquidity risk, funds may also use in-kind redemptions for other reasons. For example, funds may wish to redeem certain investors (particularly, large, institutional investors) in kind, because in-kind redemptions could have a lower tax impact on the fund than selling portfolio securities in order to pay redemptions in cash. This, in turn, could

Continued

disclose that they have reserved the right to redeem in kind, most funds often consider redemptions in kind to be a last resort or emergency measure, and thus many do not have specific policies or procedures in place governing such in-kind redemptions.[776] Like the proposal, the final rule requires a fund that engages in or reserves the right to engage in in-kind redemptions to adopt and implement written policies and procedures regarding in-kind redemptions as part of the management of its liquidity risk.[777] These policies and procedures generally should address the process for redeeming in kind, as well as the circumstances under which the fund would consider redeeming in kind.

Multiple commenters welcomed efforts by the Commission to facilitate funds' ability to use redemptions in kind and stated that they considered redemptions in kind an important liquidity risk management tool for allocating the cost of selling securities to meet redemptions to redeeming investors.[778] These commenters also generally agreed that as part of a fund's management of its liquidity risk, a fund should adopt and implement written policies and procedures regarding in-kind redemptions.[779] Commenters noted that there are often logistical issues associated with paying in-kind redemptions, and that this limits the availability of in-kind redemptions under many circumstances.[780] Commenters also noted that some shareholders are generally unable or unwilling to receive in-kind redemptions, which may limit its utility.[781] These commenters agreed that requiring funds to implement policies and procedures on in-kind redemptions in advance would promote a focus on addressing any legal or operations issues before the fund's use of redemptions in kind, thus making such redemptions a more practical and effective liquidity management tool.[782]

Commenters also suggested that the Commission provide guidance on the appropriate use of in-kind redemptions for funds.[783] We expect that effective fund policies and procedures on in-kind redemptions would contemplate a variety of issues and circumstances. Well-designed policies and procedures would likely address the particular circumstances in which a fund might employ in-kind redemptions, for example, detailing whether a fund would use in-kind redemptions at all times, or only under stress, and what types of events may lead the fund to use them. Such policies and procedures would also likely address whether a fund would use in-kind redemptions for all redemption requests or only for requests over a certain size.[784]

Funds may also wish to consider having policies and procedures that address the ability of investors to receive in-kind redemptions, potentially including different procedures for different shareholder types. For example, the policies and procedures might provide that retail shareholders (who may not be operationally equipped to receive in-kind redemptions) may be provided cash redemptions, but that institutional investors who may be able to receive such securities, would be paid out in-kind under certain circumstances. These procedures may also consider whether holdings through omnibus accounts pose any unique issues that should be addressed. Well-designed policies and procedures would likely also address potential operational issues with providing in-kind redemptions to various kinds of investors, and plan out methods for addressing such operational issues. These might include notifying large shareholders that may be subject to redemptions in kind and setting up securities transfer processes for those shareholders in advance.

Effective policies and procedures would also likely address how the fund would determine which securities it would use in an in-kind redemption (for example would it use illiquid or restricted securities), or whether it plans to redeem securities in kind as a *pro rata* ratio of the fund's securities holdings, or whether it would redeem in a non-*pro rata* manner. For a fund that redeems *pro rata,* policies and procedures might address how the fund plans in-kind redemptions of odd lots or small lots of securities, and if a fund were to do such odd lot transactions, how to process such transactions. They may also consider how they would accomplish in-kind redemptions of illiquid securities or securities that have restrictions on their transferability, and the extent to which these securities would not be redeemed in kind.

If a fund chooses not to redeem in a *pro rata* manner, effective policies and procedures would likely address that securities redeemed are selected and distributed in a manner that is fair and does not disadvantage either the redeeming shareholder or the remaining investors in the fund. We caution that if a fund redeems an investor's interests in a fund by transferring an unrepresentative set of securities to the investor, this may raise questions of shareholder discrimination and unfairness (as well as potentially cherry picking and favoritism), which should be addressed in the fund's policies and procedures. For example, policies and procedures could address how to ensure that any securities that are redeemed in kind in a non-*pro rata* manner are valued properly, to ensure that the securities transferred represent the proportionate share of the fund NAV.[785] They might also address how the fund would determine that shareholders are treated fairly, and are not redeemed with securities the fund deems undesirable or securities that have significant tax consequences. Relatedly, the policies and procedures may also address how the fund evaluates the tax consequences to the fund and the redeeming shareholder of distributing certain securities, for example, whether distributing certain securities that have significant capital gains or losses built in would have inequitable results.

Because the management and personnel capacity of funds facing heavy redemptions and other liquidity stresses will likely be strained as funds attempt to manage these pressures, the Commission believes that requiring funds to have policies and procedures

benefit the remaining shareholders in the fund. *See, e.g., id.* (''If a fund has to sell appreciated stocks to pay a redeeming shareholder, it realizes capital gains. Unless the fund has offsetting capital losses, those gains are distributed as taxable income to all remaining fund holders. By contrast, when funds distribute stocks from their portfolios, there is no tax event for the continuing holders.'').

[776] *See* Proposing Release, *supra* footnote 9, at section III.C.5

[777] Rule 22e–4(b)(v). This requirement also applies to In-Kind ETFs that are subject to the tailored regime discussed below. *Id.*

[778] BlackRock Comment Letter (noting that redemptions in kind allow costs to be externalized from the fund without the use of mechanisms such as swing pricing).

[779] *See, e.g.,* BlackRock Comment Letter; Invesco Comment Letter.

[780] *See, e.g.,* Invesco FSOC Notice Comment Letter, *supra* footnote 248 (noting that while ''Invesco has on occasion exercised rights to redeem in kind, in practice such rights are exercised infrequently'').

[781] *See* Peter Fortune, *Mutual Funds, Part I: Reshaping the American Financial System,* New England Econ. Rev. (July/Aug. 1997) (''Fortune'') at 47 (''A fund redeeming in kind does so at the risk of its reputation and future business . . .''), *available at http://www.bostonfed.org/economic/neer/neer1997/neer497d.htm*; Invesco Comment Letter.

[782] ICI Comment Letter I; BlackRock Comment Letter.

[783] *See, e.g.,* BlackRock Comment Letter.

[784] One commenter suggested that fund sponsors should consider redemptions in kind if withdrawal requests exceed a certain percentage of a fund's total assets. *See* BlackRock Comment Letter.

[785] *See* section 2(a)(32) (definition of redeemable security). Such a transaction may have significant negative consequences to the redeeming recipient, particularly if the security provided was fair valued improperly, was restricted, or was in other ways impaired.

dictating how fund's will implement in-kind redemptions will increase the likelihood that in-kind redemptions will be a feasible risk management tool, and may address any potential fund or shareholder inequities. Accordingly, we are adopting this requirement largely as proposed.[786]

G. Cross-Trades

Today, under rule 17a–7, funds may make certain affiliated securities transactions between funds and certain affiliates (''cross trades''), provided they meet certain protective conditions.[787] Rule 17a–7 includes conditions that limit the portfolio assets that may be cross-traded, and, as discussed below, cross-trades involving certain less liquid assets may not be eligible to rely on the rule. As discussed in the Proposing Release, some funds may consider engaging in cross-trades to be a useful liquidity risk management tool. Cross-trading can benefit funds and their shareholders by allowing funds that are mutually interested in a securities transaction that is consistent with the investment strategies of each fund to conduct the transaction without incurring transaction costs and without generating a market impact.[788] However, cross-trades also have significant potential for abuse. For example, as the Commission has previously stated, ''an unscrupulous investment adviser might 'dump' undesirable securities on a registered investment company or transfer desirable securities from a registered investment company to another more favored advisory client in the complex. Moreover the transaction could be effected at a price which is disadvantageous to the registered investment company.'' [789] Cross-trade transactions also may be inconsistent with the investment objectives, investment strategies, or risk profiles of participating investment companies and other advisory clients.[790]

Accordingly, rule 17a–7 requires that any cross-trades satisfy certain conditions designed to prevent such abuses, including the requirement that market quotations be readily available for each traded security and that if the security is only traded over the counter, the cross-trade be conducted at the average of the highest current independent bid and lowest current independent offer determined on the basis of reasonable inquiry.[791] In requiring market quotations for cross-traded securities, the Commission has stated that ''[r]eliance upon such market quotations provides an independent basis for determining that the terms of the transaction are fair and reasonable to each participating investment company or other advisory client and do not involve overreaching.'' [792] Rule 17a–7 also requires that a cross-trade transaction be ''consistent with the policy of each registered investment company and separate series of a registered investment company participating in the transaction, as recited in its registration statement and reports filed under the Act.'' [793]

We noted in the Proposing Release that less liquid assets are less likely to satisfy rule 17a–7 than highly liquid investments.[794] Some commenters expressed concern that this assertion would prohibit funds from, or create a presumption against, cross-trading any assets deemed less liquid,[795] or directly incorporate liquidity classification decisions into rule 17a–7 eligibility determinations.[796] One commenter, disagreeing with the assertion that less liquid assets are less likely to satisfy rule 17a–7 than highly liquid assets, stated ''a less actively traded security may be less liquid, but nonetheless have readily available market quotations, and a fund may determine that independent bid and offer prices are available in the market. The relative illiquidity of the security itself will not alone be determinative of whether prices are available for Rule 17a–7 purposes.'' [797]

We note that less liquid assets, by definition, are less likely to trade in highly active markets that produce readily available market quotations, which may make it more difficult to ensure that the terms of a cross-trade transaction are fair and reasonable to each participating investment company or other advisory client and do not involve overreaching. As one commenter noted, ''rule 17a–7 broadly requires the availability of accurate valuation information with respect to any security proposed to be traded from one adviser-directed account to another. This effectively requires such securities to be relatively liquid.'' [798] Moreover, the absence of highly active markets for less liquid assets may exacerbate the concern discussed above relating to ''dumping'' undesirable securities, because limited markets for such assets indicates that there are fewer alternate options for disposing of the assets. Similarly, the absence of highly active markets for less liquid assets may exacerbate the concern relating to a transfer of assets that is inconsistent with the investment objective, investment strategies, or risk profile of each participating investment company or other advisory client.

We agree that an assessment of an asset's liquidity, without more, would not determine whether the asset is eligible for a cross-trade transaction under rule 17a–7. However, as noted above, we believe that any assets used in a cross-trade transaction should be scrutinized to ensure that they satisfy all of rule 17a–7's requirements. Due to the particular risks associated with cross-trading less liquid assets, it may be

[786] The rule text has been slightly modified to make clear that redemption in kind policies and procedures must address not just how the fund will engage in redemptions in kind, but also when it will do so. Rule 22e–4(b)(1)(v).

[787] Section 17 of the Act restricts transactions between an ''affiliated person of a registered investment company or an affiliated person of such affiliated person'' and that investment company—for example, transactions between a fund and another fund managed by the same adviser. A fund must therefore obtain exemptive relief from the Commission before entering into purchase or sale transactions with an affiliated fund, or execute such transactions subject to the provisions of rule 17a–7 under the Investment Company Act (permitting purchase and sale transactions among affiliated funds and other accounts, under certain circumstances).

[788] As noted above, rule 17a–7 requires that each cross-trade be consistent with the policy of each fund participating in the transaction and that no brokerage commissions, fees or other remuneration be paid in connection with the transaction. Because cross-trades are conducted privately between funds, they are not transparent to market trading reporting systems and thus are unlikely to generate a market impact.

[789] Exemption of Certain Purchase or Sale Transactions Between a Registered Investment Company and Certain Affiliated Persons Thereof, Investment Company Act Release No. 11136 (Apr. 21, 1980) [45 FR 29067 (May 1, 1980)]. *See also* Evergreen Order, *supra* footnote 46 (fund's adviser failed to seek best execution in trading fund securities and favored one client over another, thereby engaging in transactions that operated as a fraud or deceit upon its client in violation of section 206(2) of the Advisers Act).

[790] A fund that provided a non-*pro rata* distribution of cash, securities or other property to a shareholder that owns 5% or more of the fund and/or gives any election to the shareholder about which assets to receive may also raise affiliated transaction concerns under section 17(a) and rule 17a–5, as such a transaction would fall outside the exemption provided by rule 17a–5 and thus might be viewed as a sale to or purchase from the fund by an affiliated person.

[791] *See* rule 17a–7(b).

[792] Exemption of Certain Purchase or Sale Transactions Between a Registered Investment Company and Certain Affiliated Persons Thereof, Investment Company Act Release No. 11676 (Mar. 10, 1981) [45 FR 17011 (Mar. 17, 1981)]. The Commission has historically declined to expand rule 17a–7 to cross-trades for which market quotations were not readily available and where independent current market prices were not available because these conditions increase the potential for abuse through cross-trades. *See id.*

[793] *See* rule 17a–7(c).

[794] *See* Proposing Release, *supra* footnote 9, at n.396 and accompanying text.

[795] *See* ICI Comment Letter I.

[796] *See* Comment Letter of Simpson Thacher & Bartlett LLP (Jan. 14, 2016) (''Simpson Thacher Comment Letter'').

[797] *See* Fidelity Comment Letter.

[798] See id.

prudent for advisers to subject less liquid assets to careful review (and potentially even a heightened review compared to other more liquid assets) before engaging in such transactions.

We note that cross trading also implicates a fund's adviser's duty to seek best execution for each fund or other advisory client, as well as its duty of loyalty to each fund or other advisory client.[799] An adviser should not cause funds or other clients to enter into a cross-trade unless doing so would be in the best interests of each fund or other client participating in the transaction. Advisers should be particularly sensitive to the possibility of heightened conflicts when one or both of the clients is experiencing stress at the time of consideration of a cross trade.

Under rule 38a–1, a fund's compliance policies and procedures related to rule 17a–7 generally should contemplate how the fund meets the rule's requirements with regard to less liquid assets. For example, as part of these policies and procedures, a fund might consider conducting a review of less liquid assets before cross-trading them to ensure that ''market quotations are readily available,'' that a ''current market price'' is available, that the transaction is in line with each participating investment company's or other advisory client's investment objective, investment strategies and risk profile, and that the cross-trade satisfies all other requirements set forth in rule 17a–7. Reasonably designed policies and procedures thus would likely specifically address how a fund would determine that such less liquid securities are appropriately used when meeting the requirements of rule 17a–7. The specific review of a less liquid asset would likely vary depending on the characteristics of the market or markets in which the asset transacts, the characteristics of the asset itself, and the nature of the funds potentially involved in the cross trade.

In crafting policies and procedures reasonably designed to address the particular risks of cross-trading less liquid assets, a fund could consider specifying the sources of the readily available market quotations to be used to value the assets and establish specific criteria for determining whether market quotations are current and readily available, and include potential back-up sources if the primary sources are not available. Funds should consider including in their policies and procedures periodic reviews of the continuing appropriateness of those sources of readily available market quotations.

In addition, a fund's policies and procedures might also provide for assessing the quality of quotations provided by dealers. The quality of dealer quotations may vary depending upon, among other things, the extent to which a dealer makes a market in or retains an inventory in the particular security, or in similar securities, such that the dealer maintains an awareness of changes in market factors affecting the value of the security.[800] ''Indications of interest'' and ''accommodation quotes,'' may not necessarily reflect the current market values of the securities and thus are not ''market quotations'' or ''market values'' for the purposes of rule 17a–7.[801]

In addition, reasonably designed policies and procedures likely would also include compliance monitoring to help ensure that the investment objective, investment strategies and risk profile of each participating investment company or other advisory client are scrutinized in conjunction with the characteristics of any cross-traded asset to evaluate whether the asset transfer is not in line with any objective or strategy or inappropriately shifts risk from one investment company or other advisory client to another. Whether a cross-trade is in the best interest of an investment company or other client purchasing an asset may depend, in part, on the relative liquidity of the purchaser's existing portfolio assets and the level of redemptions that may be reasonably anticipated by the purchaser.

H. Board Approval and Designation of Program Administrative Responsibilities

Directors, and particularly independent directors, play a critical role in overseeing fund operations, although they generally may delegate day-to-day management to a fund's adviser.[802] As discussed below, we are adopting as proposed the requirement for a fund's board of directors to approve the investment adviser, officer, or officers who are responsible for administering the program and to approve the fund's written liquidity risk management program. However, in a change from the proposal, the board will not be required to specifically approve the fund's highly liquid investment minimum (except in the limited circumstances that a fund below its minimum seeks to change it) or to approve material changes to the program. Instead, similar to rule 38a–1, the board will be required to review, no less than annually, a written report prepared by the investment adviser, officer, or officers designated to administer the liquidity risk management program that describes a review of the program's adequacy and effectiveness, including, if applicable, the operation of the highly liquid investment minimum, and any material changes to the program.[803] As discussed in detail below, the final rule retains a role for the board in overseeing the fund's liquidity risk management program, but in response to commenters, eliminates certain of the more specific and detailed approval requirements.

We believe the role of the board under the rule is one of general oversight, and consistent with that obligation we expect that directors will exercise their reasonable business judgment in overseeing the program on behalf of the fund's investors. As discussed in the Proposing Release, directors may satisfy their obligations with respect to this initial approval by reviewing summaries of the liquidity risk management program prepared by the fund's investment adviser, officer, or officers administering the program, legal counsel, or other persons familiar with the liquidity risk management

[799] *See, e.g.,* In re Western Asset Management Co., Investment Company Act Release No. 30893 (Jan. 27, 2014) (settled action) (stating that the adviser to funds and other advisory clients engaging in cross-trading ''has a fiduciary duty of loyalty to its clients and also must seek to obtain best execution for both its buying and selling clients'' and finding that the adviser aided and abetted and caused violations of section 17(a) and violated Advisers Act section 206).

[800] Dealers do not necessarily purport to provide quotations for securities that reflect their current market values. Some dealers may provide only ''indications of interest,'' *i.e.,* non-firm expressions of interest to trade that do not constitute quotations or ''accommodation quotes''. *See, e.g.,* Regulation NMS, Securities Exchange Act Release No. 49325 (Feb. 26, 2004) [69 FR 11126 (Mar. 9, 2004)], at n.257. *Cf.* Rules 600(b)(8) and (62) under Regulation NMS [17 CFR 242.600(b)(8) and 242.600(b)(62)] (defining ''bid or offer'' as ''the bid price or the offer price communicated by a member of a national securities exchange or member of a national securities association to any broker or dealer, or to any customer, at which it is willing to buy or sell one or more round lots of an NMS security, as either principal or agent, but shall not include indications of interest,'' and defining ''quotation'' as ''a bid or an offer'').

[801] *Id.* We also note that evaluated prices provided by pricing services are not, by themselves, readily available market quotations. *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at n.895 and accompanying text.

[802] *See* Investment Trusts and Investment Companies: Hearings on H.R. 10065 Before a Subcomm. of the House Comm. on Interstate and Foreign Commerce, 76th Cong., 3d Sess. 112 (1940) at 109 (describing the board as an ''independent check'' on management); *Burks* v. *Lasker,* 441 U.S. 471, 484 (1979) (citing *Tannenbaum* v. *Zeller,* 552 F.2d 402, 406 (2d. Cir. 1979)) (describing independent directors as ''independent watchdogs'').

[803] *See* rule 22e–4(b)(2).

program.[804] The summaries should familiarize directors with the salient features of the program and provide them with an understanding of how the liquidity risk management program addresses the required assessment of the fund's liquidity risk.

Many commenters expressed general support for board oversight of the liquidity risk management program, although several objected to certain of the board's specific responsibilities required under the rule, in particular their approval of the three-day highly liquid asset minimum and of material changes to the program.[805] Given the board of directors' historical oversight role, the Commission continues to believe it is appropriate to require a fund's board to oversee the fund's liquidity risk management program. The rule's requirements are designed to facilitate the board's oversight of the adequacy and effectiveness of the fund's liquidity risk management program.

Several commenters asked that the final rule include an express standard of care (*i.e.,* the business judgment rule) to which the Commission would hold a fund's board accountable in this area.[806] One commenter requested that the final rule provide fund boards with a safe harbor in approving specific elements of the program and clarification that a board is not required to consider all of the enumerated factors (specifically, any non-applicable factors) when setting and adjusting the three-day liquid asset minimum.[807] We believe that the changes made to the board oversight role from the proposal should largely address the commenters' concerns. In addition, we believe that the board oversight role here is substantially similar to its role and responsibilities in other contexts under the Investment Company Act, and that providing a different standard of care for board action here would not be appropriate.[808]

1. Designation of Administrative Responsibilities to Fund Investment Adviser, Officer, or Officers

We are adopting substantially as proposed the requirements that the fund's board of directors approve the designation of the fund's investment adviser, officer, or officers (which could not be solely portfolio managers of the fund) responsible for administering the fund's liquidity risk management program.[809] We are also adopting, substantially as proposed, the requirement that the administrator of the program provide the board with a written report on the adequacy of the fund's liquidity risk management program, including the highly liquid investment minimum, and the effectiveness of its implementation, at least annually.[810] The Commission continues to believe this approach properly tasks the person(s) who are in a position to manage the fund's liquidity risks on a real-time basis with responsibility for administration of the liquidity risk management program. Designating the fund's investment adviser, officer, or officers responsible for the administration of the fund's liquidity risk management program, subject to board approval, is consistent with the way the Commission understands most funds manage liquidity.[811]

We received little comment on this aspect of the proposal. A few commenters agreed with the proposal that the board's responsibilities should include approval of the program's administrator.[812] We continue to believe that requiring that the board approve the designation of the administrator of the liquidity risk program is an important step in board oversight of the program. We believe that having the board approve the administrator should help enhance board oversight of the program and allow for boards to better understand who is responsible for administering it.

One commenter argued that portfolio managers should administer the program, contending that liquidity risk management requires investment skills and swiftness during stress to manage redemptions.[813] This commenter believed that if a program administrator were independent from portfolio management, then liquidity assessment might become divorced from the investment process, which the commenter argued would be disadvantageous to the fund and investors. We agree that portfolio management provides valuable input into the liquidity risk management process. However, we are concerned that if only portfolio managers run the program, the program might not be administered with sufficient independence to accomplish the goal of managing the risk of the fund's liquidity. We believe that a fund generally should consider the extent of influence portfolio managers may have on administration of the program, and seek to provide independent voices and administration of the program as a check on any potential conflicts of interest to the extent appropriate. However, as the proposal noted, although the fund's portfolio managers cannot be solely responsible for administering the program, the administrator of the program might wish to consult with the fund's portfolio manager, traders, risk managers, and others as necessary or appropriate in administering a fund's liquidity risk management program.[814] Portfolio managers may also be a part of any committee or group designated to administer the program, if more than one person is so designated. The Commission understands that some funds currently employ a dedicated risk management officer who consults with the fund's portfolio management team. One commenter noted, and we agree, that portfolio managers should provide day-to-day management of funds, with an additional layer of oversight provided by the risk and compliance framework.[815] After review of the comments received, we continue to believe that requiring the officer or officers responsible for administering the fund's liquidity risk management program not to be solely portfolio managers strikes the appropriate balance between independence and expertise.

The Commission recognizes that, in certain circumstances, a fund's service providers might assist a fund and its investment adviser by providing information relevant to a fund's assessing and managing liquidity

[804] *See* Proposing Release, *supra* footnote 9, at section III.D.

[805] *See, e.g.,* ICI Comment Letter I; IDC Comment Letter; SIFMA Comment Letter I.

[806] Fidelity Comment Letter; FSR Comment Letter; MFDF Comment Letter; T. Rowe Comment Letter. *See also* NYC Bar Comment Letter (suggesting codifying a good-faith, reasonable, business judgment standard). One commenter also suggested that the proposed requirement of keeping records of the board's determination related to the factors considered when approving the three-day liquid asset minimum is not appropriate in light of the board's historical role. T. Rowe Comment Letter. We note that as discussed below, the board will not specifically approve the highly liquid investment minimum, thereby addressing the commenters' concerns about keeping records of the factors used in the board's determination.

[807] T. Rowe Comment Letter.

[808] *See, e.g.,* 2014 Money Market Fund Reform Adopting Release, at text accompanying nn.266–267 (discussing the board's role under the Investment Company Act).

[809] *See* rule 22e–4(b)(2)(ii).

[810] *See* rule 22e–4(b)(2)(iii). We note that a fund's sub-adviser could be designated as the administrator of the program if appropriate.

[811] *See* American Bar Association, Fund Director's Guidebook, Federal Regulation Of Securities Committee, (4th ed. 2015), at 82 (''Determining the liquidity of a security is primarily an investment decision that is delegated to the investment adviser, but directors may establish guidelines and standards for determining liquidity.'').

[812] IDC Comment Letter; Voya Comment Letter.

[813] Invesco Comment Letter.

[814] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[815] BlackRock Comment Letter.

risk.[816] We note, however, that the primary parties responsible for a fund's liquidity risk management are the fund itself and any parties to whom the fund has delegated responsibility for administering the fund's liquidity risk management program.

One commenter requested further guidance on what responsibilities the administrator could delegate and to what extent the administrator could rely upon third parties.[817] The Proposing Release provided two examples of when a fund's service providers could assist a fund and its investment adviser in monitoring factors relevant to a fund's liquidity risk and managing the fund's liquidity risk: Third parties could provide data relevant to assessing fund flows, and a sub-adviser necessarily would be responsible for investing a fund's assets in accordance with the fund's three-day liquid asset minimum and any other liquidity-related portfolio requirements adopted by the fund.[818] As proposed, the final rules require a fund to oversee any liquidity risk monitoring or risk management activities undertaken by the fund's service providers. We encourage the fund to communicate regularly with its service providers as a part of its oversight and to coordinate the liquidity risk management efforts undertaken by various parties.

2. Oversight of the Liquidity Risk Management Program

Under the final rule, a fund will be required to obtain initial approval of its written liquidity risk management program from the fund's board of directors, including a majority of its independent directors.[819] Additionally, the fund's board will be required to review a written report from the administrator of the fund's liquidity risk management program, provided no less frequently than annually, that addresses the operation of the program and assesses its adequacy and effectiveness of implementation.[820] In a change from the proposal, a fund will not be required to obtain approval of any material changes to the fund's liquidity risk management program from the fund's board of directors, but instead such material changes will be described in the report.[821]

Commenters raised concerns that the proposed rule imposed management responsibilities on the fund's board of directors and suggested that the Commission clarify that the board's role is to provide oversight through approval of policies and procedures, whereas management's role is to devise the specific details of the program.[822] Commenters contended that the final rule should mirror rule 38a–1, requiring fund managers to explain material changes to the program (including changes to the three-day liquid asset minimum) in an annual report to the board, not to submit those changes for prior board approval.[823] These commenters felt that a requirement to discuss material changes to the liquidity risk management program in an annual update to the fund's board would strike an appropriate balance between allowing the fund manager the flexibility to make changes to liquidity risk management as market conditions might require, while also keeping the fund's board informed.[824]

We agree with commenters that requiring funds to obtain approval from fund boards before making material changes to a liquidity risk management program risks the program becoming stale and outdated as market changes occur, and is not consistent with the approach taken under rule 38a–1. Accordingly, the final rule does not require prior approval of material changes to the fund's liquidity risk management program from the fund's board of directors. However, under the final rule, the board is still required to approve the program initially and to provide oversight of it, as well as review a report on the adequacy and effectiveness of the program's implementation, which must include a description of any material changes made to the program during the period. We believe that this oversight role is consistent with the board's historical responsibilities with respect to overseeing fund operations.

3. Oversight of the Highly Liquid Investment Minimum

In a change from the proposal, under the final rule, boards will not be required to approve the highly liquid investment minimum, nor approve changes to it, except in the limited circumstances where a fund seeks to change the minimum while the fund is below the pre-established minimum. Commenters argued that because liquidity risk management, including management of three day-liquid assets, is both technical and fact-intensive and often requires day-to-day judgments, fund managers should develop and administer the program, subject to board review.[825] Commenters were concerned that the requirement for a fund to obtain board approval for setting and changing the three-day minimum may cause delay that might harm fund shareholders.[826] For example, one commenter argued that requiring board approval, which might be difficult to obtain on a timely basis, could cause a fund to stand idle as market conditions changed, missing opportunities as board approval was sought.[827]

We agree with commenters that requiring boards to approve the highly liquid investment minimum may reduce its utility, as the minimum may need to be revised on a more timely basis so that it can best reflect the liquidity management needs of the fund under current market conditions. In addition, we understand commenters' concerns that requiring mutual fund boards to make day-to-day determinations regarding the minimum amount of cash or liquid assets the fund should hold may lead to a more detailed managerial role for the board.

However, in the limited circumstances where the program administrator seeks to change the fund's highly liquid investment minimum while the fund is below the pre-established minimum, the final rules require the board to approve such a change. In the absence of such a requirement, the administrator could simply change the minimum if the fund dropped below it, avoiding the accountability of the board approval requirements as well as reducing the minimum's utility as a liquidity risk management tool. The final rule also requires the board to receive a report whenever the fund falls below its highly liquid investment minimum at its next regularly scheduled meeting and a report of such a shortfall if the fund is below its highly liquid investment minimum for more than 7 consecutive calendar days, within one business day thereafter. The Commission believes these requirements properly balance the ability of funds to move quickly in response to shifting environments with

[816] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[817] Voya Comment Letter.

[818] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[819] *See* rule 22e–4(b)(2)(i).

[820] As noted above, more frequent reports to the board may be appropriate in certain circumstances. *See supra* footnote 771.

[821] *See* rule 22e–4(b)(2).

[822] *See, e.g.,* Cohen & Steers Comment Letter; FSR Comment Letter; HSBC Comment Letter; NYC Bar Comment Letter.

[823] *See, e.g.,* BlackRock Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[824] *See, e.g.,* BlackRock Comment Letter; Dechert Comment Letter; Voya Comment Letter.

[825] *See, e.g.,* CRMC Comment Letter; FSR Comment Letter; State Street Comment Letter; Dodge & Cox Comment Letter.

[826] *Id.*

[827] Dechert Comment Letter.

the boards' oversight of the liquidity risk management program.

4. Oversight of Illiquid Investment Limit

In a change from the proposal, the final rule will also require that a fund board be informed within one business day if the fund's holdings of illiquid investments exceed 15% of its net assets. In the proposal, we requested comment as to whether additional aspects of a fund's liquidity management program should be reported to a fund's board. For the reasons discussed in the section on Form N–LIQUID, if a fund's holdings of illiquid investments exceed 15% for any reason (for example, if a fund experiences net redemptions leading to increased holdings of illiquid investments) it may raise significant concerns regarding the fund's management of its liquidity and ability to continue to meet its redemption obligations. Accordingly, we believe that such an event should be reported to the board immediately, as it may have significant impacts on the ability of the fund to meet its redemption obligations, and may compromise its liquidity risk management.

As discussed in the section on Form N–LIQUID below, a number of commenters also expressed support for the addition of an early warning notification provision, under which funds would be required to notify the Commission (or take other action) when illiquid investments held at the end of a business day exceed 15% of net assets and continue to exceed 15% of net assets three business days after the threshold was first exceeded.[828] As discussed in the section on Form N–LIQUID, we are adopting a requirement that a fund report to the Commission within one business day if the fund's holdings of illiquid investments exceed 15% percent of its net assets. One commenter suggested that such a requirement would impose greater discipline on the oversight of fund holdings of illiquid assets, and that a fund would likely consult with the fund board in developing how to proceed in response.[829] We agree, and believe that if a fund were to file Form N–LIQUID because the fund's holdings of illiquid investments exceeded 15% of its net assets, a fund board should be informed, and should be informed quickly, so that the board can provide oversight as the fund determines how to address the level of illiquidity in the fund's portfolio. Accordingly, as a complement to this new N–LIQUID requirement, the final rules require that if a fund's holdings of illiquid investments exceed 15% of its net assets, the fund board be informed of that fact within one business day after the occurrence, with an explanation of the extent and causes of the occurrence and how the fund plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.

I. Recordkeeping Requirements

Under the final rules, and as we proposed, each fund will be required to maintain a written copy of the policies and procedures adopted as part of its liquidity risk management program for five years, in an easily accessible place.[830] Additionally, each fund will be required to maintain copies of any materials provided to its board in connection with the board's initial approval of the fund's liquidity risk management program, and copies of written reports provided to the board on the adequacy of the fund's liquidity risk management program, including the fund's highly liquid investment minimum, and the effectiveness of its implementation for at least five years after the end of the fiscal year in which the documents were provided to the board, the first two years in an easily accessible place.[831] In a change from the proposal, funds would also need to keep records of any materials provided to the board related to the fund dropping below its highly liquid investment minimum. As with the proposal, the final rules also require each fund to keep a written record of how its highly liquid investment minimum, and any adjustments thereto, were determined, including the fund's assessment and periodic review of its liquidity risk for a period of not less than five years, the first two years in an easily accessible place, following the determination of, and each change to, the fund's highly liquid investment minimum.[832]

One commenter found the recordkeeping requirements consistent with similar recordkeeping requirements that funds are currently required to maintain.[833] The recordkeeping requirement is designed to provide our examination staff with a basis to evaluate a fund's compliance with the requirements of rule 22e–4. We also anticipate that these records would assist our staff in identifying weaknesses in a fund's liquidity risk management. The five-year retention period is also consistent with the period provided in rule 38a–1(d) under the Act. We believe consistency in these retention periods is appropriate because funds currently have compliance program-related recordkeeping procedures in place incorporating a five-year retention period, which we believe lessen the compliance burden to funds, compared to choosing a different retention period, such as the six-year recordkeeping retention period under rule 31a–2 of the Act.

The Commission continues to believe that the rule appropriately balances recordkeeping-related burdens on funds and our examination staff's ability to evaluate a fund's liquidity risk management program in light of the requirements of rule 22e–4. We are therefore adopting this aspect of the rule substantially as proposed.

J. ETFs

We are adopting certain tailored liquidity risk management program requirements for ETFs.[834] In assessing, managing, and periodically reviewing its liquidity risk, an ETF will be required to consider certain additional factors, as applicable, that take into account its unique operation, as discussed further below.[835] Like all funds, each ETF also will be required to limit its investments in illiquid investments to no more than 15% of its net assets and obtain certain board approvals regarding the program. Certain ETFs that qualify as ''In-Kind ETFs,'' [836] (generally ETFs that redeem shares in kind except to a *de minimis* extent and that publish their holdings daily) however, will not be required to classify their portfolio investments or comply with the highly liquid investment minimum requirement.[837]

[828] *See, e.g.,* ICI Comment Letter III; SIFMA Comment Letter III (noting that this early warning notification could respond to concerns raised by the Third Avenue Fund liquidation); *see also* Third Avenue Temporary Order, *supra* footnote 12.

[829] *See* ICI Comment Letter III.

[830] *See* rule 22e–4(b)(3)(i). These policies and procedures would include any shortfall policies and procedures adopted by a fund. *See id.*

[831] *See* rule 22e–4(b)(3)(ii).

[832] *See* rule 22e–4(b)(3)(iii).

[833] CFA Comment Letter.

[834] References to ETFs in this section are to both in-kind and other open-end ETFs, but not UIT ETFs (which are not subject to the liquidity risk management program requirements), except where specifically indicated otherwise. *See infra* section III.K for a discussion of limited liquidity review requirements for principal underwriters and depositors of UITs.

[835] *See* rule 22e–4(b)(1)(i).

[836] References to ''In-Kind ETFs'' include both ETFs and ETMFs that meet the requirements in rule 22e–4(a)(9)) (defining an ''In-Kind ETF''). *See infra* footnote 851 and accompanying text (discussing a requirement that ETFs report their status as an ''In-Kind ETF,'' when applicable, on Form N–CEN).

[837] ETFs that redeem in cash, or that do not qualify otherwise as ''In-Kind ETFs'' (as defined in rule 22e–4(a)(9)) will be subject to the full set of liquidity risk management program elements, including the classification and highly liquid investment minimum requirements. *See* rule 22e–

Continued

We believe these adjusted program requirements recognize and appropriately require management of the unique liquidity risks found in ETFs, and in particular In-Kind ETFs.

A number of commenters on the proposal highlighted how ETFs differ from mutual funds, and stated in particular that In-Kind ETFs do not present the same type of liquidity risks as other funds.[838] These commenters suggested that the Commission: (i) Exempt either ETFs or In-Kind ETFs entirely from proposed rule 22e–4;[839] (ii) exempt either ETFs or In-Kind ETFs from certain requirements of proposed rule 22e–4 (notably the portfolio liquidity classification and three-day liquid asset requirements);[840] or (iii) develop a more tailored liquidity risk management program applicable to ETFs.[841]

As noted above, we believe that ETFs, like mutual funds, face liquidity risks.[842] But we agree that In-Kind ETFs have different liquidity risks than funds (including ETFs) that redeem in cash. This is particularly the case because the redeeming shareholder (*i.e.,* authorized participant or its customer), rather than the ETF, typically will bear the direct costs associated with its liquidity needs, given that if that authorized participant (or its customer) wants cash, it must sell the in-kind assets and bear the costs of doing so. Therefore, after further analysis, including carefully considering the comments received, we are adopting tailored liquidity risk management program requirements for ETFs as discussed further below.

We decline to exempt all ETFs from the rule entirely, because we believe ETFs that redeem more than a *de minimis* amount in cash can have substantially similar liquidity risks as mutual funds, and we believe that all ETFs have certain unique additional risks discussed below. In addition, while we agree that the classification and highly liquid investment minimum components of the liquidity risk management program we are adopting for other funds are not necessary for In-Kind ETFs, we believe that In-Kind ETFs must maintain sufficient liquidity and assess liquidity-related risks that could affect their shareholders. In this regard, the liquidity of an ETF's portfolio positions is a factor that may contribute to the bid-ask spread, the effective functioning of the ETF's arbitrage mechanism and the ETF's shares trading at a price that is at or close to NAV.[843] For example, if an ETF holds illiquid or less liquid investments, this will be reflected in the redemption basket transferred to a redeeming authorized participant (or its customer), which might result in a liquidity cost to the authorized participant (or its customer or other market participants). This increased cost could alter the authorized participant's decisions regarding exactly when or whether to create or redeem the ETF's creation units, possibly resulting in the ETF trading at increased spreads and/or a price that deviates significantly from its NAV and ultimately adversely impacting the ETF's investors.

Over the years, the Commission and staff have explored the structural and operational differences between ETFs (including those that redeem in kind) and other open-end funds (that redeem in cash), solicited public comment, including on issues related to the potential effects of illiquidity on the operation of ETFs and evaluated the trading of ETFs in times of market stress.[844] In 2015, the Commission solicited public comment on topics related to the listing and trading of exchange-traded investment products (''ETPs'') on national securities exchanges and sales of these products by broker-dealers.[845] Of relevance here, the Commission sought comment on all aspects of the arbitrage mechanism for ETPs (including ETFs), including what characteristics of an ETP would facilitate or hinder the alignment of secondary market share prices with the value of the underlying portfolio reference assets and how arbitrage mechanisms work in the case of ETPs with less-liquid underlying or reference assets. The questions posed in this Release, as well as the comments received, demonstrate the importance of assessing liquidity risks and liquidity needs for all ETFs, including In-Kind ETFs. We considered the comments received on the 2015 ETP Request for Comment in formulating the proposed rule and the final rule we are adopting today.

1. Definitions

Under the final rule, all ETFs must consider certain additional liquidity risk assessment factors, if applicable, but only In-Kind ETFs will be excluded from the classification and highly liquid investment minimum requirements.[846] We are defining an exchange-traded

4(b)(1)(i)–(iii). Throughout the discussion of liquidity risk management programs in this Release, references to ''funds'' include ETFs that redeem in cash, except where specifically indicated otherwise.

[838] *See, e.g.,* ICI Comment Letter; BlackRock Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

[839] *See, e.g.,* Invesco Comment Letter (suggesting an exemption for all ETFs); FSR Comment Letter (suggesting an exemption for In-Kind ETFs); SIFMA Comment Letter I (suggesting an exemption for In-Kind ETFs).

[840] *See, e.g.,* State Street Comment Letter (suggesting an exemption for In-Kind ETFs from the portfolio liquidity classification and three-day liquid asset requirements); Dechert Comment Letter (suggesting an exemption for all ETFs from the three-day liquid asset requirements); ICI Comment Letter I (suggesting an exemption for In-Kind ETFs from the three-day liquid asset requirements); BlackRock Comment Letter (stating that the days-to-cash framework in the portfolio liquidity classification requirements is irrelevant for ETFs and suggesting an exemption for at least In-Kind ETFs from the three-day liquid asset requirements).

[841] *See* BlackRock Comment Letter; FSR Comment Letter.

[842] We note, as discussed previously, that ETFs will be subject to the requirement to implement an overall liquidity risk management program, including the requirement that the fund determine whether its investment strategy is appropriate for an open-end fund.

[843] By this we mean that, and we generally expect that, each day and over time an ETF's shares will trade at or close to the ETF's intraday value. *See* 2015 ETP Request for Comment, *supra* footnote 29 (''When providing exemptive or no-action relief under the Exchange Act, the Commission and its staff have analyzed and relied upon the representations from ETP issuers regarding the continuing existence of effective and efficient arbitrage to help ensure that the secondary market prices of ETP Securities do not vary substantially from the value of their underlying portfolio or reference assets.''); *infra* footnote 857. Because an ETF does not determine its NAV in real time throughout the trading day, in assessing whether this expectation is met, one looks to the difference between the ETF shares' closing market price and the ETF's end-of-day net asset value (*i.e.,* its ''premium'' or ''discount''). *See* 2015 ETP Request for Comment, *supra* footnote 29. With regard to ETMFs, as noted in the Proposing Release, ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because all trading prices of ETMF shares are linked to NAV. *See* Proposing Release, *supra* footnote 9, at n.458.

[844] *See, e.g.,* ETF Proposing Release, *supra* footnote 27; Staff of the Office of Analytics and Research, Division of Trading and Markets, Research Note: Equity Market Volatility on August 24, 2015 (Dec. 2015) (''August 24 Staff Report''), *available at https://www.sec.gov/marketstructure/research/equity_market_volatility.pdf.*

[845] *See* 2015 ETP Request for Comment, *supra* footnote 29 at n.10. The 2015 ETP Request for Comment did not address ETMFs' listing and trading given that, at the time, no ETMFs were listed or traded on an exchange.

[846] We note that an in-kind ETF may not be able to avail itself of the tailored liquidity risk management program where the in-kind ETF operates as a class of a fund that also has mutual fund classes. In such a case, for example, the liquidity classification requirement would apply to the entire portfolio, thus applying to both in-kind ETFs and other funds (*e.g.,* mutual funds). UITs, including ETFs structured as UITs, will not be subject to the majority of the liquidity risk management program requirements. *See supra* section III.A.2.d and *infra* section III.K (discussing rule 22e–4(c), that requires, on or before the date of initial deposit of portfolio securities into a registered UIT (including ETF UITs), the principal underwriter or depositor to determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues and maintain a record of that determination for the life of the UIT and for five years thereafter).

fund or ''ETF'' as ''an open-end management investment company (or series or class thereof), the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule adopted by the Commission.'' [847] We are defining an ''In-Kind ETF'' to mean an ETF that meets redemptions through in-kind transfers of securities, positions, and assets other than a *de minimis* amount of cash and that publishes its portfolio holdings daily.[848] The definition of ''In-Kind ETF'' is intended to distinguish this type of ETF, which, as described throughout this Release, has a unique structure and raises different liquidity risks than other open-end funds (that in most cases redeem shares in cash). As discussed below, we believe that this definition of an In-Kind ETF facilitates this distinction by limiting an ETF's redemption basket to in-kind securities and other assets, and no more than a *de minimis* amount of cash. In addition, the definition requires that an In-Kind ETF publish the ETF's holdings daily.[849] This daily publishing of ETF holdings (or ''daily transparency'') is a condition of many of our ETF orders, and we understand that even for ETFs not subject to that condition, most provide this daily transparency as a matter of course.[850] We believe that requiring this daily transparency will permit the sophisticated authorized participants that directly interact with the ETF to effectively evaluate the liquidity of the ETF's holdings. We also note that we are requiring an ETF to report publicly to the Commission on Form N–CEN its designation as an In-Kind ETF as defined in the final rule so that there is clarity on which ETFs meet this definition and are thus subject to the tailored liquidity risk management program.[851]

Consistent with our exemptive orders, we recognize that there may be circumstances under which an In-Kind ETF may use cash to meet redemptions (in addition to securities and other non-cash assets). For example, today an ETF that typically redeems in-kind may use cash to: (i) Make up any difference between the NAV attributable to a creation unit and the aggregate market value of the creation basket exchanged for the creation unit (generally referred to as the ''balancing amount'' in an ETF's exemptive order); (ii) correspond to uninvested cash in the fund's portfolio (which, to the extent that this amount of cash equals the fund's cash position in the portfolio, would be an ''in-kind'' redemption); or (iii) substitute for a portfolio position or asset that is not eligible to be transferred in kind (*e.g.,* a derivative instrument that, pursuant to contract, is not transferrable).[852] By their nature, ''balancing amounts'' are small amounts and thus would be *de minimis.* Accordingly, there are a number of reasons, including those described above, why an In-Kind ETF may find it prudent or necessary to use a *de minimis* amount of cash to meet redemptions. However, if an In-Kind ETF were to use more than a *de minimis* amount of cash (as determined in accordance with its written policies and procedures) to meet redemptions (for any of the reasons discussed above or otherwise), it would not qualify as an In-Kind ETF and would need to comply with the liquidity risk management program requirements applicable to other ETFs.[853] By way of example, an ETF that normally redeems in-kind, but delivers all cash to a single authorized participant that elects to receive cash, would not be an ETF that uses a *de minimis* amount of cash. However, depending on the circumstances, an ETF that delivers cash only on one occasion may be able to conclude that it qualifies as an In-Kind ETF in later years if such circumstances are not repeated.

An In-Kind ETF generally should describe in its written policies and procedures for its liquidity risk management program,[854] to the extent applicable, how the fund analyzes the ability of the ETF to redeem in-kind in all market conditions such that it is unlikely to suddenly fail to continue to qualify for this exception to the classification and highly liquid investment minimum requirements, the circumstances in which the In-Kind ETF may use a *de minimis* amount of cash to meet a redemption, and what amount of cash would qualify as such. As part of its policies and procedures, an In-Kind ETF generally should also describe how the ETF will manage and/or approve any portion of a redemption that is paid in cash and document the ETF's determination that such a cash amount is *de minimis.* In making these determinations, an In-Kind ETF may consider, if applicable: (i) The amount (both in dollars and as a percentage of the entire redemption basket) and frequency with which cash is used to meet redemptions; and (ii) the circumstances and rationale for using cash to meet redemptions.

As discussed above, in-kind redemptions mitigate certain liquidity risks, but only to the extent that the fund can use in-kind redemptions. This factor is particularly important for an In-Kind ETF because such a fund may only include in its redemption basket a *de minimis* amount of cash if it wants to qualify for the exclusion from the classification and highly liquid investment minimum requirements. If, for example, market conditions change and the fund can no longer meet redemptions without more than a *de minimis* amount of cash, the fund would no longer qualify as an In-Kind ETF. As a result, the ETF would be required to comply with additional requirements under its liquidity risk management program (including liquidity portfolio classifications and highly liquid investment minimum).

[847] *See* rule 22e–4(a)(4). We note that this definition is substantially the same as the definition of ETF that we had proposed as amendments to rule 22c–1. We also note that this definition is substantially the same as the definition in Form N–1A.

[848] *See* rule 22e–4(a)(9). Cash means cash held in U.S. dollars, and would not include, for example, cash equivalents or foreign currency.

[849] Today, such daily publishing of ETF holdings involves posting on the ETF's Web site on each day that the national securities exchange on which the fund's shares are listed is open for business, before commencement of trading of fund shares on the exchange, the identities and quantities of the securities, assets or other positions held by the fund, or its respective master fund, that will form the basis for the fund's calculation of net asset value at the end of the business day.

[850] *See, e.g.,* Foreside ETF Trust, *et al.,* Investment Company Act Release No. 32284 (Sep. 26, 2016) [81 FR 68079 (Oct. 3, 2016)] (notice of application). We note that ETMFs are not required to provide such daily transparency under their orders, and thus would need to choose to provide such daily transparency if they wished to take advantage if this provision.

[851] *See* Item E.5 of Form N–CEN (''Is the Fund an 'In-Kind Exchange-Traded Fund' as defined in rule 22e–4 under the Act?''). In addition, ETFs (including In-Kind ETFs) will be required to report on Form N–CEN the average percentage value of creation units purchased and redeemed both with in-kind securities and assets and with cash, during the reporting period. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[852] We note that depending on the size of the position being substituted for, such a transaction may not always be *de minimis,* and thus the ETF may no longer be eligible to qualify for this provision.

[853] In-Kind ETFs are subject to rule 22e–4, including the obligation to establish written policies and procedures for a liquidity risk management program. As part of these written policies and procedures, we would expect that an In-Kind ETF would determine the amount of cash and the types of transactions that it will treat as *de minimis.* If for any reason, an In-Kind ETF was not able to meet redemptions with more than a *de minimis* amount of cash consistent with those policies and procedures, such a fund would no longer qualify as an In-Kind ETF and would thus no longer be eligible to rely on this provision. *See* rule 22e–4(b)(1)(ii).

[854] Rule 22e–4 requires that an In-Kind ETF adopt and implement a written liquidity risk management program reasonably designed to assess and manage the fund's liquidity risk. *See* rule 22e–4(b).

2. Tailored Program Elements for ETFs

By adopting certain tailored liquidity risk management program requirements for ETFs, we recognize, consistent with comments received, that both ETFs that redeem in cash and In-Kind ETFs present unique liquidity risks as compared to other funds. Some of these unique risks were not specifically addressed in the generally applicable liquidity risk management program as proposed, while still other aspects of the general program were less applicable to the actual operation of In-Kind ETFs, particularly those that offer daily transparency of holdings. Our final rule is designed to address both issues. Accordingly, an ETF will be required to adopt and implement a tailored liquidity risk management program that has the unique elements discussed below, in addition to the elements discussed elsewhere in this Release.

Liquidity Risk Assessment

An ETF, like other open-end funds, will be required to assess and manage the fund's ''liquidity risk''—defined as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.[855] As discussed above, we believe that this definition, modified from the proposal as informed by commenter input, is appropriate for all open-end funds, whether the fund redeems in cash or in kind and whether the fund is a mutual fund or an ETF.[856]

Illiquidity in an ETF's portfolio or its basket assets can adversely impact investors by imposing costs on market participants that could then potentially be reflected in a widening of the bid-ask spread of the ETF shares. This widening could result in shareholders transacting in an ETF's shares at market prices that do not maintain a ''close tie'' to the NAV per share of the ETF. As we have previously stated, a close tie between ETF share market prices and the ETF's NAV per share is important because section 22(d) and rule 22c–1 under the Act are designed to require that all fund shareholders be treated equitably.[857] In addition, declining liquidity in an ETF's portfolio also could affect a market maker's ability or willingness to make a market in the product because arbitrage opportunities would be more difficult to evaluate.[858] This, in turn, could affect the liquidity of the ETF shares, making it difficult for market participants to price, trade and hedge.

Under the final rule, ETFs will be required to assess, manage, and periodically review the fund's liquidity risk and needs, taking into account, as applicable, the liquidity risk factors for all funds (as modified from the proposal) discussed previously.[859] ETFs also must consider the following additional factors, as applicable, that are specific to the structure and operation of ETFs:

- The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants);[860] and
- The effect of the composition of baskets on the overall liquidity of the ETF's portfolio.

We considered, in establishing these factors, comments received on the Proposing Release and the 2015 ETP Request for Comment, as well as the unique structure and operation of ETFs. We discuss these factors in more detail below. As we noted with regard to other open-end funds, the list of liquidity risk assessment factors for ETFs is not meant to be exhaustive. Rather, an ETF generally should incorporate other considerations in assessing its liquidity risk that it considers appropriate.

ETF Trading—Arbitrage Function and Level of Activity of Market Participants

As discussed above, the ETF structure permits only authorized participants to purchase or redeem shares from an ETF and to transact in the ETF's shares at the NAV per share. The combination of the creation and redemption process with secondary market trading in ETF shares provides arbitrage opportunities that, if effective, keep the market price of the ETF's shares at or close to the NAV per share of the ETF.[861] If an ETF has a significant amount of illiquid securities in its portfolio, market participants may find it more difficult to evaluate opportunities and ultimately participate in the arbitrage process (because of challenges in pricing, trading, and hedging their exposure to the ETF). If the arbitrage function fails to operate efficiently, investors could buy and sell the ETF shares at prices that are not at or close to the NAV per share of the ETF, which may raise concerns relating to section 22(d) of and rule 22c–1 under the Act regarding whether all fund shareholders (authorized participants and retail investors) are being treated equitably.[862] We discussed in the Proposing Release how the effective functioning of this arbitrage mechanism has been pivotal to the operation of ETFs (and to the Commission's approval of exemptions that allow their operation) and how the liquidity of the ETF's portfolio positions is a factor that contributes to the effective functioning of this arbitrage mechanism.[863]

Commenters to the 2015 ETP Request for Comment also highlighted the importance of portfolio liquidity on the efficiency of the ETF arbitrage mechanism. During an extraordinary period of market volatility on August 24, 2015 (''the August 24th Market Events''), for example, many ETFs traded at prices materially different from the NAV of the funds' underlying

[855] *See* rule 22e–4(a)(11) (defining liquidity risk); rule 22e–4(b) (requiring each fund and in-kind ETF to adopt and implement a written liquidity risk management program).

[856] *See supra* section III.B.1 for a discussion of the definition of liquidity risk, including comments received and modifications made from the proposal.

[857] *See generally* H.R. REP. NO. 2639, 76th Cong., 3d Sess., 8 (1940). *See also* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission, H.R. Doc. No. 279, 76th Cong., 1st Sess., pt. 3, at 860–874 (1939); Spruce ETF Trust, *et al.,* Investment Company Act Release No. 31301 (Oct. 21, 2014) [79 FR 63964 (Oct. 27, 2014)] (notice of application) (to the extent that investors would have to exit at a price substantially below the NAV of the ETF, this would be ''contrary to the foundational principle underlying section 22(d) and rule 22c–1 under the Act that all shareholders be treated equitably when buying and selling their fund shares''); Precidian ETFs Trust, *et al.,* Investment Company Act Release No. 31300 (Oct. 21, 2014) [79 FR 63971 (Oct. 27, 2014)] (notice of application) (''A close tie between market price and NAV per share of the ETF is the foundation for why the prices at which retail investors buy and sell ETF shares are similar to the prices at which Authorized Participants are able to buy and redeem shares directly from the ETF at NAV. This close tie between prices paid by retail investors and Authorized Participants is important because section 22(d) and rule 22c–1 under the Act are designed to require that all fund shareholders be treated equitably when buying and selling their fund shares.'').

[858] *See supra* footnote 843 and accompanying text.

[859] *See supra* section III.B.2 (discussing the factors as proposed and how the factors have been amended in the final rule to address commenter concerns). We recognize that not all of these factors may be applicable to all ETFs (and that some mutual funds would not need to consider certain factors relevant only to ETFs).

[860] We note that this factor will not be applicable to ETMFs to the same extent it applies to ETFs. ETMF market makers will not engage in the same kind of arbitrage as ETF market makers and will assume no intraday market risk with their positions in ETMF shares as all trading prices are linked to NAV. *See* ETMF Notice, *supra* at note 31 at n.21 and accompanying text.

[861] We recognize that an ETF is not as likely as a mutual fund to sell or in-kind transfer its portfolio holdings in order to meet redemptions because an authorized participant generally will not seek to create or redeem a basket with the ETF until there is a sufficient deviation between the ETF shares' market price and the ETF's NAV. As discussed previously, ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because all trading prices of ETMF shares are linked to NAV. *See supra* footnote 836.

[862] *See supra* footnote 857.

[863] *See* Proposing Release, *supra* footnote 9, at nn.23–30 and accompanying text.

portfolio assets.[864] One commenter on the 2015 ETP Request for Comment, in observing the August 24th Market Events, noted that there are many reasons an ETF may trade at a substantial difference from the NAV of its underlying constituent stocks, including a lack of liquidity in the ETF constituents and a lack of liquidity in the ETF shares themselves.[865] Another commenter suggested that, where the market for an underlying asset is illiquid, no amount of arbitrage will be sufficient to equalize market discrepancies between underlying assets and the fund's price, especially during times of market stress.[866] In addition, the level of active participation by market participants, including market makers and authorized participants, in the trading of ETF shares is important to the way in which, and the prices and spreads at which, shares trade. As one commenter on the 2015 ETP Request for Comment noted, the more authorized participants that are active in the market, the more opportunities there are to trade and provide liquidity.[867] For these reasons, we are requiring that an ETF consider the relationship between the liquidity of its portfolio and the arbitrage function in assessing its liquidity risk (where applicable).

Basket Composition

In-Kind ETFs create and redeem using baskets of securities and other assets. These baskets may be highly correlated to the ETF's overall portfolio. As we noted in the Proposing Release, the composition of the basket can affect the liquidity of the ETF's portfolio.[868] For example, an ETF whose basket does not reflect a *pro rata* share of the fund's portfolio may alter the liquidity profile of the ETF's portfolio and may adversely affect the fund's future ability to meet cash redemptions or mitigate shareholder dilution.[869] We recognize that certain market incentives exist to mitigate the likelihood of significant or frequent divergence between an ETF's basket and the fund's portfolio. For example, if an ETF's basket is not correlated with the fund's portfolio, the ETF likely will develop a higher tracking error. Nonetheless, such divergence may occur, with potentially adverse consequences to the remaining shareholders in the fund. Accordingly, we are requiring an ETF to consider the effect of its basket composition on the fund's overall portfolio liquidity (even if an ETF's creation and redemption baskets reflect a *pro rata* share of the ETF's portfolio).[870]

A few commenters also suggested that increasing ETF basket flexibility and eliminating the two percent limitation on redemption fees for ETFs would help enhance ETF liquidity and the orderly and efficient operation of the arbitrage function.[871] We are not addressing these issues here because they are beyond the scope of this rulemaking.

Portfolio Liquidity Classification

Under the final rule, an open-end fund (other than an In-Kind ETF) will be required to classify each of the fund's portfolio investments (generally by asset class) into one of four categories: Highly liquid investments; moderately liquid investments; less liquid investments; and illiquid investments. A number of commenters noted, as the Commission recognized in the Proposing Release and as we reiterate above, that an open-end fund (including an open-end ETF) that redeems in cash has a different nature of liquidity risk than an ETF that redeems through in-kind transfers of securities, positions, and other assets.[872]

We note, for example, that when a mutual fund experiences daily net redemptions, the fund will likely be required to sell its portfolio holdings in order to generate cash to meet redemptions. To the extent that a fund must sell a less liquid security in order to generate the cash proceeds required, there is enhanced liquidity risk—that is, risk that a fund cannot meet redemptions without significant dilution of remaining investors. Therefore, we believe that it is appropriate for such a fund to assess its liquidity risk by analyzing the amount of time it will take, in current market conditions, to convert its portfolio assets (without the conversion (or in some cases, sale or disposition) significantly changing the market value of the investments).

As discussed above, an In-Kind ETF's liquidity risk is different from the liquidity risk of a fund that generally meets redemptions in cash. Rather than liquidity risk affecting investors directly in their ability to receive cash redemption proceeds, illiquidity in an ETF's portfolio or its basket assets can adversely impact investors by contributing to a widening of the bid-ask spread of the ETF shares. This widening could result in shareholders transacting in an ETF's shares at market prices that do not maintain a ''close tie'' to the NAV per share of the ETF. The declining liquidity in an ETF's portfolio also could affect the arbitrage function related to the ETF, as discussed above.

Despite our concern about the specific liquidity-related risks in ETFs described above, we view the liquidity classification information for In-Kind ETFs as less necessary for the Commission, investors, and other potential users of this information because, unlike for mutual funds, the daily identity and weightings of ETF portfolio holdings are well known to authorized participants and other ETF liquidity providers, and would be required to be disclosed daily under our final rules to qualify for the exemption from the classification requirement.[873]

[864] August 24 Staff Report, *supra* footnote 844, at 5 (discussing large ETFs that traded at ''substantial discounts'' to the ETFs' NAVs).

[865] *See* Comment Letter of Modern Markets Initiative on 2015 ETP Request for Comment (Sept. 14, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-39.pdf*.

[866] *See* Comment Letter of Occupy the SEC on 2015 ETP Request for Comment (Aug. 21, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-32.pdf*.

[867] *See* Comment Letter of Flow Traders Group on 2015 ETP Request for Comment (Aug. 17, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-25.pdf*.

[868] *See* Proposing Release, *supra* footnote 9, at nn.23–24, 156–157 and accompanying text.

[869] Under limited circumstances, an index ETF's redemption basket also may differ from the portfolio deposit made by the authorized participant.

[870] One commenter on the 2015 ETP Request for Comment, discussing the potential effects of basket composition on an ETF's overall liquidity, noted that an ETF whose basket reflects a *pro rata* share of the ETF's portfolio will have a larger number of securities in the basket, with the size of each individual position potentially being smaller. This commenter suggested that, as a result: (i) The smaller lots can be more difficult for an authorized participant to trade efficiently, thereby increasing the bid/ask spreads of the ETF; and (ii) the *pro rata* basket is more likely to include less liquid or even illiquid securities that an ETF not subject to the *pro rata* requirement can exclude. *See* Comment Letter of Charles Schwab & Co. on the on 2015 ETP Request for Comment (Aug. 17, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-28.pdf*.

[871] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Fidelity Comment Letter.

[872] *See, e.g.,* BlackRock Comment Letter; Proposing Release, *supra* footnote 9.

[873] *See* rule 22e–4(a)(9). *See also,* Precidian ETFs Trust, *et al.,* Investment Company Act Release No. 31300 (Oct. 21, 2014) [79 FR 63971 (Oct. 27, 2014)] (notice of application) (''The Commission therefore has granted such exemptive relief to date only to those actively managed ETFs that have provided daily transparency of their portfolio holdings.''). The identity and weightings of the constituents of affiliated indices are required by exemptive application condition to be made publicly available on a daily basis. *See, e.g.,* Columbia ETF Trust I, et. al., Investment Company Act Release No. 32134 (May 31, 2016) (order) (related application with conditions *available at: https://www.sec.gov/Archives/edgar/data/1233991/000119312516578039/d194333d40appa.htm*). The identity and weightings of the constituents of non-affiliated indexes are not required to be made publicly available on a daily basis. However, because: (1) These index compositions are generally broadly available to liquidity providers either publicly, by subscription or by license; and (2) index-based ETFs publish their purchase and redemption baskets daily, and those baskets generally are tracking baskets that represent either

Continued

Authorized participants are the only shareholders that are permitted to transact with the ETF at NAV, and these sophisticated broker-dealers are more likely to be able to readily discern the ETF's liquidity profile from this daily portfolio information.

We continue to believe that it is important that an In-Kind ETF maintain sufficient liquidity in its portfolio. Accordingly, the final rule requires that an In-Kind ETF, in assessing liquidity risk, take into account certain factors that are more tailored to the way in which such funds operate and the resulting liquidity risks. For example, those factors include considering the relationship between portfolio liquidity and the arbitrage function, as well as the effect of the composition of in-kind baskets on the overall liquidity of the fund's portfolio. However, given the more limited utility of this classification information for the reasons described above, and considering the burdens of tracking and reporting it to us, we do not believe that it is appropriate to require an In-Kind ETF to classify its portfolio investments into liquidity categories based on a ''days-to-cash'' framework and report that information to the Commission.[874]

Highly Liquid Investment Minimum

Under the final rule, an open-end fund (other than an In-Kind ETF) will be required to determine a percentage of the fund's net assets that it will invest in assets that are highly liquid investments. The fund will determine its highly liquid investment minimum using the first category in the liquidity classification requirement (*i.e.,* cash and assets convertible into cash within three business days). The fund also will be required to take certain actions when the fund's highly liquid investments fall below its minimum.[875]

In determining to adopt a highly liquid investment minimum for certain open-end funds, we considered comments received on proposed rule 22e–4, which would have required a ''three-day liquid asset minimum.''[876] Multiple commenters suggested that the concept of a three-day liquid asset minimum does not take into account the unique structural aspects of ETFs.[877] One commenter suggested that the concept of ''convertible into cash within three business days'' has little relevance to an ETF that does not liquidate securities to meet cash redemptions.[878]

Consistent with the comments received, we are not requiring that an In-Kind ETF adopt a highly liquid investment minimum. First, an open-end fund will be required to establish its highly liquid investment minimum using its ''highly liquid investment'' portfolio classification. As discussed earlier, we have determined that it is not necessary to require that an In-Kind ETF classify its portfolio liquidity (*e.g.,* into ''highly liquid investment,'' or ''moderately liquid investment''). The portfolio liquidity classifications incorporate a ''convertible to cash'' concept that is generally not relevant for an In-Kind ETF (except in managing cash holdings to no greater than a *de minimis* amount of cash). Because the highly liquid investment minimum incorporates the same ''convertible to cash'' concept as the portfolio liquidity classifications (which, for the reasons discussed above, we are not requiring for In-Kind ETFs), we do not believe it is appropriate to require that an In-Kind ETF establish a highly liquid investment minimum.

Second, the highly liquid investment minimum, as discussed above, is intended to increase the likelihood that an open-end fund meets redemption requests without significant dilution of remaining investors. Open-end funds that redeem in cash and In-Kind ETFs operate differently, and therefore evaluate liquidity risk differently. We believe, for example, that it is necessary for an open-end fund that meets redemptions in cash (including an ETF) to manage its liquidity risk by establishing a minimum amount of highly liquid investments that, as defined in the final rule, are quickly convertible to cash (within 3 business days). In this way, the highly liquid investment minimum increases the likelihood that the fund will be able to meet redemption requests in cash without significant dilution of remaining investors. Conversely, we believe, for example, that it is more appropriate for an In-Kind ETF that meets redemptions through in-kind transfers of securities, positions, and other assets (and no more than a *de minimis* amount of cash) to, among other things, assess its liquidity risk through consideration of the factors we have discussed above (*e.g.,* assessing the relationship between portfolio liquidity and the arbitrage function). For these reasons, we are excluding In-Kind ETFs from the highly liquid investment minimum requirement in rule 22e4.

We discussed above the requirement that funds (including ETFs) other than In-Kind ETFs establish a highly liquid investment minimum.[879] One commenter noted that the three-day liquid asset minimum might increase tracking error, or force an ETF to either violate the terms of its exemptive order,[880] or refuse in-kind purchase requests from authorized participants, thus interfering with the arbitrage mechanism that keeps ETF market prices close to their underlying NAV.[881] An ETF that does not qualify as an In-Kind ETF necessarily meets redemptions through more than a *de minimis* amount of cash. For the reasons discussed above, we believe that it is appropriate to require a fund that meets redemptions, at least partially in cash, to comply with the liquidity classification and highly liquid investment minimum requirements.[882] With regard to tracking error, an ETF with an index-based strategy, like other open-end funds, needs to balance its implementation of its investment strategy with the need for appropriate liquidity risk management given its obligation to meet redemptions without significant dilution. We recognize that this balancing may result in tracking error, and such a fund may wish to address and manage this risk through appropriately designed policies and procedures. This concern, along with the concerns regarding potentially violating an exemptive order, or

a *pro rata* replication of the index or a sampling of the index, authorized participants and other ETF liquidity providers should nonetheless be able to determine the liquidity profile of a non-affiliated, index-based ETF on a daily basis. Unlike ETFs, ETMF are only required to provide the same disclosure about the identity and weightings of their portfolio holdings as mutual funds.

[874] In the Proposing Release, we proposed to apply the portfolio liquidity classification requirement to open-end ETFs (in addition to other open-end funds), in part, because, ETFs permit authorized participants to redeem in cash (even if these funds typically redeem in kind). *See* Proposing Release, *supra* footnote 9, at n. 129 and accompanying text. Accordingly, we determined that it was appropriate to require that all ETFs classify their portfolio liquidity by assessing the fund's ability to convert portfolio positions into cash. The final rule, however, establishes a more tailored regulatory regime for In-Kind ETFs, that, by definition, do not meet redemptions through more than a *de minimis* amount of cash. Thus, under the final rule, we do not believe it is necessary to require that In-Kind ETFs be subject to the portfolio liquidity classification requirement (which is based on a ''days-to-cash'' or ''days-to-sell'' framework).

[875] *See supra* section III.D; rule 22e–4(b)(1)(iii).

[876] *See supra* section III.D.

[877] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; BlackRock Comment Letter; SIFMA Comment Letter I.

[878] *See* BlackRock Comment Letter.

[879] *See supra* section III.D.

[880] *See* ICI Comment Letter I (noting that if an ETF was prohibited from accepting a less liquid asset, the ETF may violate a requirement that that all creation baskets correspond *pro rata* to the ETF's portfolio positions).

[881] *Id.*

[882] An ETF that does not qualify as an In-Kind ETF would not be required to determine and periodically review a highly liquid investment minimum if it holds primarily highly liquid investments. *See supra* section III.D.

refusing an in-kind purchase request from an authorized participant, are also mitigated by the additional flexibility provided for in the final rule. Under the final rule (as compared with the proposal), a fund that breaches its highly liquid investment minimum will be subject to certain board reporting requirements, but will not be barred from purchasing non-conforming assets (as would have been required as proposed).[883] Under the final rule, therefore, a fund will have flexibility to address potentially adverse situations, including tracking error, that may arise as a result of complying with the highly liquid investment minimum.

K. Limitation on Unit Investment Trusts' Investments in Illiquid Investments

As noted above, the proposed scope of rule 22e4 did not include UITs, although we requested comment on whether UITs should be included within its scope, and whether we should include specific limitations on UIT's holdings of illiquid assets at inception.[884] As adopted today, UITs remain excluded from the rule's liquidity risk management program requirements. However, as suggested by some commenters, we are now requiring a limited liquidity review for UITs. Under the final rules, the UIT's principal underwriter or depositor must determine, on or before the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[885]

As discussed in detail in the Proposing Release, most UITs serve as separate account vehicles used to fund variable annuity and variable life insurance contracts,[886] and these UITs essentially function as pass-through vehicles, investing principally in securities of one or more open-end investment companies that would be subject to rule 22e–4.[887] Also, UITs are not actively managed, and thus certain provisions of rule 22e–4 that require a fund's board to approve and oversee the fund's liquidity risk management program and the fund's adviser, officer, or officers to administer it are inapposite to the management structure of a UIT.[888]

Several commenters argued (in the context of ETFs organized as UITs) that UITs may be subject to liquidity risk comparable to other funds.[889] As discussed previously, in recognition of the different unmanaged organizational structure of UITs, we continue to believe that including UITs within the scope of rule 22e–4's liquidity risk management program requirements (or even the tailored program requirements for ETFs that redeem in kind) would not be feasible. However, we recognize that UITs may in some circumstances be subject to liquidity risk (particularly where the UIT is not a pass-through vehicle and the sponsor does not maintain an active secondary market for UIT shares) as investor redemption requests may lead to dissipation of UIT assets, forcing a UIT to sell securities that it holds to meet redemptions.

Accordingly, today we are adopting a limited liquidity review requirement for UITs to require that a UIT's principal underwriter or depositor determine upon initial deposit of a registered UIT that the level of illiquid investments it will hold is consistent with the redeemable nature of the securities it issues.[890] Though commenters focused their discussion on UITs that are ETFs, we believe it is appropriate for the principal underwriter or depositor of any registered UIT to conduct the initial liquidity assessment described above on or before the date of the initial deposit of securities into the UIT. The securities that the UIT is expected to hold should be examined so that they are consistent with the ability of a UIT to issue redeemable securities, much as an open-end fund will be required to evaluate whether its investment strategy and the securities it holds is appropriate for an open-end fund under the final liquidity risk management program.[891] Though UITs are not actively managed and do not have a board of directors, corporate officers, or an investment adviser to render advice during the life of the trust, making active liquidity risk management inapposite to the management structure of a UIT, we believe that this requirement of a tailored, one-time, initial liquidity risk management requirement for UITs is in line with the unmanaged structure of a UIT and its liquidity risk.[892]

We expect that this initial review requirement would in many respects be similar to the process for determining whether a fund's holding of illiquid investments is consistent with rule 22e–4's 15% limitation on illiquid investments, taking into account the unique structure and purpose of UITs. If a UIT were to hold or planned to hold more than 15% of its investments in illiquid investments at the time of initial deposit, such a level of illiquid investments is unlikely to be consistent with the nature of the redeemable securities it issues. Thus, if a UIT planned to hold significant amounts of illiquid securities (in excess of 15%), its principal underwriter or depositor would be unlikely to be able to make the determination that its investment's liquidity is consistent with its issuance of redeemable securities.

Due to the unmanaged structure of UITs and the fixed nature of their portfolios, it would be inconsistent with their structure and portfolios to require UITs to re-evaluate the securities they hold based on their liquidity characteristics and change their investments accordingly over time. Therefore, the requirement only applies at the time of the UIT's creation. Although this is a one-time determination at the time of the UIT's initial deposit, it should take into

[883] *See supra* section III.D.

[884] *See supra* section III.A.2.d; Proposing Release, *supra* footnote 9 at section III.A.3 and comment requests following n 156 (''alternatively, should we require UITs to meet certain minimum liquidity requirements at the time of deposit of the securities . . .'').

[885] *See* rule 22e–4(c). The rule also requires UITs to maintain a record of that determination for the life of the UIT and for five years thereafter. *See also* Rule 144A Release *supra* footnote 37 at n.61 (discussing liquidity requirements for UITs prior to the adoption of rule 22e–4).

[886] *See* Proposing Release, *supra* footnote 9, at n.139 and accompanying text. We currently estimate that approximately 92.9% of UITs serve as separate account vehicles (based on data as of December 31, 2015).

[887] *See id.,* at nn.139–140 and accompanying text.

[888] *See id.,* at nn.141–143 and accompanying text.

[889] *See* Anonymous Comment Letter I; BlackRock Comment Letter. One of these commenters also observed that, while there are few ETFs that are UITs, some of the largest ETFs in the world (by volume/value traded) are UIT ETFs, and thus any liquidity risks faced by these UIT ETFs could lead to significant adverse market consequences. The commenter also expressed concern that excluding UIT ETFs from the scope of rule 22e–4 may prompt more ETF sponsors to structure ETFs as UITs rather than open-end funds to avoid being subject to the liquidity risk management program requirement. *See* Anonymous Comment Letter I. We recognize the risks of excluding UIT's from 22e–4, and thus are adopting the liquidity review requirement discussed in this section, as a tailored approach that fits the unique unmanaged structure of UITs, including ETFs that are structured as UITs. (ETMFs are not structured as UITs because, as they are structured today, they are actively managed and thus cannot operate as UITs.)

[890] *See supra* footnote 885 and accompanying text.

[891] As noted above, all UITs are subject to the requirements of section 22(e) and therefore must meet redemptions within seven days. *See also* section 4(2).

[892] With regard to UITs structured as ETFs in particular, we agree with commenters' concerns that UIT ETFs' liquidity risks may be comparable to those faced by other ETFs and that the relatively large size of certain UIT ETFs could lead to significant market consequences if these UIT ETFs were to encounter liquidity issues. However, because UIT ETFs are unmanaged and must fully replicate their underlying indices, we believe that a one-time determination regarding liquidity concerns at the commencement of the offering of a registered UIT is the appropriate manner to mitigate such concerns.

account the planned structure of the UIT's holdings. In particular, if the UIT tracks an index, the determination should consider the index design and whether the index design is likely to lead to the UIT holding an amount of illiquid assets that is inconsistent with the redeemable nature of the securities it issues.

As discussed above, because of the unmanaged nature of an UIT, we recognize that depending on its particular circumstances, after initial deposit, an UIT might potentially hold a higher level of illiquid investments due to redemptions or changes in the liquidity of the investments it holds. Nonetheless, we expect that the requirement for the depositor or principal underwriter to determine that the liquidity of the investments the UIT holds is consistent with the nature of the redeemable securities it issues at the time of initial deposit should help enhance UIT liquidity.

L. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

Receiving relevant information about the operations of a fund and its principal investment risks is important to investors in choosing the appropriate fund for their risk tolerances. Investors in open-end funds generally expect funds to pay redemption proceeds promptly following their redemption requests based, in part, on representations made by funds in their disclosure documents. Currently, funds are not expressly required to disclose how they manage the liquidity of their investments, and limited information is available regarding fund liquidity and whether the liquidity of a fund's portfolio securities corresponds with its anticipated liquidity needs.

We are adopting, substantially as proposed with some modifications in response to comment, amendments to Form N–1A that will require a fund to further describe its procedures for redeeming the fund's shares including the number of days following receipt of shareholder redemption requests in which the fund typically expects to pay redemption proceeds to redeeming shareholders and the methods the fund typically uses to meet redemption requests, including whether those methods are used regularly or only in stressed market conditions.[893] We also are adopting an amendment to General Instruction A of Form N–1A to conform the definition of ''exchange-traded fund'' to the definition of ETF adopted today in connection with rule 22e–4 and the adoption of Form N–CEN in the Investment Company Reporting Modernization Adopting Release.[894]

In addition, we are adopting new Form N–LIQUID to incorporate information that would have previously been reported on Form N–PORT under the proposal concerning a fund's investments in illiquid investments, but with some modifications in response to comments. Under this new reporting form, a fund is required to notify the Commission when more than 15% of the fund's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4 and report information about the investments affected.[895] A fund also is required to report on Form N–LIQUID if the fund's illiquid investments that are assets previously exceeded 15% of net assets and the fund determines that its illiquid investments that are assets have changed to be less than or equal to 15% of net assets.[896] In addition, under the new form, a fund is required to notify the Commission if the fund's holdings in highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days.[897] Information reported on Form N–LIQUID will be non-public.

We are adopting, as proposed, the requirement that a fund report on Form N–CEN information regarding the use of lines of credit, interfund lending, and interfund borrowing.[898] In addition, we are adopting a new requirement that a fund report on Form N–CEN whether the fund is an ''In-Kind Exchange-Traded Fund'' as defined in rule 22e–4.[899]

Many commenters expressed general support for enhanced disclosures regarding fund liquidity risk management practices.[900] Some commenters noted that understanding the liquidity dynamics of an investment strategy employed by a fund would be beneficial to investors[901] and that enhanced information could assist the Commission in its role as the primary regulator of investment companies and help investors make more informed investing decisions by providing more transparency into fund investment practices.[902] Other commenters expressed concerns with specific disclosure and reporting requirements outlined in the proposal, which are discussed in detail below.

1. Amendments to Form N–1A

Form N–1A is used by open-end funds, including money market funds and ETFs, to register under the Investment Company Act and to register offerings of their securities under the Securities Act. We are adopting, substantially as proposed, amendments to Form N–1A that will require a fund to further describe its procedures for redeeming the fund's shares including the number of days following receipt of shareholder redemption requests in which the fund typically expects to pay redemption proceeds to redeeming shareholders.[903] A fund also will be required to describe the methods the fund typically expects to use to meet redemption requests in stressed and non-stressed market conditions.[904] Funds will not be required, however, to file as exhibits to their registration statements credit agreements as we proposed. We note that these amendments will apply to all open-end funds, including money market funds and ETFs.[905]

In addition, we are adopting an amendment to General Instruction A of Form N–1A to conform the definition of ''exchange-traded fund,'' which currently defines an ETF to mean, in part, a fund or class, ''the shares of which are *traded* on a national securities exchange'' to the definition of ETF adopted today in connection with rule /–4 and the adoption of Form N–PORT and Form N–CEN in the Investment Company Reporting Modernization Adopting Release, which both define an ETF, in part, to mean a fund or class, ''the shares of which are *listed and traded* on a national securities exchange.'' [906]

[893] *See* Items 11(c)(7) and (c)(8) of Form N–1A.

[894] *See infra* footnote 906.

[895] *See* Part A and Part B of Form N–LIQUID.

[896] *See* Part C of Form N–LIQUID.

[897] *See* Part D of Form N–LIQUID.

[898] *See* Item C.20 of Form N–CEN. In the Proposing Release, we also proposed to add to Form N–CEN a requirement for funds to report whether the fund required that an authorized participant post collateral to the fund or any of its designated service providers in connection with the purchase or redemption of fund shares during the reporting period. *See* Proposing Release, *supra* footnote 9, at section III.G.3.a. We are adopting this requirement in the Investment Company Reporting Modernization Adopting Release. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[899] Item E.5 of Form N–CEN.

[900] *See, e.g.,* BlackRock Comment Letter; J.P. Morgan Comment Letter; LPL Comment Letter (supporting increased disclosure about liquidity); SIFMA Comment Letter I (expressing general support for the proposed amendments to Form N–1A and proposed Form N–CEN).

[901] *See* BlackRock Comment Letter.

[902] *See* Charles Schwab Comment Letter.

[903] *See* Item 11(c)(7) of Form N–1A.

[904] *See* Item 11(c)(8) of Form N–1A.

[905] *See supra* footnote 4; *see also infra* section V.H.; and Proposing Release, *supra* footnote 9, at section V.G.

[906] *See* General Instructions A of Form N–1A (emphasis added) and General Instruction E of Form N–CEN. *See also* Investment Company

Many commenters generally supported enhancing prospectus disclosure requirements,[907] noting, for example, that enhanced disclosures will improve shareholder and market participant knowledge regarding fund redemption procedures and liquidity risk management.[908] Several commenters expressed concerns with the proposed requirements to disclose the number of days or the methods in which a fund will pay redemption proceeds[909] and include lines of credit agreements as exhibits to the fund registration statement.[910] We discuss the comments received in response to the proposal, as well as the amendments to Form N–1A and modifications to the proposal, in more detail below.

a. Timing of the Redemption of Fund Shares

Form N–1A requires funds to describe their procedures for redeeming fund shares.[911] Disclosure regarding other important redemption information, such as the timing of payment of redemption proceeds to fund shareholders, varies across funds as today there are no specific requirements for this disclosure under the form. Some funds disclose that they will redeem shares at a price based on the next calculation of net asset value after the order is placed but may delay payment for up to seven days (consistent with section 22(e) of the Act), and others provide no specific time periods for the payment. Some funds disclose differences in the timing of payment of redemption proceeds based on the distribution channel or payment method through which the fund shares are redeemed, while others do not.

We proposed amendments to Item 11 of Form N–1A that would require a fund to disclose the number of days in which the fund would pay redemption proceeds to redeeming shareholders.[912] Under the proposal, if the number of days in which the fund would pay redemption proceeds differed by distribution channel, the fund also would be required to disclose the number of days for each distribution channel.[913] We also proposed amendments to Item 11 that would require a fund to disclose the methods that the fund uses to meet redemption requests.[914] Under the proposal, funds would have been required to disclose whether they use the methods regularly to meet redemptions or only in stressed market conditions.

Some commenters expressed general support for these new disclosure requirements under the proposal, stating that this information will improve shareholder and market participant knowledge regarding fund redemption procedures and liquidity risk management[915] and provide meaningful information about the general time taken to meet redemptions and the fund's approaches to liquidity risk management.[916]

Some commenters also expressed concerns with the proposed requirement that funds disclose the number of days in which a fund will pay redemption proceeds for each distribution channel, stating that the disclosure could present undue complexity to the prospectus and may lead to shareholder confusion.[917] In addition, commenters argued that a fund does not always have a direct contractual relationship with the ultimate beneficial owners of its shares, as there are often multiple intermediaries between the mutual fund and its shareholder, and that a fund is not in the best position to disclose to its shareholders a precise timeframe in which an intermediary will transmit the proceeds of a shareholder's redemption.[918]

We understand that in most cases, the distribution channel through which a shareholder transacts in fund shares is unlikely to have a material effect on the timing of the payment of redemption proceeds, but instead that the choice of *method* of payment of redemption proceeds will have the most significant effect on when an investor receives proceeds. For example, we understand that the industry's central fund transaction processing utility (the NSCC), typically debits or credits the cash accounts of users of the utility (such as funds or their transfer agents on one side of the transaction, and intermediaries on behalf of beneficial owners, on the other side of the transaction) regarding net purchase or redemption activities in shares of a fund on T+1 (and to a lesser extent with respect to certain funds on T+3). Such intermediary users of the utility would in turn update their account records, including the beneficial owner's activity, on that date regardless of the type of book entry securities, account structure, or intermediary that the beneficial owner holds through. However, if the beneficial owner wishes to receive remittance of redemption proceeds via check (for example, instead of reinvesting them in another investment), it may take a certain number of days for the intermediary (or fund, as applicable) to process and mail the check to the customer. Accordingly, in a change from the proposal, the final form amendments do not require disclosure on timing of redemption proceeds based on distribution channel, but instead only require a fund to disclose typical expected payout times based on the payment method chosen

Reporting Modernization Adopting Release, *supra* footnote 120. For purposes of reporting on proposed Form N–CEN, we proposed to define (i) ''exchange-traded fund'' as an open-end management investment company (or series or class thereof) or UIT, the shares of which are listed and traded on a national securities exchange at market prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission and (ii) ''exchange-traded managed fund'' as an open-end management investment company (or series or class thereof) or UIT, the shares of which are listed and traded on a national securities exchange at NAV-based prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission. *See* Investment Company Reporting Modernization, Investment Company Act Release No. 31610 (May 20, 2015) [80 FR 33590 (June 12, 2015)] (''Investment Company Reporting Modernization Proposing Release''), at n.446 and accompanying text. In the Investment Company Reporting Modernization Proposing Release, we requested comment on whether the definitions of the type of funds listed in proposed Form N–CEN were appropriate and if any different definitions should be used. We did not receive any comments on the proposed definitions of ETF and ETMF in proposed Form N–CEN, and are adopting the definitions of ETF and ETMF, as proposed. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[907] *See, e.g.,* CFA Comment Letter; LPL Comment Letter; Charles Schwab Comment Letter; Vanguard Comment Letter.

[908] *See* J.P. Morgan Comment Letter.

[909] *See, e.g.,* Fidelity Comment Letter; Federated Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[910] *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[911] *See* Item 11(c) of Form N–1A, which requires a fund to describe procedures for redeeming fund shares, including (1) any restrictions on redemptions; (2) any redemption charges; (3) if the fund has reserved the right to redeem in kind; (4) any procedure that a shareholder can use to sell fund shares to the fund or its underwriter through a broker-dealer (noting any charges that may be imposed for such service); (5) the circumstances under which the fund may redeem shares automatically without action by the shareholder in accounts below a certain number or value of shares; (6) the circumstances under which the fund may delay honoring a request for redemption for a certain time after a shareholder's investment; and (7) any restrictions on, or costs associated with, transferring shares held in street name accounts.

[912] *See* proposed Item 11(c)(7) of Form N–1A; *see also* Proposing Release, *supra* footnote 9, section III.G.1.

[913] *Id.*

[914] *See* proposed Item 11(c)(8) of Form N–1A.

[915] *See* J.P. Morgan Comment Letter.

[916] *See* ICI Comment Letter I.

[917] *See, e.g.,* Fidelity Comment Letter. *See also e.g.,* Federated Comment Letter (stating that distribution channel level disclosure is unnecessary and could present undue complexity in prospectus if there are minor deviations).

[918] *See* Fidelity Comment Letter.

by the investor (*e.g.,* check, wire, automated clearing house).[919]

Thus, under the final amendments, if the number of days a fund expects to pay redemption proceeds differs by method of payment (*e.g.,* check, wire, automated clearing house), then the fund is required to disclose the typical number of days *or estimated range of days* that the fund expects it will take to pay out redemption proceeds for each method used.[920] This requirement focuses on disclosing when the fund expects to *make the payment,* not when the shareholder should expect to *receive* the proceeds, because receipt of proceeds is unlikely to be in the fund's control (for example, a fund cannot predict how long a mailed check will take to arrive). We believe narrowing the disclosure requirement to the effects of payment methods rather than the effects of all types of distribution channels addresses comments. We also believe that this modification will increase the quality of information provided to fund shareholders about the timing of their redemption proceeds and, at the same time, reduce the likelihood that disclosures regarding such timing will be overly granular and complex for investors and overly burdensome for registrants.[921]

Other commenters expressed concerns about specific aspects of the proposed disclosure amendments. For example, some commenters stated that requiring funds to disclose the number of days in which the fund will pay redemption proceeds to redeeming shareholders would pressure funds to disclose shorter redemption payment periods, thereby limiting funds from exercising discretion in stressed markets.[922] Other commenters opposed a requirement to disclose the number of days or methods used to pay redemption proceeds,[923] arguing, for example, that the disclosure requirement would inappropriately limit the flexibility of a fund to meet redemptions to timing and methods previously disclosed in its prospectus [924] or would cause generic disclosures because of the variety of methods available to funds to meet redemptions.[925] One commenter recommended that the Commission narrow the scope of the amendments to only the ''typical'' number of days, methods, and funding sources used for meeting redemption requests.[926]

In consideration of these comments, and in a modification to the proposal, we are adopting amendments to Item 11 of Form N–1A to require a fund to disclose the number of days following receipt of shareholder redemption requests in which the fund *typically expects* to pay redemption proceeds to redeeming shareholders,[927] rather than the number of days in which the fund will pay redemption proceeds as proposed. Funds may wish to consider also disclosing whether payment of redemption proceeds may take longer than the number of days that the fund typically expects and may take up to seven days as provided in the Investment Company Act.

We appreciate commenters' concerns, and believe that this adjustment to the language in Form N–1A will give funds flexibility to provide disclosures about redemption procedures that do not inappropriately limit a fund's ability to meet redemptions to the exact timing previously disclosed in its prospectus. We continue to believe that requiring this disclosure will inform the public about a critical aspect of a shareholder's relationship with a fund—when the shareholder can expect redemption proceeds. Funds generally should disclose timing that reflects their actual operational procedures for meeting redemption rather than generic disclosures about fund redemptions, regardless of what other funds in the industry may disclose. We continue to believe that it is in the public interest to inform investors on the timing of when fund shareholders should expect redemption proceeds. We believe that this disclosure requirement will also enhance consistency in fund disclosures regarding the timing in which a fund will pay redemption proceeds, thereby improving the information provided to shareholders and the ability of investors to compare redemption procedures across funds.

b. Methods Used To Meet Shareholder Redemption Obligations

As noted above, some commenters opposed a requirement to disclose the methods used (and number of days) to pay redemption proceeds, arguing, for example, that the disclosure requirement would inappropriately limit the flexibility of a fund to meet redemptions to timing and methods previously disclosed in its prospectus or would cause generic disclosures because of the variety of methods available to funds to meet redemptions.[928] Some commenters generally opposed requirements for funds to disclose the methods used to meet redemption requests, stating, for example, that it does not serve a purpose for investors to know precisely how the fund meets their redemption requests—so long as they receive their redemption proceeds within the period prescribed by regulation.[929] As noted above, one commenter suggested that we narrow the scope of the disclosure requirement to only the ''typical'' methods funds use for meeting redemption requests.[930]

In light of these comments, in a modification to the proposal, we are adopting amendments to Item 11 of Form N–1A to require a fund to disclose the methods that the fund *typically expects* to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions.[931] We believe requiring that the description of the procedures for redeeming fund shares include a description of the methods a fund typically expects to use to meet redemption requests will improve disclosure about another critical aspect of a shareholder's relationship with a fund—how a shareholder can expect to receive redemption proceeds. We appreciate the concerns expressed by commenters and believe that the modified language in the form provides some needed flexibility for funds while at the same time providing investors with improved information concerning redemption procedures. Furthermore, this disclosure requirement will increase consistency in fund disclosure documents regarding fund redemption practices and improve the comparability of such information across funds. Absent this amendment, disclosures concerning the methods funds use to pay redemption proceeds will continue to vary across funds.

We believe that requiring specific disclosure on the methods a fund uses to pay redemption proceeds could improve investor knowledge on how a fund manages liquidity and its redemption obligations to shareholders. At the foundation of the prospectus

[919] *See* Item 11(c)(7) of Form N–1A.

[920] *See id.* (emphasis added).

[921] *See* Proposing Release, *supra* footnote 9, section III.G.1.a.

[922] *See* FSR Comment Letter; NYC Bar Comment Letter.

[923] *See, e.g.,* Fidelity Comment Letter; Federated Comment Letter; Invesco Comment Letter; Vanguard Comment Letter.

[924] *See, e.g.,* Invesco Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[925] *See* Federated Comment Letter.

[926] *See* ICI Comment Letter I.

[927] *See* Item 11(c)(7) of Form N–1A (emphasis added).

[928] *See, e.g.,* Federated Comment Letter; Invesco Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[929] *See* Invesco Comment Letter.

[930] *See* ICI Comment Letter I; *see also* footnote 926 and accompanying text.

[931] *See* Item 11(c)(8) of Form N–1A (emphasis added).

disclosure framework is the provision to all investors of user-friendly information that is key to an investment decision.[932] Additionally, given the increase in open-end funds pursuing alternative and fixed income strategies with varied liquidity risks,[933] the sources of liquidity and methods used to meet shareholder redemptions are key information that investors need.

Methods to meet redemption obligations may include, for example, sales of portfolio assets, holdings of cash or cash equivalents, the use of lines of credit and/or interfund lending, and in-kind redemptions.[934] Funds may also use redemption fees to help mitigate dilution and address transaction costs associated with shareholder activity. We also believe that requiring this disclosure could encourage funds to consider their operations and ensure that the methods they may use to meet shareholder redemption obligations in normal and reasonably foreseeable stressed markets are viable.

As noted above, Form N–1A requires funds to disclose whether they reserve the right to redeem their shares in kind instead of in cash and to describe the procedures for such redemptions.[935] As proposed, we are amending Form N–1A to incorporate this disclosure requirement into Item 11(c)(8) discussed above. We understand that the use of in-kind redemptions (outside of the ETF context) historically has been rare and that many funds reserve the right to redeem in kind only as a tool to manage liquidity risk under emergency circumstances or to manage the redemption activity of a fund's large institutional investors.[936] We also are aware that there are often logistical issues associated with redemptions in kind and that these issues can limit the availability of in-kind redemptions as a practical matter. A fund should consider whether adding relevant detail to its disclosure regarding in-kind redemptions, including, for example, whether redemptions in kind will be pro-rata slices of the fund's portfolio or individual securities or a representative basket of securities, or revising its disclosure if the fund would be practically limited in its ability to redeem its shares in kind, would provide more accurate information to investors.

One commenter expressed concerns that the proposed additional disclosure requirements in Form N–1A runs against the Commission's goal of clear and concise, user-friendly disclosures.[937] We believe that the amendments adopted today in this Release, including specific modifications in response to commenters, respond appropriately to this commenter's concern and are designed to provide disclosures to investors with key information in a clear, concise, and understandable manner. We believe that investors in an open-end fund should have information on how the fund expects to meet redemptions and in what time period they expect to pay redemption proceeds.

c. Credit Agreements Exhibit

We also proposed to amend Item 28 of Form N–1A to require a fund to file as an exhibit to its registration statement any agreements related to lines of credit for the benefit of the fund to increase Commission, investor, and market participant knowledge concerning the arrangements funds have made in order to strengthen their ability to meet shareholder redemption requests and manage liquidity risk and the terms of those arrangements.[938] In light of concerns expressed by commenters, we are not adopting amendments to Form N–1A to require the filing of credit agreements as exhibits to a fund's registration agreement.

Many commenters objected to the credit agreements exhibit requirement,[939] with some arguing, for example, that credit agreements are often extremely lengthy documents that are not user-friendly,[940] the disclosure of which would be unnecessary in light of the lines of credit reporting requirements in Form N–CEN as well as information concerning lines of credit disclosed in a fund's statement of additional information and financial statements.[941] Other commenters expressed concern that public disclosure of line of credit agreements in a fund's registration statement could ultimately harm fund shareholders, noting that public disclosure could (1) disrupt and weaken a fund's ability to negotiate credit terms; [942] (2) make public proprietary and competitive information (*e.g.,* certain representations and warranties) that lenders and funds may wish to keep confidential and are not easily redacted; [943] and (3) ultimately discourage lending banks from granting lending terms to funds out of a concern that terms granted would become standard in other lending agreements.[944]

Rather than include line of credit agreements as exhibits, other commenters suggested including a narrative discussion of lines of credit information, similar to the data required to be disclosed in Form N–CEN, in a fund's statement of additional information.[945] Some commenters did not oppose requiring the filing of line of credit agreements as an exhibit to a fund's registration statement if, in addition to redacting fees as proposed, certain other portions of the agreement were permitted to be redacted.[946]

We find the concerns expressed by commenters persuasive and have determined to not adopt this amendment to Form N–1A. We acknowledge that credit agreements can be lengthy, complex documents that may be of limited value to retail investors and that the information provided in the proposed exhibits could be, in part, duplicative of information provided in a fund's statement of additional information and financial statements. We believe that requiring funds to report the use of lines of credit in response to reporting requirements in Form N–CEN is an appropriate means to increase Commission, investor, and market participant knowledge concerning the arrangements funds have made in order to strengthen their ability to meet shareholder redemption

[932] *See* Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies, Investment Company Act Release No. 28584 (Jan. 13, 2009) [74 FR 4546 (Jan. 26, 2009)] (''N–1A Release''), at section I.

[933] *See supra* section II.C.1.

[934] *See supra* footnote 686 and accompanying text.

[935] *See* Item 11(c)(3) of Form N–1A.

[936] *See supra* section III.J. We note that funds also have the ability to redeem in kind, subject to the limitations under rule 18f–1 under the Act for funds that have made an election under the rule. An 18f–1 election commits a fund to pay in cash all requests for redemption by any shareholder of record, limited in amount with respect to each shareholder during any 90-day period to the lesser of $250,000 or 1% of the fund's net asset value at the beginning of the period.

[937] *See* Federated Comment Letter.

[938] *See* Proposing Release, *supra* footnote 9, at section III.G.1 (where we also proposed to include an instruction related to credit agreements noting that the specific fees paid in connection with the credit agreements need not be disclosed in the exhibit filed with the Commission to preserve the confidentiality of this information).

[939] *See, e.g.,* Fidelity Comment Letter; CRMC Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

[940] *See* CRMC Comment Letter; T. Rowe Comment Letter.

[941] *See, e.g.,* Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[942] *See* Oppenheimer Comment Letter; Fidelity Comment Letter.

[943] *See* CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

[944] *See* Fidelity Comment Letter.

[945] *See* ICI Comment Letter I; CRMC Comment Letter.

[946] *See* FSR Comment Letter (requesting redaction of the identity of the counterparty); Federated Comment Letter (requesting redaction of the rate payable by the fund on any drawdowns).

requests and manage liquidity risk and the terms of those arrangements.

d. Additional Disclosure Requirements

Some commenters recommended that the Commission require additional disclosures in a fund's registration statement about a fund's specific liquidity risk management policies and procedures [947] and the market impact costs associated with redemption activity.[948] For example, one commenter recommended requiring a fund to disclose a narrative of its liquidity risk management program in its statement of additional information as well as a statement in the fund prospectus about the liquidity risk appetite of each fund.[949] Another commenter expressed support for the Commission requiring funds to include a discussion of their liquidity risk management policies and procedures, similar to what is currently required on Form N–1A for policies and procedures regarding proxy voting (Items 17 and 27) and valuation procedures (Item 23), among others.[950] In addition, one commenter recommended that we consider requiring a fund to also disclose the level of ''position concentration'' that is appropriate for the fund in terms of portfolio liquidity in light of the fund's investment strategy and investor profile.[951] While another commenter recommended that, at a minimum, funds be required to provide disclosures noting the possibility of suspending redemptions and how the fund will handle redemption requests in that situation.[952]

We support commenters' goals of providing useful information about a fund's liquidity risk management practices to investors but also remain committed to encouraging statutory prospectuses that are simple, clear, and useful to investors [953] and registration statements that provide useful information, rather than boilerplate legal representations. In the interest of balancing these two goals, we are adopting the proposed amendments to Form N–1A substantially as proposed without including these specific additional disclosure requirements suggested by commenters in the text of the form. We note, however, that nothing in Form N–1A prohibits disclosures about the features of a fund's liquidity risk management program where relevant to understanding disclosures under existing reporting requirements.

2. New Form N–LIQUID

We are also adopting a new requirement that open-end investment companies, including In-Kind ETFs to the extent applicable [954] but not including money market funds (*i.e.,* registrants), file on a non-public basis a current report to the Commission on new Form N–LIQUID when certain significant events related to a fund's liquidity occur.[955] This requirement will be implemented through our adoption of new rule 30b1–10, which requires funds to file a report on new Form N–LIQUID in certain circumstances. The content of this report is similar to the information that we proposed to be reported on Form N–PORT under the proposal concerning a fund's investments in illiquid assets, but with some modifications in response to comments. A report on Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of one or more of the events specified in the form.[956] Form N–LIQUID will be non-public. For the same reasons discussed previously regarding our determination to keep information regarding a fund's highly liquid investment minimum and specific position level disclosure of illiquid investments non-public, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make the information filed on Form N–LIQUID publicly available.[957]

First, a registrant is required to file Form N–LIQUID within one business day when more than 15% of its net assets are, or become, illiquid investments that are assets as defined in rule 22e–4.[958] If this occurs, the registrant will be required to report on Form N–LIQUID general information about the registrant as well as (1) the date(s) of the event, (2) the current percentage of the registrant's net assets that are illiquid investments that are assets, and (3) identification information about the illiquid investments.[959]

Second, if a registrant whose illiquid investments that are assets previously exceeded 15% of net assets determines that its holdings in illiquid investments that are assets have changed to be less than or equal to 15% of the registrant's net assets, then the registrant also is required to report within one business day (1) the date(s) on which its illiquid investments that are assets fell to or below 15% of net assets and (2) the current percentage of the registrant's net assets that are illiquid investments that are assets.[960]

Lastly, a registrant also is required to notify the Commission on Form N–LIQUID within one business day if its holdings in highly liquid investments that are assets fall to or below the registrant's highly liquid investment minimum for more than 7 consecutive calendar days.[961] If this occurs, a fund is required to report the date(s) on which the fund's holdings in liquid investments that are assets fell below the fund's highly liquid investment minimum.[962]

As discussed above, we are modifying the 15% standard asset-reporting requirement originally proposed by incorporating this information into the fourth ''illiquid investment'' classification category reported on Form N–PORT.[963] Under the proposal, Form N–PORT would have required a fund to report, for each portfolio asset, whether the asset is a 15% standard asset in order to allow our staff and other interested parties to track the extent that funds are holding 15% standard assets and to discern the nature of those holdings and assist these groups in tracking the fund's exposure to liquidity risk.[964]

Some commenters recommended that the Commission require more detailed reporting data from funds that hold a larger percentage of securities that are

[947] *See, e.g.,* Invesco Comment Letter; J.P. Morgan Comment Letter.

[948] *See* BlackRock Comment Letter.

[949] *See* Invesco Comment Letter.

[950] *See* J.P. Morgan Comment Letter.

[951] *See* BlackRock Comment Letter.

[952] *See* CFA Comment Letter.

[953] *See* N–1A Release, *supra* footnote 932.

[954] As discussed below, some of the events required to be reported on Form N–LIQUID are in connection with the breach of a fund's highly liquid investment minimum. *See* Part D of Form N–LIQUID. Because In-Kind ETFs are not subject to the highly liquid investment minimum requirement under rule 22e–4(b)(1)(iii), they would not be subject to this Part D reporting requirement on Form N–LIQUID.

[955] *See* rule 30b1–10.

[956] Form N–LIQUID will also require a fund to report the following general information: (1) The date of the report; (2) the registrant's central index key (''CIK'') number; (3) the EDGAR series identifier; (4) the Securities Act file number; and (v) the name, email address, and telephone number of the person authorized to receive information and respond to questions about the filing. *See* Part A of Form N–LIQUID.

[957] *See supra* footnote 615 and accompanying text and footnote 743 and accompanying text. Section 45(a) of the Investment Company Act requires information in reports filed with the Commission pursuant to the Investment Company Act to be made available to the public, unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors.

[958] *See* Part A and Part B of Form N–LIQUID.

[959] *See* Items A.1—A.5 and Items B.1—B.3 of Form N–LIQUID.

[960] *See* Item C.1 and Item C.2 of Form N–LIQUID.

[961] *See* Part D of Form N–LIQUID.

[962] *See* Item D.1 of Form N–LIQUID.

[963] *See* Item C.7 Form N–PORT; *see also supra* section III.C.6.

[964] *See* Proposing Release, *supra* footnote 9, at section II.G.2.b.

less liquid or illiquid and that funds should notify the Commission more promptly than the Form N–PORT filing deadline when a fund's illiquid assets exceed 15% of net assets, or if the fund otherwise encounters indications of increased liquidity risk.[965] Other commenters expressed support for the addition of an early warning notification provision, under which funds would be required to notify the Commission when illiquid assets held at the end of a business day exceed 15% of net assets and continue to exceed 15% of net assets three business days after the threshold was first exceeded.[966] Another commenter expressed the belief that the sheer scale of Americans' reliance on open-end funds as an investment instrument and the potential for systemic contagion that arises when funds confront liquidity challenges must inform any consideration of the Commission's proposal.[967] In the commenter's view, the reporting requirements under the proposal with underlying factor-based analysis was largely discretionary and lacked mandatory requirements, and thereby failed to adequately account for the potential systemic threat to the nation's financial stability posed by liquidity risk.[968]

We appreciate the concerns and suggestions raised by commenters and agree that the Commission should be notified promptly when a fund encounters indications of increased liquidity risk and believe that new Form N–LIQUID addresses some concerns expressed by commenters that certain liquidity events that could affect the liquidity of a particular fund and/or indicate potential liquidity risks across the fund industry require particular attention by Commission staff. Pursuant to Part B of Form N–LIQUID, registrants will now be required to report to the Commission within one business day of when their percentage of illiquid investments that are assets exceeds (and subsequently falls to or below) 15% of their net assets.[969] Providing this information more promptly than monthly reporting on Form N–PORT, as proposed, will be the ''early warning notification'' that some commenters recommended[970] and will inform the Commission of potential liquidity stress events at the earliest possible juncture. Similarly, requiring a registrant to report when its holdings in highly liquid investments that are assets fall below the registrant's highly liquid investment minimum will add to this early warning system and ensure the Commission is made aware of such breaches promptly, rather than later in reports filed on Form N–PORT.[971] We believe that the information reported on Form N–LIQUID will assist Commission staff in its monitoring efforts of liquidity, including monitoring of not only the reporting fund but also funds that may have comparable characteristics to the reporting fund and could be similarly affected by market events.

Form N–LIQUID also includes general filing and reporting instructions, as well as definitions of specific terms referenced in the form.[972] These instructions and definitions are intended to provide clarity to funds and to assist them in filing reports on Form N–LIQUID.

3. Amendments to Form N–CEN

We proposed several reporting items under Part C of Form N–CEN to allow the Commission and other users to track certain liquidity risk management practices that we expect funds to use on a less frequent basis than the day-to-day portfolio construction techniques captured by Form N–PORT.[973] We are adopting these reporting requirements substantially as proposed. Where we have received comments on specific reporting requirements, we discuss them in more detail below.

a. Lines of Credit, Interfund Lending, and Interfund Borrowing

We are adopting, largely as proposed, but with a modification in response to comment, the requirement in Form N–CEN that a management company report information regarding the use of lines of credit, interfund lending, and interfund borrowing.[974] Several commenters expressed general support for these reporting requirements on Form N–CEN.[975] In a modification to the proposal, if a fund reports that it has access to a line of credit, for each line of credit the fund will be required to report whether the line of credit is a committed or *uncommitted* line of credit.[976] The fund will be required to report information concerning the size of the line of credit in U.S. dollars, the name of the institution(s) with which the fund has the line of credit, and whether the line of credit is for that fund alone or is shared among multiple funds.[977] If the line of credit is shared among multiple funds, the fund is required to disclose the names and SEC File numbers of the other funds (including any series) that may use the line of credit.[978] If the fund responds affirmatively to having available a line of credit, the fund is required to disclose whether it drew on the line of credit during the reporting period.[979] If the fund drew on that line of credit during the reporting period, the fund is required to disclose the average dollar amount outstanding when the line of credit was in use and the number of days that line of credit was in use.[980]

The Proposing Release included a request for comment on whether funds should be required to report information on uncommitted lines of credit on Form N–CEN.[981] In general, a committed line of credit represents a bank's obligation, in exchange for a fee, to make a loan to a fund subject to specified conditions. For uncommitted or standby lines of credit, however, a bank indicates a willingness, but no obligation, to lend to a fund.[982] As one commenter noted, funds may have certain tools like lines of credit from banks for temporary liquidity management purposes ''when more typical means (*e.g.,* use of new or existing cash or sales of portfolio holdings) are unavailable or otherwise

[965] *See, e.g.,* Charles Schwab Comment Letter (noting that this proposed approach could be similar to the Commission's 2015 Derivatives Proposing Release, which has proposed to enhance requirements for funds whose aggregate exposure to derivatives exceeds 50% of its net assets); *see also, e.g.,* SIFMA Comment Letter III.

[966] *See, e.g.,* SIFMA Comment Letter III (noting that this early warning notification could respond to concerns raised by the Third Avenue Fund liquidation); *see also* Third Avenue Temporary Order, *supra* footnote 12.

[967] *See* Better Markets Comment Letter.

[968] See id.

[969] *See* Part B and Part C of Form N–LIQUID; *see also* General Instruction A of Form N–LIQUID.

[970] *See* SIFMA Comment Letter III.

[971] *See* Part D of Form N–LIQUID.

[972] *See* General Instructions A (Rule as to Use of Form N–LIQUID), B (Application of General Rules and Regulations), C (Information to Be Included in Report Filed on Form N–LIQUID), D (Filing of Form N–LIQUID), E (Paperwork Reduction Act Information), and F (Definitions) of Form N–LIQUID.

[973] *See* Proposing Release, *supra* footnote 9, at section III.G.3.

[974] *See* Item C.20 of Form N–CEN. We have modified the numbering convention for items within Form N–CEN from the proposal to be consistent with Form N–CEN as adopted in the Investment Company Reporting Modernization Adopting Release and to clarify that responses regarding lines of credit, interfund lending, and interfund borrowing should apply to each line of credit or loan, as applicable.

[975] *See, e.g.,* CFA Comment Letter; Federated Comment Letter; Vanguard Comment Letter.

[976] *See* Item C.20.a.i of Form N–CEN (emphasis added).

[977] *See* Item C.20.a.ii–iv. of Form N–CEN.

[978] *See* Item C.20.a.iv.1 of Form N–CEN. Under Form N–CEN, ''SEC File number'' means the number assigned to an entity by the Commission when that entity registered with the Commission in the capacity in which it is named in Form N–CEN. *See* General Instruction E to Form N–CEN.

[979] *See* Item C.20.a.v of Form N–CEN.

[980] *See* Item C.20.a.vi. and vii of Form N–CEN.

[981] *See* Proposing Release, *supra* footnote 9, at section III.G.3.c.

[982] *See* Fortune, *supra* footnote 781 at 47.

sub-optimal.'' [983] One commenter suggested that funds report the availability of uncommitted lines of credit in addition to committed lines of credit in Form N–CEN.[984]

In consideration of these comments, we are including in Form N–CEN a requirement for funds to report the availability and use of committed and uncommitted lines of credit.[985] We believe that this information will allow our staff and other potential users to assess what sources of external liquidity are available to funds and to what extent funds rely on dedicated external sources of liquidity, rather than relying on the liquidity of fund portfolio investments alone, for liquidity risk management. In addition, we believe that if funds make substantial use of uncommitted lines of credit, the reporting of that reliance could flag potential vulnerabilities in a fund or the fund industry, particularly in the event of a market crisis when uncommitted lines of credit might become unavailable. Furthermore, having funds report information on lines of credit will also allow monitoring of whether lines of credit are concentrated in particular financial institutions.

We are adopting, as proposed, the requirement that a fund report whether it engaged in interfund lending or interfund borrowing during the reporting period, and, if so, the average amount of the interfund loan when the loan was outstanding and the number of days that the interfund loan was outstanding.[986] This information will provide some transparency regarding the extent to which funds use interfund lending or interfund borrowing. We understand that one reason that funds have sought exemptive relief to engage in interfund lending and borrowing is to meet redemption obligations if necessary.[987]

b. Additional Information Concerning ETFs

In a modification to the proposal, we are requiring that each ETF that complies with rule 22e–4 as an ''In-Kind ETF'' under the rule, identify itself accordingly in reports on Form N–CEN.[988] As discussed above, we are adopting certain tailored liquidity risk management program requirements for ETFs, and certain ETFs that qualify as In-Kind ETFs will not be required to classify their portfolio investments or comply with the highly liquid investment minimum requirement of rule 22e–4.[989] We believe that the In-Kind ETF information reported on Form N–CEN will be helpful in understanding the volume of ETFs that identify as In-Kind ETFs and thus are not required to classify their portfolio investments or comply with the highly liquid investment minimum requirement of rule 22e–4.[990]

4. Safe Harbors

Some commenters suggested that the Commission should include a safe harbor and/or protection from liability as part of the final rule for proposed liquidity-related disclosures.[991] One commenter recommended that the Commission provide a safe harbor for ''forward-looking statements'' given the speculative nature of the proposed disclosures.[992] Another commenter recommended that the Commission implement measures to shield from liability funds that in good faith make forward-looking assessments of liquidity at either the asset or portfolio level that subsequently turn out to materially differ from actual liquidity.[993] One commenter further suggested that the Commission should include a provision stating that funds and their affiliates will not face liability for errors in classification or otherwise in implementing their liquidity risk management programs, and related reports and (if applicable) disclosures, unless (i) the error is material and (ii) the fund or affiliate acted knowingly or recklessly. Commenters argued that any safe harbor provision should also make clear that funds and managers would not face liability for violation of rule 22e–4 based on second-guessing, either by the Commission or by fund shareholders, of the design of the liquidity risk management program.[994] One commenter expressed concern that, even if a safe harbor provision were established that protected funds and directors from Commission enforcement actions, funds and directors could still be subject to private litigation.[995] We decline to provide such a safe harbor.

M. Effective and Compliance Dates

We are adopting the following effective and compliance dates, as set forth below.

1. Liquidity Risk Management Program

The compliance date for our liquidity risk management program requirement is December 1, 2018 for larger entities, and June 1, 2019 for smaller entities. Thus all registered open-end management investment companies, including open-end ETFs, that are not smaller entities, will be required to adopt and implement a written liquidity risk management program, approved by a fund's board of directors on December 1, 2018, while smaller entities will be required to do so six months later, on June 1, 2019.[996]

In the Proposing Release, the Commission stated that it expected to provide a tiered set of compliance dates based on asset size.[997] The Commission expected that 18 months after the effective date would provide an adequate period of time for larger entities to prepare internal processes, policies, and procedures and implement liquidity risk management programs that would meet the requirements of the rule.[998] We believed that smaller entities would benefit from having an additional 12 months to establish and implement a written liquidity risk management program.[999]

Most of the commenters who discussed the proposed liquidity risk management program compliance

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[983] ICI Comment Letter I.

[984] *See* Federated Comment Letter.

[985] *See* Item C.20.a.(i) of Form N–CEN.

[986] *See* Items C.20.b and c of Form N–CEN.

[987] For example, we understand that funds may engage in interfund lending and borrowing to pay out redemption proceeds same-day or T+1 while the fund awaits proceeds from sales of non-traded securities.

[988] *See* Item E.5 of Form N–CEN; *see also supra* section III.J regarding the definition and treatment of ''In-Kind ETFs'' under rule 22e–4.

[989] *Id.*

[990] ETFs that redeem in cash, or that do not qualify otherwise as ''In-Kind ETFs'' (as defined in rule 22e–4(a)(9)) will be subject to the full set of liquidity risk management program elements, including the classification and highly liquid investment minimum requirements. *See* rule 22e–4(b)(1)(i)–(iii).

[991] *See, e.g.,* ICI Comment Letter I; LSTA Comment Letter; SIFMA Comment Letter II; T. Rowe Comment Letter.

[992] *See* FSR Comment Letter.

[993] *See* ICI Comment Letter I (noting that the Commission has precedent for using its authority to shield from potential liability certain forward-looking information that registrants are required to provide (*see, e.g.,* rule 175 under the Securities Act; rule 3b–6 under the Exchange Act; Item 303(c) of Reg. S–K; and Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations, Securities Act Release No. 33–8182 (Feb. 5, 2003) (regarding MD&A disclosures)).

[994] *See* SIFMA Comment Letter II.

[995] *See* Federated Comment Letter.

[996] The compliance date in the section applies to rule 22e–4, rule 30b1–10, and Form N–LIQUID.

[997] *See* Proposing Release, *supra* footnote 9, at section III.H. Specifically, for larger entities—namely, funds that together with other investment companies in the same ''group of related investment companies'' have net assets of $1 billion or more as of the end of the most recent fiscal year—the Commission proposed a compliance date of 18 months after the effective date to comply with the Proposed Rule. For smaller entities (*i.e.,* funds that together with other investment companies in the same ''group of related investment companies'' have net assets of less than $1 billion as of the end of the most recent fiscal year), the proposal provided for an extra 12 months (or 30 months after the effective date) to comply with proposed rule 22e–4.

[998] *Id.*

[999] *Id.*

date(s) opposed tiered compliance and requested at least 30 months to comply. Some argued larger funds would need at least 30 months to comply because of their size: More funds and a greater number and variety of investments to classify would require more time.[1000] Others cited operational limitations: A need of adequate time for (1) all funds to properly prepare processes, policies and procedures; (2) managers to adjust operations and develop reporting capabilities; and (3) mutual fund boards to review, approve, and implement the program.[1001] The only commenter that supported tiered compliance requested lengthier compliance dates for both larger and smaller entities.[1002]

After evaluating the comments received, we believe that larger entities would benefit from an additional period of time to come into compliance with the rules over the 18 months that was proposed. Therefore, we are providing an additional 6 months for these entities, for a total of 24 months (*i.e.,* December 1, 2018) to come into compliance. We continue to believe that smaller entities may face additional or different challenges in coming into compliance with the rules quickly, and are therefore providing an extended compliance period of a total of 30 months (*i.e.,* June 1, 2019) for such smaller entities.

2. Amendments to Form N–1A, Form N–PORT, and Form N–CEN

In the Proposing Release, the Commission expected to require all initial registration statements on Form N–1A, and all post-effective amendments that are annual updates to effective registration statements on Form N–1A, filed six months or more after the effective date, to comply with the proposed amendments to Form N–1A.[1003] Few commenters discussed the Form N–1A amendments. One commenter agreed that 6 months was sufficient to comply with the amendments;[1004] another commenter requested 30 months to comply.[1005] Because we do not expect that funds will require significant amounts of time to prepare these additional disclosures,[1006] we are adopting a compliance date for our amendments to Form N–1A of June 1, 2017. This will provide a six month compliance period for these amendments, as proposed.

Similar to the tiered compliance dates for the liquidity classification requirements (discussed above), we are providing a tiered set of compliance dates based on asset size for the additions to Form N–PORT and Form N–CEN.[1007] In the Proposing Release, for larger entities, we expected that 18 months would provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports containing the additional information requested by the proposed amendments to Form N–PORT. Further, we believed that smaller entities would benefit from extra time to comply and from the lessons learned by larger investment companies during the adoption period for Form N–PORT. For Form N–CEN, we proposed a compliance date of 18 months after the effective date to comply with the new reporting requirements.[1008] We expected that 18 months would provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports containing the additional information requested by the proposed amendments to Form N–CEN. Multiple commenters, restating their concerns about operational limitations, requested 30 months for all entities to comply with the Form N–PORT and Form N–CEN amendments.[1009]

As discussed above, we are persuaded that larger entities would benefit from extra time to comply and are therefore providing a compliance date of December 1, 2018 for larger entities to come into compliance with the additional liquidity-related reporting requirements of Form N–PORT and Form N–CEN. This will result in larger funds filing their first reports with additional liquidity-related information on Form N–PORT, reflecting data as of December 31, no later than January 31. For smaller entities, the compliance date will be June 1, 2019. This will provide smaller entities an additional six months to comply with the new liquidity-related reporting requirements.

IV. Economic Analysis

A. Introduction and Primary Goals of Regulation

1. Introduction

As discussed above, the Commission is adopting regulatory changes to require a liquidity risk management program, and to require new disclosures regarding liquidity risk and liquidity risk management (collectively, the ''final liquidity regulations''). Because of the significant diversity in liquidity risk management practices that we have observed in the fund industry, there exists the need for enhanced comprehensive baseline regulations instead of only guidance for fund liquidity risk management. In summary, and as discussed in greater detail in section III above, the final liquidity regulations include the following:

- New rule 22e–4 will require that each fund stablish a written liquidity risk management program. A fund's liquidity risk management program broadly requires a fund to assess, manage and review the fund's liquidity risk; to classify the liquidity of each of the fund's portfolio investments; to determine a highly liquid investment minimum (except for funds that hold primarily highly liquid investments); and to limit illiquid investments to 15% of fund investments. The final rule also provides for a tailored program for all ETFs, but offers some exemptions for In-Kind ETFs. Finally, the rule requires for board oversight of the liquidity risk management program.
- Amendments to Form N–1A and additional elements of new Form N–PORT and Form N–CEN will require enhanced fund disclosure and reporting regarding position liquidity and shareholder redemption practices. New Form N–LIQUID will require more prompt, non-public notification to the Commission when a fund's holdings of assets that are illiquid investments exceed 15% of net assets, or when a fund's holdings of highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days.

The Commission is sensitive to the economic effects of the final liquidity regulations, including the benefits and costs as well as the effects on efficiency, competition, and capital formation. The economic effects are discussed below in the context of the primary goals of the final liquidity regulations.

2. Primary Goals

The primary goals of the final liquidity regulations are to promote

[1000] *See, e.g.,* Fidelity Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[1001] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[1002] *See* Dechert Comment Letter.

[1003] *See* Proposing Release, *supra* footnote 9, at section III.H.

[1004] *See* ICI Comment Letter I.

[1005] *See* Vanguard Comment Letter.

[1006] *See* Proposing Release, *supra* footnote 9, at section III.H.

[1007] *Id.*

[1008] *Id.*

[1009] *See* Cohen & Steers Comment Letter; Fidelity Comment Letter; ICI Comment Letter I; Vanguard Comment Letter.

investor protection by reducing the risk that funds will be unable to meet their redemption obligations, elevate the overall quality of liquidity risk management across the fund industry, increase transparency of funds' liquidity risks and risk management practices, and mitigate potential dilution of non-transacting shareholders' interests. Funds are not currently subject to requirements under the federal securities laws or Commission rules that specifically require them to maintain a minimum level of portfolio liquidity (with the exception of money market funds), and follow Commission guidelines (not rules) that generally limit their investment in illiquid assets.[1010] Additionally, a fund today is only subject to limited disclosure requirements concerning the fund's liquidity risk and risk management.[1011] As discussed in the Proposing Release, staff outreach has shown that funds today engage in a variety of different practices—ranging from comprehensive and rigorous to minimal and basic—for assessing the liquidity of their portfolios, managing liquidity risk, and disclosing information about their liquidity risk, redemption practices, and liquidity risk management practices to investors.[1012] We believe that the enhanced requirements for funds' assessment, management, and disclosure of liquidity risk and enhanced limits on illiquid investment holdings could decrease the chance that funds would be unable to meet their redemption obligations and mitigate potential dilution of non-redeeming shareholders' interests.

The final liquidity regulations are also intended to lessen the possibility of early redemption incentives (and investor dilution) created by insufficient liquidity risk management, as well as the possibility that investors' share value will be diluted by costs incurred by a fund as a result of other investors' purchase or redemption activity. When a fund experiences significant redemption requests, it may sell portfolio securities or borrow funds in order to obtain sufficient cash to meet redemptions.[1013] However, sales of a fund's portfolio investments conducted in order to meet shareholder redemptions could result in significant adverse consequences to non-redeeming shareholders when a fund fails to adequately manage liquidity. For example, if a fund sells portfolio investments under unfavorable circumstances, this could create dilution for non-redeeming shareholders.[1014] Funds also may borrow from a bank or use interfund lending facilities to meet redemption requests, but there are costs (such as interest rates) associated with such borrowings. Both selling of portfolio investments and borrowing to meet redemption requests could cause funds to incur costs that would be borne mainly by non-redeeming shareholders.[1015] These factors could result in dilution of the value of non-redeeming shareholders' interests in a fund,[1016] which could create incentives for early redemptions in times of liquidity stress, and result in further dilution of non-redeeming shareholders' interests.[1017] There also is a potential for adverse effects on the markets when open-end funds fail to adequately manage liquidity. For example, the sale of less liquid portfolio investments at discounted or even fire sale prices when a fund is facing redemption pressures can produce significant negative price pressure on those investments and correlated investments, which can impact other investors holding these investments and may transmit stress to other funds or portions of the markets.[1018] For reasons discussed in detail below, we believe that the liquidity risk management program requirement, including the enhanced restrictions on holdings of assets that are illiquid investments, should mitigate the risk of potential shareholder dilution and decrease the incentive for early redemption in times of liquidity stress.

Finally, the final liquidity regulations are meant to address recent industry developments that have underscored the significance of funds' liquidity risk management practices. In recent years, there has been significant growth in the assets managed by funds with strategies that focus on holding relatively less liquid investments, such as fixed income funds (including emerging market debt funds), open-end funds with alternative strategies, and emerging market equity funds.[1019] There also has been considerable growth in assets managed by funds that exhibit characteristics that could give rise to increased liquidity risk, such as relatively high investor flow volatility.[1020] Additionally, as discussed in detail above, standard fund redemption and securities settlement periods have tended to become significantly shorter over the last several decades, which has caused funds to satisfy redemption requests within relatively short time periods (*e.g.,* within T + 3, T + 2, and next-day periods).[1021] But while fund redemption periods have become shorter, certain funds, for example, certain bank loan funds and emerging market debt funds, have increased their holdings of portfolio securities with relatively long settlement periods, which could result in a liquidity mismatch between when a fund plans or is required to pay redeeming shareholders, and when any asset sales that the fund has executed in order to pay redemptions will settle.[1022] Collectively, these industry trends have emphasized the importance of effective liquidity risk management among funds and enhanced disclosure regarding liquidity risk and risk management.

B. Economic Baseline

The final liquidity regulations will affect all funds and their investors, investment advisers and other service providers, all issuers of the portfolio securities in which funds invest, and other market participants potentially affected by fund and investor behavior. The economic baseline of the final liquidity regulations includes funds' current practices regarding liquidity risk management and liquidity risk disclosure, as well as the economic attributes of funds that affect their portfolio liquidity and liquidity risk. These economic attributes include industry-wide trends regarding funds' liquidity and liquidity risk management, as well as industry developments highlighting the importance of robust liquidity risk management by funds.

[1010] *See supra* section II.D; *infra* section IV.B.1.a.

[1011] *See supra* section II.D; *infra* section IV.B.1.c.

[1012] *See supra* section II.D; *infra* sections IV.B.1.a, IV.B.1.c.

[1013] *See supra* section II.B.2; *infra* sections IV.C.1, IV.C.2.

[1014] *See supra* footnotes 79–80 and accompanying text.

[1015] *See supra* footnote 259 and accompanying text.

[1016] *See supra* footnotes 79–80 and accompanying text; *infra* sections IV.C.1, IV.C.2.

[1017] *See supra* footnote 85 and accompanying text; *infra* sections IV.C.1, IV.C.2.

[1018] *See supra* footnote 89 and accompanying text.

[1019] *See supra* section II.C.1; *infra* section IV.B.3; *see also* DERA Study, *supra* footnote 95, at 6–9. Relevant statistics from the DERA Study were updated through 2015 using the CRSP US Mutual Fund Database.

[1020] *See infra* section IV.B.3.

[1021] *See supra* footnotes 102 and 103 and accompanying text.

[1022] *See supra* footnotes 104, 105, 377, and 378 and accompanying text.

1. Funds' Current Practices Regarding Liquidity Risk Management and Liquidity Risk Disclosure

a. Funds' Current Liquidity Risk Management Requirements and Practices

Under section 22(e) of the Investment Company Act, a registered investment company is required to make payment to shareholders for redeemable securities tendered for redemption within seven days of their tender.[1023] In addition to the seven-day redemption requirement in section 22(e), registered investment companies that are sold through broker-dealers are required as a practical matter to meet redemption requests within three business days because broker-dealers are subject to rule 15c6–1 under the Exchange Act, which establishes a three-day (T + 3) settlement period for purchases and sales of securities (other than certain types of securities exempted by the rule) effected by a broker or a dealer, unless a different settlement period is expressly agreed to by the parties at the time of the transaction. Furthermore, rule 22c–1 under the Act, the ''forward pricing'' rule, requires funds, their principal underwriters, and dealers to sell and redeem fund shares at a price based on the current NAV next computed after receipt of an order to purchase or redeem fund shares, even though cash proceeds from purchases may be invested or fund investments may be sold in subsequent days in order to satisfy purchase requests or meet redemption obligations.

With the exception of money market funds subject to rule 2a–7 under the Act, the Commission has not promulgated rules requiring open-end funds to hold a minimum level of liquid investments.[1024] The Commission historically has taken the position that open-end funds should maintain a high degree of portfolio liquidity to ensure that their portfolio securities and other assets can be sold and the proceeds used to satisfy redemptions in a timely manner in order to comply with section 22(e) and their other obligations.[1025] The Commission also has stated that open-end funds have a ''general responsibility to maintain a level of portfolio liquidity that is appropriate under the circumstances,'' and to engage in ongoing portfolio liquidity monitoring to determine whether an adequate level of portfolio liquidity is being maintained in light of the fund's redemption obligations.[1026] Open-end funds are also required by rule 38a–1 under the Act to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of the federal securities laws, including policies and procedures that provide for the oversight of compliance by certain of the fund's service providers, and such policies and procedures should be appropriately tailored to reflect each fund's particular compliance risks; the rule also requires board approval and review of the service providers' compliance policies and procedures.[1027] An open-end fund that holds a significant portion of its assets in securities with long settlement periods or with infrequent trading, or an open-end fund that represents it will pay redemptions in fewer than seven days, for instance, may be subject to relatively greater liquidity risks than other open-end funds.

Additionally, long-standing Commission guidelines generally limit an open-end fund's aggregate investment in ''illiquid assets'' to no more than 15% of the fund's net assets (the ''15% guideline'').[1028] Under the 15% guideline, a portfolio security or other asset is considered illiquid if it cannot be sold or disposed of in the ordinary course of business within seven days at approximately the value at which the fund has valued the investment.[1029] The 15% guideline has generally limited funds' exposure to particular types of securities that cannot be sold within seven days and that the Commission and staff have indicated may be illiquid, depending on the facts and circumstances. Depositors of UITs are currently required to consider which of their restricted securities are illiquid.[1030]

As noted in the Proposing Release, staff outreach has shown that funds currently employ a diversity of practices with respect to assessing portfolio investments' liquidity, as well as managing liquidity risk. Section II.D.3 above provides an overview of these practices, which include, among others: Assessing the ability to sell particular investments within various time periods, taking into account relevant market, trading, and other factors; monitoring initial liquidity determinations for portfolio investments (and modifying these determinations, as appropriate); holding certain amounts of the fund's portfolio in highly liquid investments or cash equivalents; establishing committed back-up lines of credit or interfund lending facilities; and conducting stress testing relating to the extent the fund has liquid investments to cover possible levels of redemptions.[1031] Some commenters indicated that they view in-kind redemptions as an important liquidity risk management tool.[1032] Another commenter noted that ETFs are often used to help manage liquidity risk because they can allow funds to maintain market exposure while ensuring sufficient liquidity.[1033] As noted in the Proposing Release, the staff has observed that some of the funds with relatively more thorough liquidity risk management practices have appeared to be able to meet periods of high redemptions without significantly altering the risk profile of the fund or materially affecting the fund's performance, and thus with few dilutive impacts. It therefore appears that these funds have generally aligned their portfolio liquidity with their liquidity needs, and that their liquidity risk management permits them to efficiently meet redemption requests. Other funds, however, employ portfolio investment liquidity assessment and liquidity risk management practices that are substantially less rigorous.[1034] As discussed above in section II.D.3, some funds do not take different market conditions into account when

[1023] *See* section 22(e) of the Act. Section 22(e) of the Act provides, in part, that no registered investment company shall suspend the right of redemption or postpone the date of payment upon redemption of any redeemable security in accordance with its terms for more than seven days after tender of the security absent specified unusual circumstances.

[1024] *See supra* footnotes 61–62 and accompanying text.

[1025] *See* Restricted Securities Release, *supra* footnote 37.

[1026] *See supra* footnote 64 and accompanying text.

[1027] *See* Rule 38a–1 Adopting Release, *supra* footnote 65.

[1028] *See supra* footnote 38 and accompanying text.

[1029] *See supra* footnote 39 and accompanying text.

[1030] *See* Rule 144A Release, *supra* footnote 37 at n.61 (discussing liquidity requirements for UITs prior to the adoption of rule 22e–4).

[1031] *See also, e.g.,* Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (discussing stress tests of a fund's ability to meet redemptions over certain periods); BlackRock FSOC Notice Comment Letter, *supra* footnote 85 (discussing several overarching principles that provide the foundation for a prudent market liquidity risk management framework for collective investment vehicles, including an independent risk management function, compliance checks to ensure portfolio holdings do not exceed regulatory limits, a risk management function that is independent from portfolio management, and measuring levels of liquid assets into ''tiers of liquidity''); Invesco FSOC Notice Comment Letter, *supra* footnote 248, at 11 (discussing liquidity analysis).

[1032] *See* BlackRock Comment Letter; Invesco Comment Letter.

[1033] *See* BlackRock Comment Letter.

[1034] *See infra* section IV.C.1.b, where the potential consequences of less rigorous liquidity risk management are discussed in the context of risk management program benefits.

evaluating portfolio investment liquidity, and do not conduct ongoing liquidity monitoring. Likewise, some funds do not have independent oversight of their liquidity risk management outside of the portfolio management process. As a result, funds' procedures for assessing the liquidity of their portfolio securities, as well as the comprehensiveness and independence of their liquidity risk management, vary significantly.

A fund may meet redemption requests in a variety of ways, including by using cash, borrowing under a line of credit, or by selling portfolio investments. The fund's portfolio liquidity as well as its value will be affected by the choice of which investments are sold. Subsequent portfolio transactions after redemptions are met will also affect portfolio liquidity and value. For example, a fund facing a large redemption request might lessen the impact on portfolio value of selling investments by selling the most liquid portion of the portfolio or using some of its cash or a line of credit.[1035] That choice benefits non-redeeming investors by minimizing transaction costs and the loss in fund value due to the price impact of selling, but it also could increase the liquidity risk of the fund portfolio and the fund may incur transaction costs if it subsequently engages in portfolio transactions such as rebalancing towards its previous portfolio allocation.[1036] If the fund instead were to sell a ''strip'' of the portfolio (*i.e.,* a cross-section or representative selection of the fund's portfolio investments), the immediate impact on fund value may be greater, but the liquidity of the fund portfolio would be unchanged as a result of the sale. Funds also could choose to meet redemptions by selling a range of investments in between their most liquid, on one end of the spectrum, and a perfect *pro rata* strip of investments, on the other end of the spectrum.[1037] All of the above ways by which a fund may meet redemptions potentially occur in conjunction with other strategic portfolio management decisions, such as opportunistically paring back or eliminating holdings in a particular investment or sector while meeting redemptions.

Staff analysis of the impact of large redemptions on U.S. equity fund portfolio liquidity is consistent with the hypothesis that the average U.S. equity fund does not sell a strip of its portfolio investments to meet large redemptions, but instead appears—based on changes in funds' portfolio liquidity following net outflows—to disproportionately sell the more liquid portion of its portfolio for this purpose.[1038] Similarly, staff analysis shows that after a U.S. municipal bond fund encounters net outflows, the typical U.S. municipal bond fund will experience an increase in its holdings of municipal bonds (and a decrease in its holdings of cash and cash equivalents), potentially decreasing the fund's overall portfolio liquidity.[1039]

b. Funds' Current Liquidity Risk Disclosure Requirements and Practices

Items 4 and 9 of Form N–1A require a fund to disclose the principal risks of investing in the fund.[1040] A fund currently must disclose the risks to which the fund's portfolio as a whole is expected to be subject and the circumstances reasonably likely to adversely affect the fund's NAV, yield, or total return.[1041] Some funds currently disclose that liquidity risk is a principal risk of investing in the fund, but often do so in a generic way.

Item 11 of Form N–1A requires a fund to describe its procedure for redeeming fund shares, including restrictions on redemptions, any redemption charges, and whether the fund has reserved the right to redeem in kind.[1042] Disclosure regarding other redemption information, such as the timing of payment of redemption proceeds to fund shareholders, varies across funds as there are currently no specific requirements for this disclosure. Some funds disclose that they will redeem shares within a specific number of days after receiving a redemption request, other funds disclose that they will honor such requests within seven days (as required by section 22(e) of the Act), and others provide no specific time periods. Additionally, some funds disclose differences in the timing of payment of redemption proceeds based on the payment method by which the fund shares are redeemed, while others do not.

Funds are not currently required to disclose information about the liquidity of their portfolio investments. However, some funds voluntarily disclose in their registration statements any specific limitations applicable to the fund's investment in 15% guideline assets, as well as types of assets considered by the fund to be subject to the 15% guideline.

Form N–1A does not currently require funds to disclose information about liquidity risk management practices such as the establishment (or use) of committed back-up lines of credit. A fund is, however, required to disclose information regarding the amount and terms of unused lines of credit for short-term financing, as well as information regarding related party transactions in its financial statements or notes thereto.[1043]

2. Fund Industry Developments Regarding Funds' Liquidity Risk Management

a. Overview

Below we discuss the size and growth of the U.S. fund industry generally, as well as the growth of various investment strategies within the industry. We show that the fund industry has grown significantly in the past two decades, and during this period, funds with international strategies, fixed income funds, and funds with alternative strategies have grown particularly quickly. We also determine the types of funds that demonstrate notably volatile and unpredictable flows. Because volatility and predictability in a fund's flows can affect the extent to which the fund is able to meet expected and reasonably foreseeable redemption requests without diluting the interests of fund shareholders, assessing trends regarding these factors can provide information about sectors of the fund industry that could be particularly susceptible to liquidity risk.

While we believe that these trends are relevant from the perspective of addressing potential liquidity risk in the fund industry (and in funds' underlying portfolio investments), we emphasize

[1035] We note that in some instances, selling only the most liquid investments to meet a large redemption could be inconsistent with the fund's investment mandate. For example, if a fund's investment mandate required it to hold a certain percentage of its portfolio in equities, the fund might not be able to sell a large portion of its equity holdings to meet redemption requests and still hold the required percentage of its portfolio in equities.

[1036] *See, e.g., supra* footnote 71 (discussing recent circumstances in which, during a year of heavy redemptions that caused a high yield bond fund's assets to shrink 33% in this period, the fund's holdings of lower quality bonds grew to 47% of assets, from 35% before the redemptions).

[1037] *See, e.g.,* Hao Jiang, Dan Li, and Ashley Wang, *Dynamic Liquidity Management by Corporate Bond Mutual Funds* (May 6, 2016) (unpublished working paper), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2776829*. The study presents preliminary evidence consistent with the notion that corporate bond funds tend to sell proportional ''strips'' of their portfolios during periods of high market volatility and disproportionately sell more liquid assets during periods of lower market volatility.

[1038] DERA Study, *supra* footnote 95, at 43–46. The DERA Study analyzes U.S. equity mutual fund liquidity management trends using the Amihud liquidity measure. *See* Proposing Release, *supra* footnote 9, at n.621. We respond to comments on this result and other aspects of the DERA study in section IV.C.1.f.

[1039] DERA Study, *supra* footnote 95, at 47–49.

[1040] Item 4(b)(1)(i) and Item 9(c) of Form N–1A.

[1041] *Id.*

[1042] Item 11(c) of Form N–1A.

[1043] *See* §§ 210.5–02.19(b) and 210.4–08(k) of Regulation S–X.

that liquidity risk is not confined to certain types of funds or investment strategies. Although we recognize that certain fund characteristics could make a fund relatively more prone to liquidity risk, we believe that all types of funds entail liquidity risk to some extent.[1044] Thus, while in this section we discuss certain types of funds and strategies that are generally considered to exhibit increased liquidity risk, we are not asserting that *only* these types of funds and strategies involve liquidity risk, or that a fund of the type and with the strategy discussed below necessarily demonstrates greater liquidity risk than a fund that does not have these same characteristics.

b. Size and Growth of the U.S. Fund Industry and Various Investment Strategies Within the Industry

Open-end funds and ETFs manage a significant and growing amount of assets in U.S. financial markets. As of the end of 2015, there were 10,633 open-end funds (excluding money market funds, but including ETFs), as compared to 5,279 at the end of 1996.[1045] The assets of these funds were approximately $15.0 trillion in 2015, having grown from about $2.63 trillion in 1996.[1046] Within these figures, the number of ETFs and ETFs' assets have increased notably in the past decade. There were 1,594 ETFs in 2015, as opposed to a mere 119 in 2003, and ETFs' assets have increased from $151 billion in 2003 to $2.1 trillion in 2015.[1047]

U.S. equity funds represent the greatest percentage of U.S. open-end fund industry assets.[1048] Open-end U.S. equity funds, excluding ETFs, money market funds and variable annuities, held 44.7% of U.S. fund industry assets as of the end of 2015. The investment strategies with the next-highest percentages of U.S. fund industry assets are foreign equity funds (16.7%), general bond funds (13.2%), and mixed strategy funds (12.3%).[1049] Funds with alternative strategies [1050] only represent a small percentage of the U.S. fund industry assets, but as discussed below, the number of alternative strategy funds and the assets of this sector have grown considerably in recent years.[1051]

While the overall growth rate of funds' assets has been generally high (about 7.2% per year, between the years 2000 and 2015 [1052]), it has varied significantly by investment strategy.[1053] U.S. equity funds' assets grew substantially in terms of dollars from the end of 2000 to 2015,[1054] but this sector's assets as a percentage of total U.S. fund industry assets decreased from about 65% to about 45% during that same period.[1055] Like U.S. equity funds, the assets of U.S. corporate bond funds, government bond funds, and municipal bond funds also increased in terms of dollars from 2000 to 2015, but each of these sectors' assets as a percentage of the fund industry decreased during this period.[1056] On the other hand, the assets of foreign equity funds, general bond funds, and foreign bond funds increased steadily and substantially as a percentage of the fund industry over the same period.[1057] For example, foreign equity funds increased steadily from 10.6% of total industry assets in 2000 to 16.7% in 2015. And within these three investment strategies, certain investment subclasses (emerging market debt and emerging market equity) have grown particularly quickly from 2000 to 2015.[1058] The overall growth rate of funds' assets between the years 2000 and 2015 was greater for index funds (12.3%) than actively managed funds (4.9%).[1059]

The assets of funds with alternative strategies [1060] also have grown rapidly in recent years. From 2005 to 2015, the assets of alternative strategy funds grew from $366 million to $310 billion, and from the end of 2011 to the end of 2013, the assets of alternative strategy funds grew by an average rate of almost 80% each year. However, as discussed above, funds with alternative strategies remain a relatively small portion of the U.S. fund industry as a percentage of total assets.[1061]

c. Significance of Fund Industry Developments

The industry developments discussed above are notable for several reasons. The growth of funds generally over the past few decades demonstrates that investors have increasingly come to rely on investments in funds to meet their financial needs.[1062] These trends also demonstrate growth in particular types of funds that may entail increased liquidity risk. In particular, there has been significant growth in high-yield bond funds, emerging market debt funds, and funds with alternative strategies. Commissioners and Commission staff have previously spoken about the need to focus on potential liquidity risks relating to fixed income assets and fixed income funds,[1063] and within this sector, funds that invest in high-yield bonds could be subject to greater liquidity risk as they invest in lower-rated bonds that tend to be less liquid than investment grade

[1044] *See supra* section III.A.2.

[1045] *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183. Specifically, as of the end of 2015, there were 9,039 open-end mutual funds (including funds that invest in other funds) and 1,594 ETFs. There were approximately 50 ETFs that invest in other ETFs, which are not included in our figures.

[1046] *See* 2016 ICI Fact Book, *supra* footnote 11, at 174, 182.

[1047] *See* 2016 ICI Fact Book, *supra* footnote 11, at 182, 183.

[1048] DERA Study, *supra* footnote 95, at Table 1.

[1049] *Id.* The figure for general bond funds does not include assets attributable to foreign bond funds (1.9%), U.S. corporate bond funds (0.8%), U.S. government bond funds (1.4%), and U.S. municipal bond funds (4.7%). The figure for mixed strategy funds includes assets of, among others, target date funds, convertible securities funds, and flexible portfolio funds.

[1050] Alternative funds are funds that seek total returns through the use of alternative investment strategies, including but not limited to equity market neutral, long/short equity, global macro, event driven, credit focus strategies.

[1051] DERA Study, *supra* footnote 95, at 7–8.

[1052] DERA Study, *supra* footnote 95, at Table 2.

[1053] The figures in this paragraph and the following paragraph, discussing the variance in growth rate of funds' assets by investment strategy, exclude ETF assets.

[1054] U.S. equity funds held about $5.6 trillion as the end of 2015, compared to about $2.9 trillion at the end of 2000. DERA Study, *supra* footnote 95, at Table 2.

[1055] DERA Study, *supra* footnote 95, at Table 2.

[1056] *Id.* U.S. corporate bond funds held about $95 billion at the end of 2015, as opposed to $66 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 1.5% in 2000 to 0.8% in 2015. U.S. government bond funds held about $174 billion at the end of 2015, as opposed to $91 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 2.1% in 2000 to 1.4% in 2015. U.S. municipal bond funds held about $592 billion at the end of 2015, as opposed to $278 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 6.3% in 2000 to 4.7% in 2015.

[1057] *Id.* Foreign equity funds held about $2.1 trillion in 2015, as opposed to $465 billion in 2000. U.S. general bond funds held about $1.7 trillion at the end of 2015, as opposed to $240 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 5.4% in 2000 to 13.2% in 2015. Foreign bond funds held about $244 billion at the end of 2015, as opposed to $19 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 0.4% in 2000 to 1.9% in 2015.

[1058] DERA Study, *supra* footnote 95, at 9. Emerging market debt and emerging market equity funds held about $289 billion at the end of 2015, as opposed to $20 billion in 2000. The assets of emerging market debt funds and emerging market equity funds grew by an average of 18.1% and 19.8%, respectively, each year from 2000 through 2015.

These investment subclasses represent a small portion of the U.S. mutual fund industry (the combined assets of these investment subclasses as a percentage of the U.S. fund industry was 2.3% at the end of 2015).

[1059] *See* 2016 ICI Fact Book, *supra* footnote 11, at 174, 218.

[1060] *See supra* footnote 95 for a discussion of the primary investment strategies practiced by ''alternative strategy'' funds.

[1061] *See supra* footnote 1051 and accompanying text.

[1062] *See supra* footnote 21 and accompanying text.

[1063] *See supra* footnote 93 and accompanying text.

fixed income securities.[1064] Emerging market debt funds may invest in relatively illiquid securities with lengthy settlement periods.[1065] Likewise, funds with alternative strategies may hold portfolio investments that are relatively illiquid.[1066] Moreover, Commission staff economists have found that both foreign bond funds (including emerging market debt funds) and alternative strategy funds have historically experienced relatively more volatile and unpredictable flows than the average mutual fund,[1067] which could increase these funds' liquidity risks by making it more likely that a fund may need to sell portfolio investments in a manner that creates a market impact in order to pay redeeming shareholders.

One commenter has argued that flow volatility, which staff economists have used as a measure of liquidity risk, does not necessarily translate into liquidity risk.[1068] In this commenter's view, for example, a fund with volatile but predictable flows may have less liquidity risk than a fund with less volatile but less predictable flows. Likewise, a U.S. equity fund could have much greater flow volatility than a foreign bond mutual fund without having greater liquidity risk because the equity fund's assets are more liquid. However, differences in average flow volatility between fund categories persist after accounting for predictability, and the analysis suggests that changes in flow volatility may influence the management of fund liquidity.[1069] Flow volatility is not the sole determinant of liquidity risk for a fund, but it is an important determinant, which makes it useful in helping understand differences in potential liquidity risk within and between fund categories.

The same commenter has also suggested that the same approach of measuring liquidity risk does not consider the usage of derivatives in managing volatile flows, noting that they are often more liquid than their underlying assets.[1070] We acknowledge that derivatives could play a role in managing fund flows. As is the case for corporate bond holding data, data on fund holdings of derivatives is limited so our analysis of holdings level data was necessarily limited to U.S. equity funds.

C. Benefits and Costs, and Effects on Efficiency, Competition, and Capital Formation

Taking into account the goals of the final liquidity regulations and the economic baseline, as discussed above, this section discusses the benefits and costs of the final liquidity regulations, as well as the potential effects of the final liquidity regulations on efficiency, competition, and capital formation. This section also discusses reasonable alternatives to rule 22e–4 and the disclosure and reporting requirements regarding funds' liquidity risk and liquidity risk management.

1. Rule 22e–4

a. Summary of Rule 22e–4's Requirements

Rule 22e–4 will require each fund to establish a written liquidity risk management program. The rule specifies that a fund's liquidity risk management program shall include the following required program elements: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments based on asset class, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment that would suggest a different classification for that investment;[1071] (iii) determining and periodically reviewing a highly liquid investment minimum and adopting and implementing policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its highly liquid investment minimum; (iv) prohibiting the fund's acquisition of ''illiquid investments'' (that is, any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment) if, following the acquisition, the fund would hold more than 15% of its net assets in assets that are illiquid investments; (v) requiring a fund whose illiquid investments that are assets exceed 15% of its net assets to conduct certain board reporting; and (vi) for funds that engage in, or reserve the right to engage in, redemptions in kind, establishing policies and procedures regarding how and when it will engage in such redemptions in kind.[1072] A fund's board, including a majority of the fund's independent directors, will be required to provide general oversight of the fund's liquidity risk management program, but the board would not have to approve the fund's highly liquid investment minimum.[1073] The fund will be required to designate the fund's adviser or officer(s) responsible for administering the program, and such designation is required to be approved by the fund's board of directors.[1074] The fund's board will also be required to review, at least annually, a written report prepared by the fund's investment adviser or officer(s) administering the liquidity risk management program reviewing the adequacy and effectiveness of the implementation of the fund's liquidity risk management program, including the fund's highly liquid investment minimum, and the effectiveness of its implementation.[1075]

Rule 22e–4 also includes certain recordkeeping requirements. A fund will be required to keep a written copy of its liquidity risk management policies and procedures, as well as copies of any materials provided to the fund's board in connection with the approval of the initial liquidity risk management program and annual board reporting requirement.[1076] A fund will also be required to keep a written record of how its highly liquid investment minimum, and any adjustments thereto, were determined.[1077]

[1064] The Commission and Commission staff have cautioned that high yield securities may be considered to be illiquid, depending on the facts and circumstances. *See* Interval Fund Proposing Release, *supra* footnote 41; *see also* SEC Investor Bulletin, What Are High-Yield Corporate Bonds?, SEC Pub. No. 150 (June 2013), *available at http://www.sec.gov/investor/alerts/ib_high-yield.pdf* (noting that high-yield bonds may be subject to more liquidity risk than, for example, investment-grade bonds). *But see* Who Owns the Assets?, *supra* footnote 378 (discussing the liquidity characteristics of high-yield bond funds in depth, and noting that these funds have weathered multiple market environments, and are generally managed with multiple sources of liquidity).

[1065] *See, e.g., supra* footnote 377 and accompanying text (discussing the settlement cycles associated with transactions in certain foreign securities); *see also* Reuters, *Fitch: Close Look at EM Corporate Bond Trading Reveals Liquidity Risks* (Apr. 16, 2015), *available at http://www.reuters.com/article/2015/04/16/idUSFit91829620150416. But see* Who Owns the Assets?, *supra* footnote 378 (discussing the liquidity characteristics of emerging market debt funds in depth, and noting that these funds tend to hold a portion of their assets in developed market government bonds (providing further liquidity), generally establish limits on less liquid issuers, and generally maintain allocations to cash for liquidity and rebalancing purposes).

[1066] *See supra* footnotes 99–100 and accompanying text.

[1067] DERA Study, *supra* footnote 95, at 16–24.

[1068] ICI Comment Letter II.

[1069] DERA Study, *supra* footnote 95, at 23–24, 37.

[1070] ICI Comment Letter II.

[1071] Rule 22e–4 (b)(1)(ii).

[1072] Proposed rule 22e–4(b)(2)(iv).

[1073] Proposed rule 22e–4(b)(3)(i).

[1074] Proposed rule 22e–4(b)(3)(iii).

[1075] Rule 22e–4(b)(3)(ii).

[1076] Rule 22e–4(c)(1) and (2).

[1077] Rule 22e–4(c)(3).

In addition, two types of funds are subject to tailored requirements by the final rule. First, funds that primarily hold highly liquid assets do not have to establish a highly liquid investment minimum as part of their liquidity risk management programs.[1078] Second, ETFs are required to assess and manage liquidity risk with respect to certain additional factors tailored to the specific risks of ETFs.[1079] However, an ETF that meets the final rule's definition of an ''In-Kind ETF'' is not required to establish a highly liquid investment minimum or to classify its individual portfolio holdings.[1080]

In addition to the special treatment of In-Kind ETFs and primarily highly liquid funds, the final rules differ from the proposed version in several ways that may have economic consequences: (1) It integrates the definition of illiquid investments subject to the 15% illiquid investment limit as a part of the portfolio classification process, requiring the consideration of market, trading, and investment-specific factors and market depth in determining whether an investment is illiquid, as well as the periodic review of this assessment at least monthly; (2) it reduces the number of categories used to classify portfolio investment liquidity from six to four and requires fewer long-term liquidity projections; (3) it simplifies portfolio position classification by allowing them to be based on asset classes, with customized exceptions for individual positions where necessary; [1081] (4) it does not prohibit the acquisition of less liquid investments if a fund goes below its highly liquid investment minimum, but instead requires that a fund report to its board if it goes below its highly liquid investment minimum, and, if the shortfall lasts more than 7 consecutive calendar days, also requires reporting to the Commission; (5) it requires that a fund's board approve and annually review a report concerning its liquidity risk management program, but generally does not require the board to approve the highly liquid investment minimum (except in some circumstances) or material changes to these programs; (6) it requires that a fund assess its liquidity risk with respect to several factors, where applicable, in both stressed and normal market conditions, whether its strategy is appropriate for an open-ended fund, and whether its strategy involves a concentrated portfolio or large positions in particular issuers; [1082] (7) it requires that principal underwriters or depositors of UITs to determine, on or before the date of the initial deposit of portfolio securities into a UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities that it issues; and (8) requires that In-Kind ETFs offer daily transparency by posting on the ETF's Web site on each day that the national securities exchange on which the fund's shares are listed is open for business, before commencement of trading of fund shares on the exchange, the identities and quantities of the securities, assets or other positions held by the fund, or its respective master fund, that will form the basis for the fund's calculation of net asset value at the end of the business day.

b. Benefits

Rule 22e–4, as adopted, should produce the same broad benefits for current and potential fund investors as discussed in the proposal. Where appropriate, we discuss below any changes in these benefits due to differences between the proposed and final rules. Specifically, the liquidity risk management program requirements are likely to improve investor protection by decreasing the chance that some funds may be unable to meet their redemption obligations, would meet such obligations by diluting the fund's shares, or would meet such obligations through methods that would have other adverse impacts on non-redeeming investors (*e.g.,* increased risk exposure and decreased liquidity). To the extent that some funds do not currently meet the liquidity risk management standards required by the rule—either by meeting the rule's minimum baseline requirements for fund assessment and management of liquidity risk or via alternative liquidity risk management approaches—investor protection will be enhanced by imposing these minimum requirements on funds.

We believe that the liquidity risk management program requirement should promote improved alignment of the liquidity of the fund's portfolio with the fund's expected (and reasonably foreseeable) levels of redemptions. As discussed above, rule 22e–4 will require each fund to classify the liquidity of its portfolio investments in assessing its liquidity risk, and to determine a highly liquid investment minimum to increase the likelihood that the fund will hold adequate liquid investments to meet redemption requests without significant dilution. Each fund will have flexibility to determine the particular investments that it holds in connection with its highly liquid investment minimum. Assets eligible for inclusion in a fund's highly liquid investment minimum could include a broad variety of securities, as well as cash and cash equivalents. While one fund may conclude that it is appropriate to hold a significant portion of its assets that are highly liquid investments in cash and cash equivalents, another could decide it is appropriate to hold assets that are convertible to cash within longer periods (but not exceeding three business days) as the majority of its highly liquid investments. The highly liquid investment minimum requirement should allow funds to continue to meet a wide variety of investors' investment needs by obliging funds to maintain appropriate liquidity in their portfolios. The proposed rule would have required funds to set a firm three-day liquid asset minimum, prohibiting the acquisition of relatively less liquid assets until a fund was back above its minimum, instead of allowing them to operate below the minimum with board notification, so the final rule should mitigate any unfavorable market effects related to the systematic purchase or sale of investments once a strict minimum was exceeded. In extreme cases—for example, if investments that the fund sought to purchase were trading at fire sale prices due to a market event—a fund could go below its minimum to trade opportunistically. However, that might cause the fund to operate below its highly liquid investment minimum for more than 7 consecutive calendar days, requiring reporting to the fund's board and the Commission within one business day, so funds may be hesitant to take advantage of attractive market prices when they are close to their minimum under the final rule. The ability to deviate from the minimum for up to 7 consecutive calendar days with required reporting at the next regular board meeting, or for longer periods provided the fund reports to the board and the Commission, could also reduce the likelihood that funds set artificially low minimums, which would be less protective of investors than a minimum with some flexibility built in such as the one we are adopting. The limitation on the acquisition of assets that are illiquid investments to no more than 15% of net assets, along with the corresponding enhancements to how investment illiquidity is assessed, complements the

[1078] Rule 22e–4(b)(1)(iii)(A).

[1079] Rule 22e–4(b)(1)(iii)(D)–(E).

[1080] *See infra* footnote 846 and accompanying text for the definition of ''In-Kind ETF.''

[1081] *See supra* footnote 408 and accompanying text.

[1082] Rule 22e–4(b)(1)(iii)(A)–(C).

highly liquid investment minimum requirement by increasing the likelihood that a fund's portfolio is not overly concentrated in investments whose liquidity is limited. Furthermore, the additional board reporting requirements triggered when a fund's illiquid investments that are assets exceed 15% of net assets decreases the likelihood that a fund's portfolio is overly concentrated in investments classified as illiquid for an extended period of time without board oversight.

We believe that the rule also will decrease the probability that a fund will need to meet redemption requests through activities that can materially affect the fund's NAV or risk profile or dilute the interests of fund shareholders. For example, when a fund is insufficiently liquid or does not effectively manage liquidity and is faced with significant redemptions, or both, it may be forced to sell portfolio investments under unfavorable circumstances, which could create significant negative price pressure on those investments.[1083] This, in turn, could disadvantage non-redeeming shareholders by decreasing the value of those shareholders' interests in the fund.[1084] Even if a fund were to sell the most liquid portion of its portfolio to meet redemption requests, which would minimize the loss in fund value due to the price impact of selling, these asset sales could decrease the liquidity of the fund portfolio, potentially creating increased liquidity risk for non-redeeming shareholders. As discussed above, staff analysis is consistent with the hypothesis that U.S. equity funds may disproportionally sell more liquid assets, especially when facing significant outflows, as opposed to selling a *pro rata* ''strip'' of the fund's portfolio assets, which minimizes price impact on a fund in the short term, but ultimately decreases the liquidity of the fund's portfolio.[1085] Short-term borrowings by a fund to meet redemption requests could also disadvantage non-redeeming shareholders by leveraging the fund, which requires the fund to pay interest on the borrowed funds (although, in some instances, the costs of borrowing may be less than the costs of selling assets to meet redemptions) and magnifies any gains or losses to non-redeeming shareholders. Moreover, the costs of borrowing (that is, the costs associated with maintaining a committed line of credit, as well as interest expenses associated with drawing on a credit line) could be passed on to fund shareholders in the form of fund operating expenses, which adversely affect a fund's NAV. To the extent that the program requirement results in liquidity risk assessment and management that enhance funds' ability to meet redemption obligations, it will be less likely that a fund takes actions to pay redemptions that cause dilution or have other adverse impacts on non-redeeming shareholders.

The potential negative consequences of asset sales undertaken to pay fund redemptions could create early redemption incentives in times of liquidity stress, or a ''first-mover advantage.''[1086] For example, academic studies have suggested that an incentive exists for market participants to front-run trades conducted by a fund in response to significant changes in fund flows.[1087] This suggests that sophisticated fund investors could anticipate that significant fund outflows could lead a fund to conduct trades that would disadvantage non-redeeming shareholders, which could create an incentive to redeem ahead of such trades. If investors' redemptions are motivated by a first-mover advantage, this could lead to increasing levels of redemptions, and as the level of outflows from a fund increases, the incentive to redeem also increases. Any negative effects on non-redeeming shareholders thus could be magnified by a first-mover advantage to the extent that this dynamic produces growing redemptions and decreasing portfolio liquidity. The first-mover advantage is more commonly discussed with respect to money market funds, especially institutional prime money market funds that operated under a fixed NAV prior to the 2014 reform (that will become effective October 14, 2016), but the incentives that have been argued to create the first-mover advantage among those funds could in theory exist (in possibly weaker form) among other open-end funds. We agree with commenters that the empirical support for the existence of a first-mover advantage is not conclusive and that the mutual fund industry has been able to successfully navigate periods of historical market stress.[1088] While we understand that fund investors may not have historically been motivated to redeem on account of a perceived (or actual) first-mover advantage during previous periods of stress, we cannot predict how investors may behave in the future. To the extent that economic incentives exist to redeem fund shares prematurely, such redemptions could lead to investor dilution as discussed above, and the possibility of protecting against this potential dilution could be one benefit of rule 22e–4.

The program requirement aims to promote a minimum baseline for liquidity risk management in the fund industry. This should promote investor protection by elevating the overall quality of liquidity risk management across the fund industry, reducing the likelihood that funds will meet redemption obligations only through activities that could significantly dilute shareholders or adversely affect fund risk profiles. Shareholders in funds that already engage in strong liquidity risk management practices may be less likely to benefit from the program requirement, or may benefit less, than shareholders in funds that do not employ equally rigorous practices. We cannot quantify the total benefits to fund operations and investor protection that we discuss above, but to the extent that staff outreach has noted that some funds currently have no (or very limited) formal liquidity risk management programs in place, rule 22e–4 would enhance current liquidity risk management practices.

Finally, to the extent that the program requirement results in funds less frequently needing to sell portfolio investments in unfavorable market conditions in order to meet redemptions, the requirement also could lower potential spillover risks that funds could pose to the financial markets generally. If, as a result of the program requirement, a fund was prepared to meet redemption requests in other ways, the rule could decrease the

[1083] *See* Coval & Stafford, *supra* footnote 86 (discussing how mutual fund fire sales impact asset prices).

[1084] While the impact of fire sales on asset prices may be short lived in some instances, Coval and Stafford show that the impact of fire sales can often take many months to dissipate. *Id.*

[1085] *See supra* footnote 1038 and accompanying text.

[1086] *See supra* footnote 85 and accompanying text (discussing the possibility of a first-mover advantage with respect to the timing of shareholder redemption from funds, but also arguments that such a first-mover advantage does not exist in funds, as well as arguments that even if incentives to redeem ahead of other shareholders do exist, this does not necessarily imply that investors will in fact redeem *en masse* in times of market stress).

[1087] *See* Coval & Stafford, *supra* footnote 86; Dyakov & Verbeek, *supra* footnote 86.

[1088] *See, e.g.,* Comment Letter of Wellington Management Group LLP on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 4; ICI FSOC Notice Comment Letter, *supra* footnote 68, at 7; Nuveen FSOC Notice Comment Letter, *supra* footnote 85, at 10; Dechert Comment Letter; Vanguard Comment Letter; Comment Letter of the Independent Trustees of Fidelity Fixed Income and Asset Allocation Funds (Jan. 13, 2016) (all arguing that evidence shows that fund shareholders' redemptions are largely driven by other concerns rather than a theoretical first-mover advantage).

risk that the fund might indirectly transmit stress to other market sectors and participants. The rule should help ensure that all funds, not just those with liquidity risk management practices currently in place, operate in a manner that lessens the chance of spillover risks. We are unable to quantify this potential benefit because we cannot predict the extent to which funds would enhance their current liquidity risk management practices as a result of rule 22e–4, or predict the precise circumstances that could entail negative spillover effects in light of less-comprehensive liquidity risk management by funds.[1089]

Commenters generally did not disagree with the benefits of the proposed rule, with any exceptions noted in the above discussion of rule 22e–4's benefits. As discussed above, the final rule differs from the proposal in several key respects, but it largely preserves the proposed rule's benefits. First, funds that primarily hold assets that are highly liquid investments are not required to establish a highly liquid investment minimum, so any benefits that might have accrued to shareholders of these funds under the proposed rule may be diminished. However, these funds are less likely to be exposed to the liquidity risks discussed above to the same degree as other funds, so any loss in benefits should be negligible and is likely to be less than the costs of establishing a minimum. Similarly, In-Kind ETFs are exempt from certain aspects of the final rule, because the benefits of those aspects of the final rule would have been insignificant for In-Kind ETFs. The final rule instead achieves benefits with respect to ETFs by replacing these less-apposite requirements with new tailored requirements for ETFs that are designed to promote the proper management of ETF liquidity, focused on preventing the arbitrage mechanism that keeps ETFs priced properly from being adversely impacted by a lack of liquidity. In addition, the new requirement for daily transparency will permit the sophisticated authorized participants that directly interact with the ETF to effectively evaluate the liquidity of the ETF's holdings. Since nearly all In-Kind ETFs already provide daily transparency as a matter of course, we believe no additional costs arise for In-Kind ETFs.[1090]

Second, modifications to the proposal allow funds to classify portfolio investments via assignments to asset classes as a default, but require them to classify specific investments separately if they merit special attention,[1091] which preserves the benefits of investment liquidity classification without imposing the additional cost of individually classifying each portfolio position in all cases. Third, the rule's simplification of classification categories from six to four, with shorter-term horizons, still provides a reasonably nuanced view of a fund portfolio's position-level liquidity while responding to commenters' concerns that the proposed rule's more detailed classification would have required too much precision at long-term horizons and would not accurately reflect a fund's actual liquidity profile. Fourth, the final rule should preserve the benefits of board oversight of a fund's liquidity risk management program without requiring that board members approve the highly liquid investment minimum (except in certain circumstances). The modifications to the board's role make the board's involvement in the liquidity risk management more consistent with the board's historical duty to provide oversight (instead of day-to-day management).

Changes to the final rule could also provide additional benefits relative to the proposal. While the final rule clarifies that the factors a fund should consider in devising a liquidity risk management program may be considered as appropriate, it also requires that funds consider two additional factors—whether a given strategy is appropriate in an open-ended fund or involves a concentrated portfolio or concentrated positions in particular issuers—which could improve the risk management program's effectiveness for funds that do not already consider these factors. The final rule also more precisely specifies criteria for both the initial and ongoing assessment of whether investments should be classified as illiquid under the 15% illiquid investment limit by tying it to the same criteria used in assigning investments to other liquidity categories (including considering relevant market, trading, and investment-specific considerations, and market depth), which should reduce a firm's compliance burdens relative to the proposed rule while at the same time providing a more precise picture of how exposed to illiquid investments a given fund is. Finally, while UITs were not subject to rule 22e–4 under the proposal, the final rule requires that the principal underwriter or depositor of a UIT will be required to determine, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of illiquid investments the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues. This enhancement of the final rule over the proposal could benefit investors by reducing the likelihood that a UIT could be created that holds an excessive amount of illiquid securities, which in turn would reduce the liquidity risk associated with UITs.

c. Costs

One-Time and Ongoing Costs Associated With Program Establishment and Implementation

Funds will incur one-time costs to establish and implement a liquidity risk management program in compliance with rule 22e–4, as well as ongoing program-related costs. As discussed above, funds today employ a range of different practices, with varying levels of quality, for assessing the liquidity of their portfolio investments and managing fund liquidity risk. Accordingly, funds whose practices regarding portfolio investment liquidity classification and liquidity risk assessment and management most closely align with the liquidity risk management program requirements would incur relatively lower costs to comply with rule 22e–4. Funds whose practices for classifying the liquidity of their portfolio investments and for assessing and managing liquidity risk are less thorough or not closely aligned with the rule, on the other hand, may incur relatively higher initial compliance costs.

Some commenters suggested that the estimates of costs in the rule proposal were significantly understated and that the true costs of compliance with the rule requirements would likely exceed the expected benefits.[1092] Another

[1089] The ability of the Commission to perform such analysis is limited by difficulties in both gathering data about funds' liquidity risk management practices and quantifying such data.

[1090] We note that ETMFs are not required to provide such daily transparency under their orders, and thus would need to choose to provide such daily transparency if they wished to take advantage if this provision. Choosing to take advantage of this provision is within the discretion of ETFs that could potentially qualify as In-Kind. As discussed in the PRA section below, we estimate that not all ETFs would qualify as In-kind, either because of their use of cash for redemptions or because of their choice not to provide daily transparency of holdings.

[1091] *See supra* footnote 1064 and accompanying text.

[1092] *See* CFA Comment Letter; Cohen & Steers Comment Letter; Dechert Comment Letter; Dodge & Cox Comment Letter; Federated Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter; LSTA Comment Letter; MFDF Comment Letter; SIFMA Comment Letter I; T. Rowe

Continued

commenter suggested that costs were underestimated because other fund systems would also have to be modified to ensure compliance with the entirety of the requirements of the rule.[1093] For example, if funds are required to maintain or target a certain level of fund liquidity, then the trade order management system would have to be modified to ensure accurate monitoring of such limitations. We have revised the discussion of costs to both reflect new information on the potential costs of compliance and changes in the rule that are designed to lessen the potential costs. Specifically, we use estimates provided by commenters to approximate costs for each fund complex under the proposed rule and then qualitatively discuss how changes to the proposed rule affect these estimates. Because most changes to the final rule reduce requirements for some segment of funds relative to the proposal, the estimates below can generally be considered an upper bound on fund costs except where explicitly noted.

Staff estimates of the one-time costs in the proposal, which ranged from $1.3 million to $2.25 million per fund complex, were partly based on estimates from another Commission rulemaking.[1094] Some commenters expressed concern about the calculation of this estimate because it was based on assumptions driven by analysis performed with respect to money market fund reform.[1095] While some of the large scale system modifications required by rule 22e–4 will be similar to those required for money market funds due to regulatory reform, and we attempted to adjust our estimates for differences between the two rules, one commenter suggested that the process of classifying portfolio assets was more akin to a fund's costs in analyzing the value of its assets.[1096] We acknowledge that could be an informative approach to estimating costs, but absent concrete estimates associated with that approach, which the commenter did not provide, we have updated our estimates based on the limited quantitative information available from commenters.[1097] One commenter estimated that there would be $2 million in initial implementation costs and more than $650,000 in annual recurring costs for automating a classification process that would have to manage 63,000 different portfolio positions.[1098] Another commenter estimated the costs of building a system to classify the liquidity of its investments, which is not currently commercially available, in the millions of dollars to manage their 44,000 different portfolio positions.[1099] We use the former as a basis for our analysis because it is comparable in magnitude to the latter.[1100] Because there are likely to be economies of scale in developing the policies, procedures, and systems required to comply with rule 22e–4, we approximate the cost per fund complex by assuming fixed costs constitute 30% of the commenter's estimates, and extrapolate using the number of funds per complex to scale variable costs up or down.[1101] In addition, because the process of classifying assets under the proposal would likely constitute a majority of a fund's costs, we assume the classification process constitutes approximately 75% of a fund's cost of complying with proposed rule 22e–4. This method results in one-time costs for funds under the proposed rule that range from approximately $0.8 million to $10.2 million, that the average cost per fund complex is $1 million, and the aggregate cost is approximately $855 million. The estimated range of costs using this approach is wider than our approach in the proposal, but the estimated aggregate cost is lower than our initial estimate of $1.3 billion. While these estimates would change if we varied our assumption that fixed costs comprise 30% of the commenter's estimate—for example, increasing this percentage would compress the range of costs and the aggregate may increase or decrease—they are of the same order of magnitude as our estimates in the proposal.

These estimated one-time costs are attributable to the following activities, as applicable to each of the funds within the complex: (i) Developing policies and procedures relating to each of the required program elements,[1102] and the related recordkeeping requirements of the rule; (ii) planning, coding, testing, and installing any system modifications relating to each of the required program elements; (iii) integrating and implementing policies and procedures relating to each of the required program elements (including classifying the liquidity of each of the fund's portfolio investments pursuant to rule 22e–4(b)(1)(ii)), as well as the recordkeeping requirements of the rule; (iv) preparing training materials and administering training sessions for staff in affected areas; and (v) costs associated with educating the fund's board and obtaining approval of the program. These activities are likely to cut across many different functional groups within a fund or fund complex, including legal, compliance, risk, portfolio management, accounting, and technology staff. To the extent that some of the systems needed to support the required program elements are developed by third parties, fund complexes may be able to implement their liquidity risk management programs for less than our estimated cost of developing these

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Comment Letter; Vanguard Comment Letter; Voya Comment Letter.

[1093] *See* Federated Comment Letter.

[1094] *See* Proposing Release, *supra* footnote 9, at n.702 and accompanying text.

[1095] *See* FSR Comment Letter; SIFMA Comment Letter I.

[1096] *See* Dechert Comment Letter.

[1097] As in the proposal, the estimates assume that each fund would not bear all of the costs (particularly, the costs of systems modification) on an individual basis, but instead that these costs would likely be allocated among the multiple users of the systems, that is, each of the members of a fund complex. Accordingly, we expect that, in general, funds within large fund complexes would incur fewer costs on a per fund basis than funds within smaller fund complexes, due to economies of scale in allocating costs among a group of users.

[1098] *See* Invesco Comment Letter.

[1099] *See* T. Rowe Comment Letter.

[1100] We estimate that there were 146 funds in the second commenter's fund complex as of December 31, 2015, which implies an estimated cost of approximately $4 million using our estimation procedure, in line with the commenter's statement that its cost would be ''in the millions.'' *See supra* footnote 1094 for discussion of the estimation procedure.

[1101] We use CRSP U.S. Mutual Fund Database to obtain the number of funds for each complex. As of December 31, 2015, there were 7551 mutual funds (excluding money market funds and annuities), 1484 ETFs (excluding non-40-act ETFs, ETNs, and Commodity ETFs), and 847 fund complexes (334 of them with only one fund). The commenter, Invesco, consisted of 87 funds as of that date, and we assume the fixed cost component of their estimate is $0.6 million (30% of $2 million). The remaining $1.4 million is assumed to be a variable cost that scales linearly with the number of funds. To arrive at a total cost of 22e–4, each of these estimates is scaled so that the classification process constitutes 75% of the total costs of proposed rule 22e–4.

[1102] Specifically, a fund would be required, where applicable, to establish policies and procedures relating to: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments, as well as at-least-monthly reviews of the fund's liquidity classifications; (iii) the requirements to determine and periodically review a highly liquid investment minimum, and to adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investments below its highly liquid investment minimum; (iv) the requirement to limit the fund's acquisition of illiquid investments over 15% of the fund's net assets; and (v) for funds that engage in, or reserve the right to engage in, redemptions in kind, the requirement to establish policies and procedures regarding how it will engage in such redemptions in kind. The final rule also provides for a tailored program for ETFs that redeem in kind, excluding them from the classification and highly liquid investment minimum requirements, but requiring them to consider additional factors as part of their liquidity risk assessment and management that reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs. The final rule also provides an exclusion from the highly-liquid investment minimum requirement for funds that primarily hold highly liquid investments. The rule also provides for board oversight of the liquidity risk management program.

programs themselves, but the final rule emphasizes that it is ultimately each fund's responsibility to classify its positions, so these potential cost reductions may be limited. For example, we understand that third parties have already developed programs that include certain market, trading, and investment-specific factors which could be useful in classifying the liquidity of portfolio investments, and are currently available for purchase.[1103]

We have also revised our estimates of the ongoing costs of complying with rule 22e–4 using the same approach and based on the same commenter's estimate as above for one-time costs. While our analysis in the proposal assumed ongoing costs ranged from 10% to 25% of the one-time costs resulting from the rule, we've reduced the low end of the range to 5% to reflect changes from the Proposing Release, discussed below, that should lower some funds' compliance burdens, and increased the high end of the range to 32.5% to reflect the commenter's estimate that ongoing costs for their fund under the proposed rule would be $0.65 million (compared to one-time costs of $2 million). We again extrapolate from the commenter's estimate as above to arrive at a minimum and maximum cost estimate for each fund, which implies a range of ongoing costs across all funds of $40,000 to $3.3 million per fund complex. These costs are attributable to the following activities, as applicable to each of the funds within the complex: (i) Classification of the liquidity of each of the fund's portfolio investments, as well as at-least-monthly reviews of the fund's liquidity classifications (rule 22e–4(b)(1)(ii)); (ii) periodic review of the fund's liquidity risk (rule 22e–4(b)(1)(i)); (iii) periodic review of the adequacy of the fund's highly liquid investment minimum (rule 22e–4(b)(1)(iii)(A)(2)); (iv) systems maintenance; (v) additional staff training; (vi) approval, annual review, and general oversight by the board of the fund's liquidity risk management program (rule 22e–4(b)(2)); and (viii) recordkeeping relating to the fund's liquidity risk management program (rule 22e–4(b)(3)).[1104] Relative to the proposed rule, the final rule reduces the responsibilities of a fund's board, which is not required to approve the fund's highly liquid investment minimum or material changes to the fund's liquidity risk management program, which should reduce the board-related costs embedded in the above estimates of rule 22e–4's one-time and ongoing costs.

The original classification scheme would have mandated significant micro-level analysis of instruments not currently conducted by fund advisers according to many commenters.[1105] Such an analysis would have required entirely new systems for many fund complexes and would have required funds to incur significant expenses (especially for smaller fund complexes).[1106] The new classification system lowers the potential costs of compliance with the liquidity classification requirement by (i) reducing the number of classification categories reduced from six to four, (ii) only requiring ''days-to-cash'' estimates out to 7 days, (iii) allowing funds to generally classify based on asset class (subject to an exception process), (iv) changing the process for considering position size to reduce complexity, and (v) simplifying the classification factors to be considered into a single requirement that funds consider market, trading, and investment-specific data when classifying an investment. As a whole, these changes should lower the potential costs of compliance with the classification requirement relative to the proposal estimates above without significantly reducing the potential benefits of the requirement.

Specifically with respect to position size, commenters argued that evaluating ''days-to-cash'' was inherently biased against large funds and could lead to ''plain vanilla'' funds that generally invest in only highly-liquid securities (*e.g.,* S&P 500 funds) being classified as highly illiquid if they manage a large amount of assets.[1107] The rule now only requires a fund to determine whether trading varying portions of a position in a particular portfolio investment or asset class, in sizes that the fund reasonably anticipates trading, is reasonably expected to significantly affect its liquidity. This change should prevent large ''plain vanilla'' funds from appearing to be very illiquid under the classification scheme while still maintaining the idea that position size is an important consideration in the evaluation of liquidity. Relative to the proposed rule, this should reduce the costs associated with determining how position size affects the number of days required to liquidate an investment and eliminate the cost of classifying separate portions of a position into separate liquidity buckets.

The classification process has also been revised in response to commenter concerns about the need to evaluate whether an investment can be sold for cash without materially affecting the security's price, which investors could interpret as an indication that they can redeem out of funds at a known or protected NAV.[1108] One commenter expressed concern that if investors were given estimates of liquidity that are speculative or stale, or both, which might fail to predict liquidity with accuracy during periods of market stress, then funds could be potentially subject to significant litigation costs.[1109] The value impact component of the rule has been modified so that determinations of market impact can be based on a reasonable expectation that an investment can be converted to cash (or in some cases, sold or disposed of) without the conversion (or in some cases, sale or disposition) significantly changing the market value, rather than a price ''that does not materially affect the value of that asset immediately prior to sale.'' This modification in the definition should relieve funds of the need to develop precise security-by-security expectations of forward looking liquidity while still emphasizing the need to consider the potential market impact of buying or selling an investment, reducing compliance costs relative to the proposed rule.

Commenters also expressed concern about the use of third-party vendors in the process of liquidity classification.[1110] If only a few vendors were able to provide the necessary data, such data would likely cause significant expenses for the funds, and those expenses would likely be passed on, at least in part, to fund investors through

[1103] *See supra* footnote 323 and accompanying text (discussing Commission guidance on a fund's use of third-party service providers to obtain data to inform or supplement its consideration of the liquidity classification factors). We understand, based on staff outreach, that annual costs to subscribe to the liquidity classification services provided by third-party data and analytics providers currently range from $50,000–$500,000.

[1104] As discussed in greater detail below, we anticipate that, depending on the personnel (and/or third-party service providers) involved in the activities associated with administering a liquidity risk management program, certain of the estimated ongoing costs associated with these activities could be borne by the fund, and others could be borne by the adviser.

[1105] *See* Credit Suisse Comment Letter; Dechert Comment Letter; Federated Comment Letter; Fidelity Comment Letter; Oppenheimer Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[1106] *See* Dechert Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; T. Rowe Comment Letter.

[1107] *See* Dodge & Cox Comment Letter; Oppenheimer Comment Letter; Vanguard Comment Letter; ICI Comment Letter I; ICI Comment Letter II; Invesco Comment Letter.

[1108] *See* ICI Comment Letter II.

[1109] *See* Dodge & Cox Comment Letter.

[1110] *See* Dechert Comment Letter; Federated Comment Letter; ICI Comment Letter I; ICI Comment Letter II; MFDF Comment Letter; Nuveen Comment Letter; SIFMA Comment Letter I; T. Rowe Comment Letter; Wells Fargo Comment Letter.

higher fees. Another commenter suggested that the cost of third-party liquidity data should be included in any estimate of the potential costs of the classification system because of the strong likelihood that all funds would need to subscribe to a third-party vendor to ensure compliance with the rule.[1111] As discussed in the proposal, we believe outsourcing program functions to vendors should, if anything, reduce compliance costs, and we noted that liquidity classification services already exist.[1112] In addition, our updated estimate of costs above is based on a large investment manager's estimate of constructing an internal system from scratch, so we would expect the cost of a vendor-based solution, which would be partially amortized across all of its clients, to be lower. The changes made to the classification system from the proposal could also lessen the costs associated with third-party vendors relative to the proposed rule. In particular, to the extent that requiring less precision via fewer classification categories and shorter time horizons, allowing funds to generally classify according to asset class (subject to an exception process), and requiring a simpler position size evaluation criterion reduce the scope and intensity of the investment classification process, funds may not rely as much on vendors to comply with the rule, and vendors themselves may experience reduced costs in developing programs, leading to lower prices if they pass on some of the savings to funds.

If all funds use a small number of third-party vendors, there could be other indirect, but potentially large, costs. According to one commenter, the vendors could become de facto liquidity "rating agencies" and their "upgrades" and "downgrades" of asset liquidity could have systemic effects on the market.[1113] For example, if a vendor were to remove a widely-held investment from the highly liquid investment category, then many funds could simultaneously attempt to sell that investment, which could harm both fund investors and the wider market. Given the data limitations and difficulties in estimating liquidity for many less liquid investments, that potential effect might be driven by error-prone modeling instead of true changes in liquidity. We emphasize above that while third-party products can serve as a useful input to the classification process, it is the fund's responsibility to determine the liquidity of each investment, which should lessen the potential for systemic issues by reducing fund reliance on third-party vendors and allowing more of the necessary liquidity analysis to be performed within each fund complex.[1114]

Several additional components of the final rule will affect costs relative to the proposal. First, by excluding any fund that primarily holds assets that are highly liquid investments from the requirement to have a highly liquid investment minimum, the final rule avoids imposing any potential costs related to the minimum on some funds that would benefit less from having a minimum. It is possible that some funds that do not qualify as primarily highly liquid funds will incur the costs of establishing a minimum without a significant benefit. Second, whereas funds may currently use back-office operations to limit their acquisition of illiquid assets under exiting Commission guidelines, the final rule's enhanced illiquid investment standard may require funds to incur direct costs associated with a shift of these operations to other business functions (we also discuss indirect costs associated with the enhanced illiquid investment limit below).[1115] Third, the final rule does not require In-Kind ETFs to establish a highly liquid investment minimum or classify the liquidity of their portfolios, which will reduce their costs relative to other funds, but it also requires them—as it does all ETFs—to consider several additional factors as part of their liquidity risk programs, which may increase their implementation costs. Finally, principal underwriters or depositors of UITs, which had no liquidity risk requirements under the proposed rule, will now have to incur a one-time cost on or before the date of the initial deposit of the portfolio securities into the UITs to assess whether the amount of illiquid investments they expect the UITs to hold is compatible with the redeemable nature of the securities they issue. This cost should be comparable in magnitude to incurring a fraction of the ongoing costs of an open-ended fund under rule 22e–4 because it involves an analysis that is similar to complying with the rule's 15% illiquid investment limit without having to establish all of the systems and processes that are required to perform that task on a continuing basis. Assuming that this activity accounts for 20% of an open-ended fund's ongoing costs, we estimate that it would cost a UIT $8,000 to $52,000, and note that it will only be incurred by UITs that are launched after the rule's compliance date.[1116] UITs are already required to consider which of their restricted securities are illiquid, so this estimate should be considered an upper bound on the costs imposed on UITs by the rule. Finally, the rule's provision requiring board oversight when a fund's holding of illiquid assets exceed 15% of its net assets may impose additional costs on the fund to hold a special board meeting, including the cost of preparing materials for the board's deliberation, the cost of board members' time, as well as the cost of consultations with outside counsel.

Depending on the personnel (and/or third-party service providers) involved with respect to the activities associated with establishing and implementing a liquidity risk management program, certain of the estimated one-time costs could be borne by the fund, and others could be borne by the fund's adviser or other service providers. This cost allocation would be dependent on the facts and circumstances of a particular fund's liquidity risk management program, and thus we cannot specify the extent to which the estimated costs would typically be allocated to the fund as opposed to the adviser. Estimated costs that are allocated to the fund would likely be borne by fund shareholders in the form of fund operating expenses.

Certain elements of the program requirement may entail marked variability in related compliance costs, depending on a fund's particular circumstances and sources of potential liquidity risk. The process of classifying the liquidity of each of a fund's portfolio investments could give rise to varying costs depending on the fund's particular investment strategy. For example, a U.S. large cap equity fund would likely incur relatively few costs to obtain the data necessary to classify its portfolio positions, specifically given that, relative to the proposed rule, the final rule allows such a fund to generally classify its positions based on asset classes (subject to an exception process). On the other hand, funds that hold investments for which relevant market,

[1111] *See* Interactive Data Comment Letter.

[1112] See Proposing Release, *supra* footnote 9, at n.705 and accompanying text.

[1113] *See* ICI Comment Letter II.

[1114] *See supra* section III.C.1.b. (providing guidance on the appropriate use of data vendors).

[1115] *See supra* section III.C.4.a.

[1116] These figures are based on the same comment letter used to estimate one-time and ongoing costs for open-ended funds. We assume the costs associated with launching a UIT under rule 22e–4 are equivalent to 20% of the ongoing costs of a one fund complex. Under the assumptions above that ongoing costs for open-ended funds are 5% to 32.5% of their initial costs, fund complexes with one fund have estimated ongoing costs of approximately $40,000 to $260,000. Multiplying that range by 20% produces the UIT estimate.

trading, and other investment-specific data is less readily available, for which a general asset-class-based classification is more difficult to apply, or funds that require more exceptions to their asset-class-based classification would incur relatively greater costs associated with the classification of their portfolio positions' liquidity. In addition, funds with multiple sub-advisers may incur relatively more costs to coordinate the process of classifying position liquidity as well as monitoring whether the fund is compliant with its highly liquid investment minimum and the 15% illiquid investment limit.

Certain factors that the rule's guidance suggests a fund should consider in assessing its liquidity risk also could entail relatively greater costs, depending on the fund's circumstances. For instance, a fund with a relatively short operating history could incur greater costs in assessing the fund's cash flow projections than a similarly situated fund with a relatively long operating history. This is because the newer fund could find it appropriate to assess redemption activity in similar funds during normal and stressed periods (to predict its future cash flow patterns), which could entail additional costs to gather and analyze relevant data about these comparison funds. Also, a fund whose shares are held largely through omnibus accounts may wish to periodically request shareholder information from financial intermediaries in order to determine how the fund's ownership concentration may affect its cash flow projections. These data requests, and related analyses, could cause a fund to incur costs that another fund, whose shares are largely held directly, would not. A fund that deems it appropriate to establish and implement additional liquidity risk management policies and procedures beyond those specifically required under the rule also would incur additional related costs. While we recognize that, as described above, the costs to establish and implement a liquidity risk management program in compliance with rule 22e–4 will depend to some degree on the level of liquidity risk facing the fund, we are unable to quantify the various ways in which a fund's individual risks and circumstances could affect the costs associated with establishing a liquidity risk management program.

Commenters suggested that the proposed three-day liquid asset minimum requirement could have had a number of unintended consequences. As discussed above, if third-party vendors become de facto ''rating agencies'' for liquidity, then a liquidity minimum could force many funds to sell the same investments simultaneously after a liquidity ''downgrade,'' which could have a systemic impact on funds and the overall market.[1117] Similarly, if a fund were forced into predictable trading behavior during a market downturn because of the highly liquid investment minimum requirement, the liquidity and performance of that fund would be negatively impacted.[1118] It is possible that the proposed three-day liquid asset minimum requirements could have created these types of unintended consequences by prohibiting a fund from acquiring less liquid assets if it was below its three-day liquid asset minimum, but the final rule does not include this prohibition. Instead, as discussed above, a fund is only required to report to its board and, possibly, the Commission when it is below its highly liquid investment minimum. This requirement should provide fund management the flexibility to avoid forced, predictable trading behavior while maintaining the emphasis on effective liquidity risk management the minimum is designed to provide. While fund liquidity may vary more under this approach, the reporting requirements surrounding any shortfall, including a requirement to provide the fund's board with an explanation of how the fund plans to restore its minimum if a shortfall lasts more than 7 consecutive calendar days, should help provide oversight to prevent a fund from continually failing to meet its liquidity minimum. As a whole, this approach should result in lower costs for funds compared to the proposed three-day liquid asset minimum and, because we anticipate that lengthy breaches of the minimum will be relatively rare, it should not significantly decrease the benefits of having a highly liquid investment minimum.

One commenter suggested that investor choice could be negatively impacted because of the implementation and on-going costs of the liquidity risk management program.[1119] The commenter asserted that the costs could overwhelm small fund complexes and force them to either cease operations or consolidate with a larger complex.[1120] Most of the changes made to the rule since its proposal—exclusions for funds that primarily hold assets that are highly liquid investments and In-Kind ETFs, a reduction in the number of investment classification categories, and the ability to generally classify investments based on asset classes (subject to an exception process)—should decrease the estimated implementation and on-going costs compared to the proposal. Yet it remains possible that some fund complexes will still find the costs burdensome. While investor choice may be harmed if a fund is closed because the costs of the rule are burdensome, remaining funds will be better positioned to avoid the negative consequences of inadequate liquidity management if that fund exited because it was unable to provide a minimum acceptable baseline of liquidity. To the extent that there are funds that are currently able to provide effective liquidity risk management, but would be forced to cease operations because of the costs of complying with the rule (even after changes from the proposal that increase flexibility and decrease implementation and on-going costs), investor choice may be negatively affected.

A fund may incur costs if it reallocates its portfolio to correspond with its initial or subsequently modified highly liquid investment minimum, or if the rule's definition of an illiquid investment results in the fund holding more than 15% of its net assets in assets that are illiquid investments. While we are unable to anticipate how many funds may reallocate their portfolios for these two reasons, or the extent of such reallocation by any fund that does so, we anticipate that the transaction-related costs of any such reallocation will not be significant for most funds. This is because some funds may not need to reallocate their portfolios at all to correspond with their highly liquid investment minimum or the 15% illiquid investment limit, and those that do so would be able to gradually adjust their portfolios in order to buy and sell portfolio positions during times that are financially advantageous given the delayed compliance date. Thus, while a fund may reallocate its portfolio to comply with its highly liquid investment minimum and the 15% illiquid investment limit by the time of the compliance date, a fund would not be required to conduct transactions in portfolio investments in any particular timeframe prior to the compliance date. If a fund wishes to reallocate its portfolio by the compliance date, we anticipate that the compliance date would provide sufficient time to do so with relatively few associated transaction costs. Along with the transaction-related costs associated with any portfolio reallocation, we recognize that this reallocation in turn could affect

[1117] ICI Comment Letter II.

[1118] ICI Comment Letter II.

[1119] Charles Schwab Comment Letter.

[1120] *Id.*

the performance and/or risk profiles of funds that modify their composition, which in turn could result in costs associated with decreased investment options available to investors and any changes to the market for relatively less liquid investments; these costs are discussed below. Finally, it is worth noting that, because the rule excludes both In-Kind ETFs and funds that primarily hold assets that are highly liquid investments from the requirement of having a highly liquid investment minimum, these funds will not incur any of the costs associated with transactions, reduced fund performance, or altered risk profiles associated with a minimum, though they will still incur these costs as they apply to the rule's 15% illiquid investment limit.

Potential for Decreased Investment Options and Adverse Effects

We recognize that the rule requires a fund to determine the liquidity profile of its current portfolio and evaluate its potential liquidity needs, which could result in a fund concluding that its current portfolio lacks sufficient liquidity. This could lead a fund to modify its portfolio composition to meet its appropriate highly liquid investment minimum (*e.g.,* one commenter stated that funds may decrease their holdings of long-term municipal bonds) or to comply with the more specific 15% illiquid investment limit.[1121] The rule could therefore result in certain funds increasing their investments in relatively more liquid investments or altering the way in which their portfolios are managed, which in turn could affect the performance, tracking error, and/or risk profiles of these funds.[1122] This is most likely to affect funds that currently hold investments with relatively lower liquidity. Such modifications to funds' portfolio compositions could in turn decrease certain investment options available to investors or reduce investor returns. However, because these portfolio composition shifts are most likely to occur if a fund needs to adjust its existing liquidity level to comply with the rule, we anticipate that the potential for decreased yield is most likely to affect funds currently holding portfolios whose liquidity levels have the potential to create redemption-related liquidity risk for fund investors. Thus, the potential for decreased investment options for certain investors, and any related decrease in investment yield, has the potential offsetting benefit of decreased liquidity risk in the funds in which these investors hold shares. However, there could be other reasons funds may choose to invest in more liquid investments as a result of the rule even if this reallocation is not required, including the possibility that they do not want to appear less liquid than their peer funds in their publicly disclosed liquidity profile, or because increased disclosure requirements regarding the timing of a fund's redemption payments may result in funds holding more liquid investments.[1123]

We cannot quantify the number of funds that would need to significantly modify their portfolios' risk profile as a result of the rule because we lack the information necessary to provide a reasonable estimate. Such an estimate would depend on the number of funds that might need to modify their current portfolio composition as a result of the rule, as well as the availability of relatively liquid investments that can act as adequate substitutes to existing investments for those affected funds. We are unable to quantify the total potential costs discussed in this section because: (1) We cannot anticipate the highly liquid investment minimum that each fund would determine to be appropriate based on its liquidity risk or the extent to which fund holdings exceed the rule's more specific 15% illiquid investment limit relative to the current 15% guideline; (2) we cannot determine what relatively more liquid investments funds would purchase as substitutes; (3) we are unable to estimate the resulting changes to funds' yields and risk profiles, nor how investors would react to these changes. In-Kind ETFs and funds that primarily hold assets that are highly liquid investments will not be subject to the highly liquid investment minimum, so this may reduce the aggregate costs associated with decreased investment options relative to the proposed rule. Commenters did not specifically object to our assessment of the rule's impact on investment options in the proposed rule.

Market for Relatively Less Liquid Investments

As discussed above, the rule could result in certain funds increasing their investments in relatively more liquid investments, which would effectively mean that these funds would decrease their investments in relatively less liquid investments. If funds decrease their investments in relatively less liquid investments, the market for those investments could become even less liquid. This could discourage new issuances of similar investments and decrease the liquidity of relatively less liquid investments that are still outstanding. The impact of decreased investment by funds in relatively less liquid markets will depend on how much current investment in those markets is driven by the funds, which varies between markets. Further, these market effects could be partially offset if other opportunistic investors with greater capacity to hold less liquid investments are attracted to the market by any lower prices for these investments that result if funds decrease their holdings of less liquid investments.[1124] In addition, if the rule leads funds to better assess the liquidity risk associated with certain investments, any decrease in the prices of these investments could reflect more efficient pricing of the investments (that is, risk would be better reflected in asset prices than it is currently). Because funds currently are not required to report or disclose information concerning the liquidity of their investments, and because we cannot anticipate the highly liquid investment minimum that each fund would determine to be appropriate based on its liquidity risk or the extent to which the more specific 15% illiquid investment limit will apply to current fund holdings, it is difficult to predict the extent to which the rule could lead funds to modify their portfolio holdings, or whether such modifications would discourage the issuance of certain investment. As a result, we cannot quantify the potential costs discussed in this section. Commenters did not specifically object to our assessment of the costs related to decreased investment in illiquid assets in the proposed rule.

d. Effects on Efficiency, Competition, and Capital Formation

The liquidity risk management program requirement would require a fund to assess its liquidity risk and to determine its highly liquid investment minimum based on this risk assessment. For funds that do not already engage in liquidity risk management practices that meet the rule's requirements, the requirements should improve the

[1121] GFOA Comment Letter.

[1122] *See, e.g., supra* footnote 767 (discussing how index funds that use full replication strategies might need to move towards other techniques for tracking an index if full replication requires them to exceed the 15% illiquid asset limit).

[1123] *See infra* section IV.c.2.a (discussing the effects of the rule's disclosure requirements).

[1124] Relatively less liquid investments have a higher expected return compared to relatively more liquid investments, thereby compensating longer-term investors for holding relatively less liquid investments. *See* Yakov Amihud & Haim Mendelson, *Asset Pricing and the Bid-Ask Spread,* 17 J. Fin. Econ. 223 (1986), *available at http://pages.stern.nyu.edu/~lpederse/courses/LAP/papers/TransactionCosts/AmihudMendelson86.pdf.*

alignment between fund portfolio liquidity and fund liquidity needs. This improved alignment could enhance funds' ability to meet redemptions in a manner that mitigates potential dilution of shareholders' interests, and thus this improved alignment could be viewed as increasing efficiency to the extent that dilution is perceived as a drag on the ability of a fund's NAV to reflect the performance of its portfolio. Additionally, the requirement for each fund to classify the liquidity of its portfolio investments and publicly report the aggregated percentage of its portfolio assigned to each of the four classifications categories could increase allocative efficiency by assisting investors in making investment choices that better match their risk tolerances. However, this potential efficiency gain will only hold to the extent that these portfolio-level classification aggregates, which are based on non-public subjective assessments of investment liquidity, are comparable across funds. Furthermore, this potential efficiency gain will only be achieved if this classification sufficiently contrasts the tradeoff between portfolio liquidity and performance across funds.

By enhancing funds' liquidity risk assessment and risk management, the program requirement also could promote pricing efficiency in the sense that it could decrease the likelihood that a fund would be forced to sell portfolio investments under unfavorable circumstances in order to meet redemptions, potentially creating significant negative price pressure on those investments. If a fund's asset sales were to cause temporary changes in market prices unrelated to an investment's fundamentals, this could create a temporary pricing inefficiency. By decreasing the likelihood that these types of price movements would occur, the program requirement could decrease pricing inefficiency. However, the program requirement could negatively affect the efficient pricing of investments with lower liquidity if it indirectly discourages funds from investing in them (for example, if a fund were to decrease its holdings in investments that have lower liquidity if it determines, as a result of the fund's liquidity risk assessment, that its appropriate highly liquid investment minimum or the more specific 15% illiquid investment limit do not correspond with the fund's current portfolio composition). But as discussed above, this market effect could be partially offset if other investors are incentivized to buy relatively less liquid investments on account of any lower prices for these investments that result if funds decrease their holdings of these investments.[1125] Alternatively, any price decreases experienced as a result of decreased mutual fund investment could be considered efficient price adjustments given the reduction in liquidity of the investments.

If the liquidity risk management program requirement results in a material decrease in funds' investment in relatively less liquid investments, competition for these investments would initially be negatively affected. Under this scenario, the relatively less liquid investments in which funds formerly would have invested may become less liquid, since the number of current or potential market participants would be reduced. However, because this reduction in demand and liquidity results in larger illiquidity discounts and higher expected returns, some investors might become willing to invest in these assets, which in turn would partially offset the initial reduction in competition. As a corollary, if the liquidity risk management program requirement results in a material increase in funds' investment in highly liquid investments, competition for these investments would be positively affected. However, as funds increase their investments, the liquidity of those investments should increase and their liquidity premium decrease, which in turn could lead some investors to reduce their demand for these investments, partially offsetting the initial increase in competition. Relative to the proposal, the competitive effects of fund demand for highly liquid investments relative to lower liquidity investments should, if anything, be reduced because the rule only requires a fund to consider stressed conditions that are reasonably foreseeable in determining its minimum.

The size of a fund, or the family of funds to which a fund belongs, could have certain competitive effects with respect to the fund's implementation of its liquidity risk management program. If there are economies of scale in creating and administering multiple liquidity risk management programs, funds in large families would have a competitive advantage. For a fund in a smaller complex, however, a greater portion of the fund's (and/or adviser's [1126]) resources may be needed to create and administer a liquidity risk management program, which may increase barriers to entry in the fund industry, and lead to an adverse effect on competition. The size of a fund family also could produce competitive advantages or disadvantages with respect to a fund's use of products developed by third parties to assist in classifying the liquidity of their portfolio investments, or to assess the fund's liquidity risk. Funds in a large complex also could receive relatively more favorable pricing for third-party liquidity risk management tools, if the fund complex were to purchase discounted bulk services from the developer or receive relationship-based pricing discounts. To the extent that they choose to use liquidity risk management tools such as committed lines of credit and interfund lending,[1127] funds in larger complexes likewise could receive more favorable rates on committed lines of credit than funds in smaller complexes, and could have opportunities to establish interfund lending arrangements more easily than funds in smaller complexes.

Any changes in certain investments' or asset classes' liquidity that could indirectly result from the liquidity risk management program requirement (for example, as discussed above, if the number of buyers and sellers for certain investments becomes significantly reduced as a result of the program requirement) could also affect capital formation among issuers of these investments. Because lower asset liquidity implies higher illiquidity premiums and larger asset price discounts some firms and other issuers of securities could be discouraged from issuing new securities in asset classes that are associated with lower liquidity. If changes in liquidity are not equal across all asset classes, firms and other entities may begin to shift their capital structure (*e.g.,* begin to issue equity instead of debt) or to change the terms of certain securities that they issue in order to increase their liquidity (*e.g.,* by standardizing the terms of certain debt securities, or modifying the securities' terms to promote electronic trading).[1128]

Commenters did not specifically object to our assessment of the proposed rule's effects on efficiency, competition, and capital formation. With the exception of the potential efficiency changes due to modifications reflected in the adoption of a highly liquid investment minimum and the more specific 15% illiquid investment limit discussed above, our assessment of the

[1125] *See supra* section IV.C.1.c.

[1126] *See supra* footnote 446 and accompanying text.

[1127] *See supra* footnote 258 and accompanying text (discussing and providing guidance on the use of these tools).

[1128] *See* GFOA Comment Letter (discussing these types of effects on municipal bond issuers).

final rule's effects largely corresponds with those of the proposed rule.

e. Reasonable Alternatives

The Commission considered various alternatives to the individual elements of rule 22e–4. Those alternatives are outlined above in the sections discussing the rule elements.[1129] The following discussion addresses economically significant alternatives to rule 22e–4, which involve broader issues than the more granular alternatives to the individual rule elements discussed above.

Liquidity Risk Management Program and Scope

The Commission considered, but ultimately decided against, excluding certain types of funds from rule 22e–4.[1130] For example, the rule could have carved out funds with investment strategies that historically have entailed relatively little liquidity risk, or funds with relatively low asset levels. We are not excluding any subset of open-end funds, other than money market funds, from the scope of the rule, although we have tailored the rule for certain kinds of investment companies that present different liquidity risks (In-Kind ETFs, funds that primarily hold assets that are highly liquid investments, and UITs). Some funds with investment strategies that historically have involved little liquidity risk invest in assets that have lower liquidity, or in more liquid assets that can experience episodes of lower liquidity.[1131] To the extent that these types of investments create potential liquidity risk for a fund, excluding funds with investment strategies that have historically involved little liquidity risk could expose investors to more potential liquidity risk than they would face under the rule. Furthermore, investors in small funds could suffer from insufficient liquidity risk management just as investors in larger funds could. Indeed, staff analysis suggests that funds with relatively low total assets can experience greater flow volatility, including more volatility in unexpected flows, than funds with higher assets, which could indicate increased liquidity risk.[1132] The program requirement permits a fund to customize and calibrate its liquidity risk management program to reflect the liquidity risks that it typically faces (and that it could face in stressed market conditions). This flexibility is meant to result in programs whose scope, and related costs and burdens beyond the fixed cost of establishing a minimum liquidity risk management program, are appropriate to manage the actual liquidity risks facing a particular fund. For example, funds that primarily hold assets that are highly liquid investments are not required to adopt a highly liquid investment minimum because any benefits associated with this requirement as applied to these funds are less likely to justify the associated burdens.

Instead of adopting rule 22e–4, the Commission could issue guidance surrounding the assessment and management of liquidity risk, which would give funds more flexibility in managing liquidity risk and could reduce costs relative to the requirements of the rule. However, on account of the significant diversity in liquidity risk management practices that we have observed in the fund industry, we believe that the need exists for an enhanced comprehensive baseline requirement instead of only guidance for fund liquidity risk management.

Commenters suggested the rule could have also taken a purely principles-based approach instead of a prescriptive approach.[1133] The final rule is not a purely prescriptive rule; while it does specify certain standards, it provides funds with a substantial degree of flexibility in implementing those standards. That said, a purely principles-based approach that specified few or no requirements could give funds more flexibility in tailoring risk management programs to their needs and could reduce compliance costs, but it would be less certain to create a comprehensive baseline for fund liquidity risk management, which in turn would diminish the comparability (and thus the value) of information reported to the Commission and to the public about funds' liquidity. Under a purely principles-based approach, an investor with investments in multiple funds would be aware that those funds are all generally required to manage liquidity risk, but may not have sufficient clarity about how each of the funds may have chosen to interpret and implement general principles so as to permit the investor to understand how this variation across funds affects the liquidity risk to which the investor is exposed. Finally, funds are not prohibited from developing or maintaining their own, tailored risk management programs to the extent that they are supplemental to the baseline that the Commission's program requires.

The Commission considered proposing liquidity requirements similar to those imposed on money market funds—that is, the requirement to hold a specified minimum level of highly liquid investment holdings, and the ability to impose redemption fees and gates.[1134] The requirements imposed on money market funds, and the tools available to these funds to manage heavy redemptions, are specifically tailored to the assets held by money market funds and the behavior of money market fund investors.[1135] Imposing similar regulatory requirements on funds that are not money market funds would ignore significant differences between money market funds and other funds. We discuss the costs and benefits of requiring funds to hold a specified minimum level of highly liquid investments below (similar to the portfolio liquidity requirements applicable to money market funds). With respect to redemption fees, funds are already permitted to use them under existing regulations (up to a maximum fee of two percent), although those fees are largely used by certain funds to recoup costs incurred as a result of excessive short-term trading of mutual fund shares, rather than mitigating dilution arising from shareholder transaction activity generally, and are viewed as unpopular with investors and intermediaries. Redemption gates would allow funds to limit the potential dilution shareholders face in circumstances where they face extreme redemptions, but they would also impose constraints on shareholders' access to their assets in those situations, and commenters were not in favor of extending rule 22e–3 to permit funds to make broader use of suspensions of redemptions.[1136] In addition, funds that are not money market funds have not demonstrated the same risk of significant redemptions during times of

[1129] *See supra* sections III.A.3, III.B.1.b, III.B.2.j, III.B.3.b, III.C.1.c, III.C.1.d, III.C.2.a, III.C.2.b, III.C.3.a, III.C.3.a, III.C.6.a, III.C.6.b, II.C.5.c, III.D.4, and III.E.

[1130] *See* section III.A.2 for more detailed discussion of rule 22e–4's scope.

[1131] *See* Proposing Release, *supra* footnote 9, at n.123–124 (discussing liquidity issues in microcap stocks as well as treasury bonds during the ''Flash Crash'').

[1132] DERA Study, *supra* footnote 95, at 16–24. *See infra* footnote 1159 and accompanying paragraph regarding comments on small funds.

[1133] AIMA Comment Letter; CFA Comment Letter; Cohen & Steers Comment Letter; Dodge & Cox Comment Letter; Eaton Vance Comment Letter I; FSR Comment Letter; ICI Comment Letter I; ICI Comment Letter III; LSTA Comment Letter; MFDF Comment Letter; Nuveen Comment Letter; NYC Bar Comment Letter; Oppenheimer Comment Letter; State Street Comment Letter; Vanguard Comment Letter; Wellington Comment Letter; Wells Fargo Comment Letter; Dechert Comment Letter.

[1134] *See supra* footnotes 153–155 and accompanying text.

[1135] *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at section II.

[1136] *See* ICI Comment Letter I.

market stress that money market funds may face and which redemption gates are meant to prevent, implying that the benefits of gates are less applicable to funds that are not money market funds.[1137]

Classifying Portfolio Investment Liquidity

The Commission considered multiple alternatives to the rule's requirement that funds classify the liquidity of their portfolio investments, which establishes one component of a uniform baseline for fund liquidity risk management. As discussed above, commenters raised three primary structural alternatives to the proposed classification requirement: (i) A ''principles-based'' liquidity classification approach, where each fund would have to classify the liquidity of its portfolio assets, but the Commission would not require any specific classification scheme; [1138] (ii) a simplified version of the proposed classification system, with fewer classification categories based on shorter time projections than the proposal; [1139] and (iii) an approach with new classification categories based on qualitative distinctions in the market- and trading-related characteristics of different asset classes under different market conditions, which generally would rely on the Commission mapping different asset classes to each of these new classification categories.[1140]

A purely principles-based approach to classifying assets, as suggested by several commenters, would have the benefit of allowing each fund to tailor its classification scheme to the liquidity factors most relevant to the assets it invests in rather than imposing a one-size-fits-all approach that may be less applicable to some funds. However, as discussed above, this approach would not provide a uniform methodology for funds' liquidity assessment procedures and would not promote reasonably comparable reporting to the Commission and disclosure to the public about funds' portfolio liquidity.[1141] Instead, also as discussed above, we are largely adopting commenters' suggested approach of reducing the number of liquidity classifications from six to four.[1142]

The Commission considered but is not adopting commenters' alternative of having the Commission establish a fixed classification schema to which all funds must adhere—for example, an enumeration of asset classes and a mapping of those classes to a liquidity classification.[1143] This approach would have the benefit of producing liquidity classifications that are objectively comparable across funds, but the Commission may not be able to respond as quickly as market participants to dynamic market conditions that might necessitate changes to asset class liquidity classifications, and would be unable to account for determinants of investment liquidity that are fund-specific.

Relatedly, some commenters also suggested classification categories based on alternatives to the ''days-to-cash'' criterion of the proposed and final rule, including, in whole or in part, on the fraction of average daily trading volume (''ADTV'') that each position size corresponds to, the expected behavior of bid-ask spreads in a given asset, or more qualitative liquidity buckets (*e.g.,* ''converted to cash quickly under most circumstances'').[1144] Some of these more specific criteria may be appropriate for particular assets (*e.g.,* ADTV is a reasonable measure for exchange-traded securities), but do not apply to all assets (*e.g.,* bid-ask spreads are not readily available for some asset classes). Also, more qualitative criteria make it more difficult to compare classifications across funds relative to the ''days-to-cash'' approach in the final rule.

Highly Liquid Investment Minimum

The final rules require funds that do not primarily hold assets that are highly liquid investments to establish a highly liquid investment minimum as part of their liquidity risk management program and provides some flexibility by not prohibiting the acquisition of less liquid investments, but instead requiring a fund to report to the board and, in some cases, the Commission if it goes below its minimum. The first type of alternative the Commission considered with respect to this requirement concerns which investments satisfy a minimum, which could have varied along a spectrum from more liquid (*e.g.,* only cash would qualify as a highly liquid investment) to less liquid (*e.g.,* investments reasonably expected to convert to cash in the 7-day timeframe associated with open-ended fund redemption and settlement requirements would qualify). While there are various marginal benefits and costs associated with defining investments that satisfy the minimum at points along that spectrum—for example, cash is more liquid but does not provide any yield—the final rule aligns the definition of what investments are subject to the minimum with the definition of the first (most liquid) category of investments in the liquidity risk management program's liquidity classification requirement.[1145] This consistency in treatment means that fund advisers, investors, and the Commission can focus on a smaller number of clearly-defined concepts when broadly evaluating fund liquidity.

The Commission also considered whether to make the highly liquid investment minimum purely a target instead of a minimum. The proposed rule would have precluded funds from acquiring less liquid investments anytime they were below their highly liquid investment minimum. Commenters suggested this could lead to several potential costs, as discussed above regarding the rule's costs and benefits, including the possibility that it could lead to herding behavior among funds.[1146] Some commenters instead suggested that a target or range be used instead of a minimum, which could provide funds more flexibility in returning to their target without incurring unnecessary trading costs, as well as the ability to trade more opportunistically during periods of market stress.[1147] However, a target

[1137] *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at section III.A.1.

[1138] *See, e.g.,* AIMA Comment Letter; LSTA Comment Letter; Street Comment Letter; Wellington Comment Letter.

[1139] *See, e.g.,* Eaton Vance Comment Letter I; Interactive Data Comment Letter; Markit Comment Letter; Wells Fargo Comment Letter. Commenters generally suggested three, four, or five classification categories.

[1140] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Nuveen Comment Letter; CSRC Comment Letter.

[1141] *See supra* section III.C.6.

[1142] The Commission also could have, as described in the Proposing Release, required funds to classify each portfolio position as ''liquid'' or ''illiquid,'' but commenters did not support such an alternative, and we continue to believe that a two-category approach would be insufficiently nuanced to capture the full spectrum of portfolio position liquidity. *See also supra* section III.C.1.a for a more detailed discussion of commenter suggestions with respect to the number of liquidity classification categories.

[1143] For examples suggesting this approach *see, e.g.,* AFR Comment Letter; BlackRock Comment Letter; SRC Comment Letter.

[1144] *See* Nuveen Comment Letter; BlackRock Comment Letter; Dodge & Cox Comment Letter; SIFMA Comment Letter I.

[1145] *See* the Proposing Release, *supra* footnote 9 at n.730 and associated text for a further discussion of cash and ''seven day liquid assets'' as alternatives for a minimum. We did not receive explicit comments on the merits of which types of investments should satisfy a minimum.

[1146] For example, any market event that increases the value of the less liquid portion of many funds' portfolios could place them below the minimum, and could indirectly result in some funds selling less liquid investments at the same time to bring their allocations back in line with their minimums.

[1147] For comments discussing the costs and benefits of a target vs. a minimum, *see, e.g.,*

Continued

might have been interpreted as an ''average'' level of highly liquid investments funds should hold and, without further requirements such as board reporting, may not have provided a sufficient incentive to fund managers to ensure that the percentage of a fund's investments invested in relatively liquid investments is at (or above) the level deemed appropriate by the fund. The final rules strike a balance: Funds are not prohibited from acquiring less liquid investments if they go below their highly liquid investment minimum, but they must report any shortfall to their boards (and the Commission where required). This should reduce concerns regarding herding behavior,[1148] but does make it more burdensome for a fund to buy any assets that are not highly liquid investments opportunistically if the fund is at or below its highly liquid investment minimum, insofar as funds may not want to trigger their reporting obligation to their board, the Commission, or both.

Some commenters were generally opposed to a highly liquid investment minimum,[1149] and the final rule could have excluded this requirement altogether. Doing so would still require that funds manage liquidity risk appropriately but would provide even more flexibility in how that is achieved. However, the highly liquid investment minimum requires funds to directly consider the assets they need to have on hand to meet redemptions in a flexible manner to reduce dilution that may result from forced sales, and funds have flexibility in setting a minimum that is appropriate to the needs of their fund as well as adjusting the minimum dynamically to adapt to changing market conditions.[1150] We note that the final rule does not require funds that primarily hold assets that are highly liquid investments to establish a minimum.

The Commission also considered requiring a uniform highly liquid investment minimum for all funds. This alternative approach would have the advantage of being simple for investors to understand, easy for funds to apply, and simple for our examination staff to verify. However, this alternative would fail to account for notable differences between funds with respect to investment strategy, fund flow patterns, and other characteristics that contribute to funds' liquidity risk, which in turn would make it reasonable for funds' portfolios to have varying liquidity profiles. We believe that the fund-specific highly liquid investment minimum requirement will promote alignment of a fund's liquidity needs with the liquidity of fund investments, while still permitting funds reasonable flexibility in implementation. In light of the significant diversity within the fund industry, we believe that flexibility is appropriate to help minimize the potential costs to investors of the requirement. This approach still includes elements that will help our staff to assess whether funds are holding an appropriate level of assets that are highly liquid investments. Each fund will be required to maintain a written record of how its highly liquid investment minimum was determined, as well as copies of materials submitted to the fund's board in connection with the highly liquid investment minimum.[1151] One benefit of a Commission-determined uniform highly liquid investment minimum would be to ensure that funds do not set their minimum at an artificially low level (*e.g.,* 0) that is divorced from their liquidity risk. We believe that the requirement for a fund to consider certain specified factors in determining its minimum, as well as the recordkeeping and board review requirements discussed above, will help promote funds' establishing realistic minimums, and discourage inappropriately low or zero minimums.

Instead of requiring funds to determine and invest their assets in compliance with a highly liquid investment minimum, we could require funds to conduct stress tests of their own design assessing the extent to which the fund has a level of highly liquid investments necessary to cover possible levels of redemptions. This would have the benefit of granting a fund flexibility in determining whether its portfolio liquidity profile is appropriate given its liquidity needs. However, because the quality and comprehensiveness of funds' liquidity risk management currently varies significantly, we believe that requiring funds to have a highly liquid investment minimum is important in reducing the risk that funds will be unable to meet their redemption obligations, in minimizing dilution, and in elevating the overall quality of liquidity risk management across the fund industry. Also, we believe that it would be difficult to determine, depending on the level of discretion a fund would have in developing stress scenarios, whether these scenarios would accurately depict liquidity risk and lead funds to determine the appropriate level of portfolio liquidity they should hold. For example, if a fund's liquidity needs were generally high during normal periods, but were not correspondingly extreme during stress events, basing this fund's portfolio liquidity on the results of stress testing alone could cause a fund to hold too little liquidity during non-stressed periods. Therefore, we do not believe that a general stress testing requirement would be an adequate substitute for the highly liquid investment minimum requirement.

15% Illiquid Investment Limit

Instead of the adopted illiquid investment definition, the Commission could have codified a definition of illiquid investments that reflects the current 15% guideline. This approach would have had the benefit of already being accepted and understood by the industry, and would have entailed few additional implementation costs for funds. However, it would not have been harmonized with the rule's requirements with respect to other liquidity classifications, particularly the requirement that funds review at least monthly whether their investments are illiquid with respect to relevant market, trading, and investment-specific factors, and also incorporate market depth considerations into this process.[1152] To the extent that the rule's liquidity classification requirement results in funds more accurately assessing the amount of illiquid investments in their portfolios, funds may improve on their liquidity risk management under the rule as adopted than under a codification of the 15% guideline.

f. Comments on the DERA Study

We received substantial comments on the DERA Study from one commenter. The Commission has carefully considered these comments and adjusted our analysis where appropriate. In terms of broader concerns, the commenter suggested that the analysis in the DERA Study does not provide a strong basis for the specifics

Blackrock Comment Letter; Federated Comment Letter; Invesco Comment Letter; PIMCO Comment Letter.

1148 For example, if an asset ceased to be a highly liquid investment, it could indirectly lead funds to sell that asset in order to meet their minimum. Coordinated selling could produce further downward pressure on the value of the investment. Some funds could be interested in purchasing such an investment if they viewed it to be undervalued and thus good for fund investors—which could also help counteract the downward pricing pressure caused by funds exiting their positions—but if such a purchase would cause them to violate their minimum, it would have been prohibited under the proposed rule.

1149 *See, e.g.,* Invesco Comment Letter; Blackrock Comment Letter.

1150 *See supra* footnote 638 and accompanying text.

1151 *See* proposed rule 22e–4(c)(2)–(3).

1152 *See supra* sections III.C.1.b and III.C.3.b.

of the rule.[1153] For example, the commenter asserts that the DERA Study's analysis does not provide a justification for funds sorting their assets into six liquidity categories and does not apply this classification in the DERA Study. The DERA Study's analysis was not designed to justify each policy choice made in the rule. Rather, the analysis in the DERA Study makes certain findings and reports certain empirical results designed to inform the Commission more generally about the current state of fund liquidity.

With respect to the proposal's interpretation of the DERA Study's results, the commenter expressed the concern that the results in the DERA Study provide only indirect evidence on the selling behavior of funds in response to redemptions. While a direct test would be preferable, such a test would require data on both daily fund flows and fund daily transactions, neither of which are available in sufficient detail for analysis. The commenter states that the DERA Study itself only shows that fund liquidity tends to decrease following outflows and that other endogenous factors, such as broad changes in market conditions due to macroeconomic events, could be causing changes in both fund liquidity and fund flows.[1154] To demonstrate its concerns about endogeneity, the commenter uses a vector autoregression (VAR) to present evidence that a proxy for market returns causes changes to both the Amihud liquidity of the S&P 500 and net U.S. equity mutual fund flows in a manner consistent with its alternative hypothesis that a fund's average Amihud liquidity may decrease due to an increase in market volatility rather than because of fund managers' trading behavior.[1155] The analysis performed in the DERA Study does control for broad changes in market liquidity at the fund class-level.[1156] To the extent that broad market effects drive variation in fund liquidity within a fund class in a way that is also correlated with fund flows, we acknowledge the commenter's concern about endogeneity and have modified our interpretation in the discussion above, but we also note that there is anecdotal evidence that supports this interpretation.[1157] With respect to the Amihud liquidity measure used in the study, the commenter states that the DERA Study's conclusion that a ''10% outflow increases the impact of selling $10 million of the asset-weighted average equity portfolio holding by 11 basis points'' is a key result supporting the proposal's hypothesis that funds sell their more liquid assets first to meet redemptions. We disagree that the specific economic interpretation of the Amihud measure cited by the commenter is necessary to support the hypothesis that funds tend to sell their more liquid assets: To the extent that the Amihud measure reflects the liquidity of underlying fund assets, a decline in the average Amihud liquidity of a fund's portfolio is consistent with the fund disproportionately selling its more liquid assets.

The commenter concludes that the analysis in the DERA Study does not demonstrate that funds are managing portfolios and redemptions in a manner that harms the interests of non-redeeming shareholders.[1158] We acknowledge that the analysis does not establish a direct link between redemptions and quantifiable harm to non-redeeming shareholders; as discussed above, it was designed to inform the Commission more generally about the current state of fund liquidity. The commenter also states the DERA Study's finding that municipal bond funds hold less cash following redemptions implies that a 40% outflow would be required to deplete the average municipal bond fund's cash holdings. We acknowledge the commenter's interpretation of the analysis, but note that the results do not imply that all municipal bond funds would necessarily require outflows of a similar magnitude to deplete a significant portion of their cash holdings.

The commenter makes several statements regarding results related to the volatility of fund flows. First, the commenter provides evidence that flow volatility declines with fund size, notes that the DERA Study's use of simple averages to calculate average flow volatility in a given fund category overstates the highly volatile flows of small funds, and shows that asset-weighted flow volatility measures are significantly smaller for all fund categories.[1159] We acknowledge that the simple average will overstate smaller funds relative to an asset-weighted average, but the opposite view holds too: Asset-weighted averages will understate flow volatility for small funds, and the rule is concerned with the potential liquidity risk problems at all funds. The commenter also states that the relatively higher flow volatility of alternative funds may simply be attributable to the fact that they are generally smaller in size (because small funds generally tend to have more volatile flows as a percentage of their assets) and that, as they have grown, the volatility of their flows has, if anything, decreased. We acknowledge that the flow volatility of alternative funds may be a function of their smaller size, but also note that small funds are also subject to the rule and that other fund categories, such as foreign bond funds, exhibit higher flow volatility despite being relatively larger in size. The commenter also notes that, as the DERA Study acknowledged, the predictability of fund flows is likely understated. The purpose of analyzing the predictability of flows in the analysis was to determine, using a simple model of fund flows, the extent which flow volatility was predictable and whether, after accounting for predictability, the unexpected component of flow volatility varied across fund types in the same way as total flow volatility. While fund managers may be able to predict a larger fraction of flow volatility, the evidence in the DERA Study supports the notion that unexpected flow volatility varies proportionally with total flow volatility, and the relative ranking of unexpected flow volatility by fund type is not likely to change with a better model of flows. The commenter also states that the DERA Study provides evidence that funds already successfully manage volatile flows.[1160] The proposal acknowledged that this evidence supports the view that funds do manage volatile flows by holding larger amounts of cash and liquid assets, and this evidence provides support for the rule's inclusion of flow volatility as a factor for funds to consider when managing risk.[1161] Finally, the commenter points out that, while the DERA Study finds smaller funds have more volatile flows, small funds may find it easier to trade assets with minimal price effects. We agree that small funds may have less price impact, but note that any fixed trading costs incurred via smaller trades will involve larger proportional trading costs.

The commenter also provides evidence on the relationship between fund flows and holdings of short-term

[1153] ICI Comment Letter II.

[1154] ICI Comment Letter II.

[1155] ICI Comment Letter II.

[1156] DERA Study, *supra* footnote 95, at 43–44. The model includes Lipper class fixed effects, year-quarter fixed effects, and interactions of those fixed effects. The year-quarter and interaction fixed effects should capture any broad changes in liquidity within different fund styles over time, which could be related to macroeconomic events.

[1157] *See, e.g., supra* footnote 71.

[1158] ICI Comment Letter II.

[1159] ICI Comment Letter II.

[1160] ICI Comment Letter II.

[1161] *See* Proposing Release, *supra* footnote 9, at n.631 and accompanying discussion.

assets for alternative strategy and high-yield bond funds. It finds no relationship between the two, asserting that the lack of a relationship shows funds are not systematically selling short-term assets to meet redemptions. However, this result is at the aggregate level, and does not necessarily preclude a relationship between the two quantities at the fund level for some funds. It also provides a fund-level analysis across high-yield bond funds in 5 separate months and also does not find a relationship between the two in four of the months. In one of the months, it does find statistically significant evidence that a decrease in short-term assets is associated with outflows, consistent with the DERA Study's finding. The commenter's inability to find a relationship is not evidence that there is no relationship *per se:* It is possible the commenter's test simply had low statistical power. To the extent that the commenter's evidence does support the claim that funds do not sell short-term assets in response to fund flows, the DERA Study used a different measure of liquidity and did not claim any evidence found using another measure, such as the short-term asset ratio used by the commenter, would produce the same result. More specifically, while funds may not sell their most liquid investments (which would be reflected in the short-term asset ratio used by the commenter), they could still be disproportionately selling their more liquid investments.

With respect to the liquidity measure used in the DERA Study, the commenter points out that it only uses a single measure of market liquidity (Amihud illiquidity) and claims that the measure is not sufficient to support the interpretations the proposal draws from the study.[1162] We acknowledge that the use of alternative measures could alter some of the results and interpretations in the DERA Study, but also emphasize that the DERA Study was intended to generally inform the Commission about the current state of fund liquidity, not to justify each policy choice made in the rule.

The commenter stated that the academic studies used in support of the DERA Study and the proposal are either (1) theoretical and ignore important institutional details or (2) based on empirical fund-level results which by their design cannot provide any commentary on market-wide concerns. With respect to the theoretical study cited in the proposal, it shows one mechanism by which mutual fund shareholders may have a first-mover incentive using a simplified model of the world for tractability; it is possible that in a model which captures more institutional details as proposed by the commenter—taxes, longer investor horizons, and reinvestment risk—this incentive is reduced or eliminated, but we are not aware of any other studies that reach such a conclusion. With respect to any empirical studies, the primary goal of the rule is to improve the fund-level management of liquidity and redemptions, which makes the cited fund-level academic studies relevant for the discussion. The commenter also points out that one of the empirical studies (Coval and Stafford), which provides evidence of negative price pressure due to forced selling by mutual funds, also states that the ex-ante probability of an equity mutual fund being affected by this risk is small because less than one percent of stocks are affected in a given quarter. The proposal did not claim that forced selling by mutual funds was a pervasive phenomenon, but did highlight that it is a possible risk that funds and their shareholders face.

2. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

a. Disclosure and Reporting Requirements

We are adopting amendments to Form N–1A as well as adopting new items to Form N–PORT, Form N–CEN, and adopting Form N–LIQUID, to enhance fund disclosure and reporting regarding liquidity and redemption practices. Specifically, amendments to Form N–1A will require a fund to disclose: (i) The number of days in which the fund typically expects to pay redemption proceeds to redeeming shareholders[1163] and (ii) the methods the fund typically expects to use to meet redemption requests in stressed and non-stressed market conditions.[1164]

New items on Form N–PORT will require a fund to confidentially disclose monthly: (i) The fund's highly liquid investment minimum and the number of days a fund's holdings in assets that are highly liquid investments fell below that minimum during a given reporting period;[1165] (ii) the liquidity classification of each investment as determined pursuant to rule 22e–4(b)(2)(i) including the determination of whether the investment qualifies as an illiquid investment, and (iii) the percentage of the fund's highly liquid investments that the fund has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of the other liquidity classification categories.[1166] Once per quarter, funds will be required to publicly disclose (with a 60-day delay): (i) The aggregated percentage of their portfolios invested in each of the four liquidity classification categories, but funds will not be required to publicly disclose the liquidity classification of each individual position;[1167] and (ii) the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of other liquidity classification categories.[1168]

New items on Form N–CEN will require a fund to disclose certain information regarding the use of committed lines of credit and interfund borrowing and lending.[1169] We have also adopted a new item on Form N–CEN that will require an ETF to report whether it qualifies as an In-Kind ETF.[1170]

The final form amendments differ from the proposal in several ways that may have potential economic consequences. In response to commenters' suggestions, the rule does not require funds to file credit agreements as part of Form N–1A. While Form N–PORT requires funds to report position-level liquidity classifications to the Commission, these classifications will not be publicly released. Instead, a fund will only be required to publicly disclose the aggregate percentage of the fund's holdings invested in each of the four liquidity classification categories and the percentage in each of the four liquidity classification categories of the fund's highly liquid investments that are segregated to cover derivatives transactions. The adopted rule also incorporates commenters' suggestions that the Commission be notified more quickly if a fund's assets that are illiquid investments exceed 15% of its net assets by requiring funds to file Form N–LIQUID indicating such a breach immediately after it occurs. With respect to the highly liquid investment minimum, a fund is required to report any decline below the minimum that lasts more than 7 consecutive calendar days to the Commission by filing Form N–LIQUID, whereas the proposal would have required that a fund not purchase

[1162] ICI Comment Letter II.

[1163] Item 11(c)(7) of Form N–1A.

[1164] Item 11(c)(8) of Form N–1A.

[1165] Item B.7 of Form N–PORT.

[1166] Item C.7 of Form N–PORT.

[1167] Item B.8 of Form N–PORT.

[1168] Item B.8.b of Form N–PORT.

[1169] Item C.20 of Form N–CEN.

[1170] Item E.5 of Form N–CEN.

less liquid investments while below its minimum. Any significant economic effects of these changes are discussed below.

b. Benefits

The disclosure and reporting requirements will promote investor protection by improving the availability of information regarding funds' liquidity risks and risk management practices, as well as funds' redemption practices. As discussed above, funds' disclosures to shareholders regarding their redemption practices are currently varied in content and comprehensiveness.[1171] To the extent that the requirement for funds to disclose the number of days in which the fund will pay redemption proceeds to redeeming shareholders fosters competition among funds to minimize the timing of redemptions, and assuming funds are able to meet redemptions in the time advertised, such competition could potentially be to the benefit of investors. Relative to the proposal, final Form N–1A requires that funds disclose estimated payment times for each payment method, which should reduce any potential investor confusion associated with the complexity of estimates based on funds' distribution channels under the proposal.[1172]

While some funds voluntarily include disclosure regarding fund limitations on illiquid asset holdings that track the 15% guideline, a fund is not currently required to disclose information about the liquidity of its portfolio investments. In light of the relatively few disclosure requirements regarding funds' liquidity risks, liquidity risk management practices, and redemption practices, as well as the current inconsistency in funds' liquidity-related disclosures, we believe that the disclosure and reporting requirements would increase shareholders' and the Commission's understanding of particular funds' liquidity-related risks and redemption policies. This in turn should assist investors in making investment choices that better match their risk tolerances.

We note that, while Form N–PORT and Form N–CEN are designed primarily to assist the Commission and its staff, we believe that the information in these forms (including the liquidity-related information to be included in these forms) also will be valuable to investors and other potential users.[1173] In particular, we believe that both sophisticated institutional investors and third-party users that provide services to retail investors may find the publically disclosed liquidity-related information to be useful. And we believe that individual investors could benefit indirectly from the information collected on reports on Form N–PORT through analyses prepared by third-party service providers.

The liquidity-related information that funds will be required to provide on Form N–PORT and Form N–CEN will enhance investor protection by improving the Commission's ability to monitor funds' liquidity using relevant and targeted data. This monitoring will permit us to analyze liquidity trends in individual funds, and, to the extent that liquidity profiles are comparable across funds, among certain types of funds and the fund industry as a whole, as well as to better understand funds' liquidity risk management practices. As discussed in our release adopting rules and forms to modernize investment company reporting, the information we receive on these reports will facilitate the oversight of funds and will assist the Commission, as the primary regulator of such funds, to better effectuate its mission to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.[1174] Some commenters supported the reporting of asset-level liquidity classifications if such information was only provided to the Commission (*i.e.,* made non-public),[1175] although some did object to the disclosure regardless of whether or not it was made public.[1176]

Form N–LIQUID will complement rule 22e–4's enhanced focus on the limits on illiquid investments and the highly liquid investment minimum discussed above by requiring reporting to the SEC every time: (1) A fund's assets that are illiquid investments exceed 15% of its net assets (as well as additional reporting when the fund's assets that are illiquid investments fall back to or below 15% of its net assets); and (2) a fund's investments in highly liquid investments that are assets fall below its highly liquid investment minimum for more than 7 consecutive calendar days. This enhanced reporting could produce significant benefits. For example, the SEC's market monitoring capacity could be enhanced, in that multiple close-in-time filings by similar types of funds may be an indication of market stress in a market segment. Similarly, multiple close-in-time filings by the same fund may be an indication that the fund is failing to adequately manage its liquidity.

Form N–PORT as adopted does not require that the asset-level liquidity classifications be publicly disclosed in order to address commenter concerns about the potential costs of such disclosure (which are discussed in the costs section below). This change reduces some of the proposal's potential public disclosure benefits. Under the proposal, investors—by their own efforts or via third-party products—could have compared how assets were classified according to different funds' subjective approaches and resolved discrepancies across funds to arrive at more directly comparable fund liquidity profiles. Under the form as adopted, a fund will publicly disclose a new aggregate liquidity profile by reporting the percentage of its portfolio assigned to each of the four liquidity classification categories on Form N–PORT. This will provide a useful snapshot of fund liquidity to investors and will increase the amount of information available to investors about fund liquidity, but this snapshot may not be as informative as liquidity profiles under the proposed rule. The final form requires funds to confidentially report their investment liquidity classifications to the Commission via Form N–PORT. This maintains a major benefit of the proposal, allowing the Commission to monitor funds' liquidity levels and take action when significant aberrations are discovered.

Similarly, the final form amendments do not require the public disclosure of a fund's highly liquid investment minimum in order to address commenter concerns, but it is not likely that this change will significantly reduce the benefits of reporting this minimum: The primary investor protection benefit of reporting the minimum via Form N–PORT is to encourage funds' holding of highly liquid investments that correspond to the liquidity risks of their strategies. By confidentially reporting the minimum, a fund will give the Commission the capability to monitor whether the minimum is an outlier relative to other funds with similar investment strategies. The oversight role of the fund's board under rule 22e–4 is yet another safeguard in this respect.

Finally, Form N–PORT's requirement that funds disclose the percentage of the fund's highly liquid investments that it

[1171] *See supra* section III.G.1.a.

[1172] *See* Fidelity Comment Letter.

[1173] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1174] See id.

[1175] *See* CFA Comment Letter; Dechert Comment Letter; State Street Comment Letter; Interactive Data Comment Letter; Nuveen Comment Letter; Oppenheimer Comment Letter; Charles Schwab Comment Letter; T. Rowe Comment Letter; Voya Comment Letter; Wellington Comment Letter.

[1176] *See* Federated Comment Letter; Fidelity Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as moderately liquid investments, less liquid investments, and illiquid investments, should more accurately reflect the amount of highly liquid investments that are available to manage a fund's liquidity risk. For example, without such a disclosure, investors might assume a fund whose highly liquid investments are all segregated to cover derivatives positions that are not highly liquid is better prepared to handle redemption requests than it actually is.

Because we cannot predict the extent to which the requirements will enhance investors' awareness of funds' portfolio liquidity and liquidity risk, influence investors' investments in certain funds, or increase the Commission's ability to protect investors, we are unable to quantify the potential benefits discussed in this section.

c. Costs

Funds will incur one-time and ongoing annual costs to comply with the disclosure and reporting requirements regarding liquidity and shareholder redemption practices. Commenters' responses to the estimates of these costs are discussed in the PRA discussion below, and we have updated all estimates in this section to reflect changes in the PRA.[1177]

We estimate that the one-time costs to comply with the amendments to Form N–1A will be approximately $324 per fund (plus printing costs).[1178] We estimate that each fund will incur an ongoing cost associated with compliance with the amendments to Form N–1A of approximately $81 each year to review and update the disclosure regarding redemptions.

The amendments to Form N–PORT will require funds to report on Form N–PORT the liquidity classification of each portfolio investment, and we estimate that the average one-time compliance costs associated with this reporting will be $15,576 per fund.[1179] Furthermore, we estimate that 9,347 funds will be required to file, on a monthly basis, additional information on Form N–PORT as a result of the amendments.[1180] Assuming that 35% of funds (3,271 funds) will choose to license a software solution to file reports on Form N–PORT in house,[1181] we estimate an upper bound on the initial annual costs to file the additional information associated with the amendments for funds choosing this option of $783 per fund [1182] with annual ongoing costs of $261 per fund.[1183] We further assume that 65% of funds (6,076 funds) will choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT,[1184] and we estimate an upper bound on the initial costs to file the additional information associated with the amendments for funds choosing this option of $1,044 per fund [1185] with annual ongoing costs of $131 per fund.[1186]

Likewise, compliance with the amendments to Form N–CEN will involve ongoing costs as well as one-time costs. We estimate that 10,633 funds will be required to file responses on Form N–CEN as a result of the amendments to the form. We estimate that the one-time and ongoing annual compliance costs associated with providing additional responses to Form N–CEN as a result of the amendments will be approximately $162 per fund.[1187]

Based on these estimates, staff further estimates that the total one-time costs to comply with the disclosure and reporting requirements will be approximately $55 million for all funds that would file reports on Form N–PORT in house [1188] and approximately

[1177] *See infra* section V.

[1178] This estimate is based on the following calculation: 1 (1 hour to update registration statement disclosure about redemption procedures) × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $324. This figure incorporates the costs we estimated for each fund to update its registration statement to include the required disclosure about: (i) The number of days in which the fund will pay redemption proceeds to redeeming shareholders; and (ii) the methods the fund uses to meet redemption requests in stressed and non-stressed market conditions. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.F.

[1179] This estimate is based on the following calculation: (i) Project planning and systems design (24 hours × $264 (hourly rate for a senior systems analyst) = $6,336) and (ii) systems modification integration, testing, installation and deployment (30 hours × $308 (hourly rate for a senior programmer) = $9,240). $6,336 + $9,240 = $15,576. Estimates for drafting, integrating, implementing policies and procedures are addressed in the discussion of rule 22e–4. This figure incorporates the costs that we estimated associated with preparing the section of the fund's report on Form N–PORT that will incorporate the information that will be required under Item C.7. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.E. As discussed in section V.E *infra,* we believe that any external annual costs associated with filing Form N–PORT will be only incrementally affected by compliance with Item C.7 of Form N–PORT, and thus Item C.7 does not affect our previous estimates of these costs.

[1180] There were 10,633 open-end funds (excluding money market funds, and including ETFs) as of the end of 2015. *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183. As discussed in note 1253, infra, we assume that 75% of ETFs, or 1,196 ETFs, will identify as In-Kind ETFs, which are exempt from the classification requirement, thereby reducing the total number of funds filing classification information to 9,347.

[1181] This assumption tracks the assumption made in the Investment Company Reporting Modernization Adopting Release that 35% of funds will choose to license a software solution to file reports on Form N–PORT. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1182] This estimate is based upon the following calculations: $783 in internal costs = ($783 = 3 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments. *See infra* at section V.E. The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1183] This estimate is based upon the following calculations: $261 in internal costs ($261 = 1 hour × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments. *See infra* at section V.E.

[1184] This assumption tracks the assumptions made in the Investment Company Reporting Modernization Adopting Release that 65% of funds will choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1185] This estimate is based upon the following calculations: $1,044 in internal costs ($1,044 = 4 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments.

[1186] This estimate is based upon the following calculations: $130.5 in internal costs ($130.5 = (0.5 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments.

[1187] This estimate is based on the following calculation: 0.5 hour × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $162. This figure incorporates the costs that we estimated associated with preparing the section of the fund's report on Form N–CEN that will incorporate the information that will be required under Item C.20. We do not estimate any additional costs in connection with proposed Item E.5 of Form N–CEN because the new item only requires a yes or no response. We do not estimate any change to the external costs associated with Form N–CEN. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.E.

[1188] This estimate assumes that 35% of funds (3,271 funds) would choose to file reports on

$103 million for all funds that will use a third-party service provider to prepare and file reports on Form N–PORT.[1189] In addition, staff estimates that the total ongoing annual costs associated with the disclosure and reporting requirements would be approximately $1.6 million for all funds that file reports on Form N–PORT in house[1190] and approximately $2.3 million for all funds that use a third-party service provider to prepare and file reports on Form N–PORT.[1191]

Commenters expressed concern that it was not appropriate to require public disclosure of liquidity classifications by position via Form N–PORT, arguing that reporting position-level liquidity classifications creates significant costs which outweigh the potential benefits. For example, they suggested this disclosure could create potential litigation exposures, create investor confusion surrounding the perceived precision of the classifications, stifle innovation in liquidity risk management, or facilitate predatory trading and/or first-mover incentives, particularly during times of stress.[1192] We agree that funds could have encountered costs related to the above concerns if they were required to follow the disclosure regime contemplated in the original proposal. While investors already have access to fund portfolio positions, to the extent that position-level liquidity classifications could have been valuable to professional traders, predatory trading opportunities could have increased under the proposal. The final form mitigates these costs by requiring that a fund's most competitively-sensitive information—its individual position liquidity classifications—be filed confidentially with the Commission.

The costs of the adopted form amendments differ from the proposal in several ways. First, as discussed above, the Form N–PORT only requires that funds publicly disclose an aggregate liquidity profile, which should significantly mitigate many of the potential costs associated with the potential front running of mutual funds by sophisticated investors. Second, Form N–PORT requires a fund to disclose the percentage of the fund's highly liquid investments that it has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as moderately liquid investments, less liquid investments, and illiquid investments. By contrast, the proposed rules required a fund to pair each segregated asset with the derivative it was covering. The final rule's approach should lower costs relative to the proposal. We also are not requiring funds to file credit agreements as exhibits to Form N–1A. Many commenters objected to the proposed requirement to file line of credit agreements[1193] with some arguing that such filings would be unnecessary because lines of credit are often already disclosed under existing requirements of Form N–1A, in a fund's statement of additional information, in footnotes to fund financial statements, and potentially in Form N–CEN.[1194] In addition, commenters stated that public disclosure of line of credit agreements could (1) weaken their ability to negotiate credit terms;[1195] (2) make public proprietary and competitive information;[1196] and (3) discourage lending banks from granting certain lending terms to funds (out of a concern that terms granted would become standard in other lending agreements).[1197] Removing the requirement to file credit agreements as exhibits to Form N–1A should, if anything, lead to a reduction in the costs associated with filing that form, vis-à-vis the proposed rule.

The requirement to file Form N–LIQUID in three circumstances—if more than 15% of a fund's net assets are, or become, illiquid investments that are assets; if the fund's illiquid investments that are assets previously exceeded 15% of net assets and the fund determines that its illiquid investments that are assets have changed to be less than or equal to 15% of net assets; or if a fund's holdings in highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days—may impose small incremental costs on funds. The adopted rule's liquidity risk management framework should help encourage funds to avoid exceeding the 15% illiquid investment limit, but in cases where they must file Form N–LIQUID, there will be incidental costs associated with filing the form itself. There will be similar incidental costs associated with filing Form N–LIQUID should a fund breach its highly liquid investment minimum for more than 7 consecutive calendar days. We estimate these costs as $1,745 per filing, and estimate the total number of filings to be roughly 90 per year, for an aggregate cost of $157,050.[1198] Finally, any potential indirect costs associated with filing the form, such as spillover effects or investor flight due to a breach, should be limited because Form N–LIQUID filings will not be publicly disclosed. Because Form N–LIQUID filings will be triggered by events that are part of a fund's periodic review of its investment classifications under rule 22e–4, the monitoring costs associated with Form N–LIQUID are included in our estimates of the compliance costs for rule 22e–4 above.

d. Effects on Efficiency, Competition, and Capital Formation

We believe the final rules' disclosure requirements could increase informational efficiency by providing additional information about the aggregate liquidity profile of funds' portfolios to investors and third-party service providers. To the extent that aggregate liquidity profiles—the percentages a fund holds in each of the four liquidity classification categories—are comparable across funds, this could assist investors in evaluating the risks associated with certain funds, which could increase allocative efficiency by assisting investors in making more informed investment choices that better match their risk tolerances. However, because each fund has discretion in how it defines both the asset type and liquidity classification of its portfolio positions, the publicly disclosed aggregation of these classifications may not be directly comparable across funds; in this case, allocative efficiency may not be enhanced, and, if fund liquidity profiles are misinterpreted as being comparable, efficiency could be reduced. Enhanced disclosure regarding funds' liquidity and liquidity risk

proposed Form N–PORT in house (*see infra* section V.D) and is based on the following calculation: 3,271 funds × $16,845 ($324 + $15,576 + $783 + $162) = $55,099,995.

[1189] This estimate assumes that 65% of funds (6,076) would choose to file reports on proposed Form N–PORT with the assistance of third-party service providers (*see infra* section V.D) and is based on the following calculation: 6,076 funds × $17,106 ($324 + $15,576 + $1,044 + $ 162) = $103,850,526.

[1190] This estimate is based on the following calculation: 3,271 funds × $502.63 ($79.63 + $261 + $162) = $1,644,102.73.

[1191] This estimate is based on the following calculation: 6,071 funds × $372.63 ($79.63 + $131 + $162) = $2,262,236.73

[1192] *See, e.g.,* Federated Comment Letter; Dodge & Cox Comment Letter; PIMCO Comment Letter; Invesco Comment Letter.

[1193] Fidelity Comment Letter; CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[1194] Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[1195] Oppenheimer Comment Letter; Fidelity Comment Letter.

[1196] CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

[1197] Fidelity Comment Letter.

[1198] *See infra* footnotes 1280–1287 and surrounding discussion for more details on these estimates.

management practices could positively affect competition by permitting investors to choose whether to invest in certain funds based on this information. However, if investors were to move their assets among funds as a result of the disclosure requirements (for example, if the disclosure made clear that a certain fund was able to generate higher returns than its peers only because of high exposures to relatively less liquid positions, which then led investors with limited risk tolerance to move assets out of this fund), this could negatively affect the competitive stance of certain funds.

Increased investor awareness of funds' portfolio liquidity and liquidity risk management practices also could promote capital formation if investors find certain funds' liquidity profiles or risk management practices, or both, attractive, and this awareness promotes increased investment in these funds (assuming these investments consist of assets that were not otherwise invested in the capital markets) and in turn in the assets in which the funds invest. On the other hand, disclosure which reveals liquidity risk could negatively impact capital formation if the disclosure causes investors to perceive that some funds pose too great an investment risk. Investors could consequently decide not to invest in these funds or to decrease their investment in these funds. If these foregone investments are not reinvested elsewhere in capital markets, capital formation would be negatively affected. Conversely, to the extent that investors assume that funds investing in relatively less liquid investments could obtain a liquidity risk premium in the form of higher returns over some period of time, the potential for higher returns could draw certain investors to funds investing in relatively less liquid asset classes, which could positively affect capital formation. If investors shift their invested investments between funds based on liquidity, there could be capital formation effects stemming from increased (or decreased) investment in the funds' portfolio investments, even if the total capital invested in funds remains constant. For example, if fund investors move assets from an investment strategy that entails relatively high liquidity risk to one whose investment strategy involves relatively low liquidity risk, less liquid portfolio asset classes could experience an adverse impact on capital formation while the more liquid portfolio asset classes could experience a positive impact on capital formation, although the total capital invested in funds would remain constant.

Relative to the proposal, the final disclosure and reporting requirements do not significantly alter our assessment of the requirements' impact on efficiency, competition, and capital formation. The exclusion of individual portfolio position classification from public disclosure requirements reduces the potential efficiency and capital formation gains that might accrue from better informed investors: position-level data could have been used (directly or via third-party vendor applications) to construct a detailed breakdown of a fund's liquidity profile, but any public analysis is now limited to an aggregate liquidity profile for each fund to address the concerns of commenters regarding the potential costs of disclosing position-level liquidity data publicly. At the same time, to the extent position-level liquidity classifications could be valuable to professional traders, requiring less public disclosure may reduce any potential inefficiencies that could have resulted from predatory trading or front running associated with the disclosure of individual investment classifications.

In addition, while we are also imposing a new filing requirement via Form N–LIQUID, this form will be filed confidentially with the Commission and will only be necessary when a fund breaches the 15% illiquid investment limit, returns to compliance with the 15% illiquid investment limit, or breaches its highly liquid investment minimum for longer than 7 consecutive calendar days. Requiring notice to the Commission of these events may itself provide an incentive for funds to manage their liquidity in such a way as to avoid triggering the reporting obligation; where a reporting obligation is triggered, Form N–LIQUID will provide the Commission with timely information that may prompt the Commission to inquire further into the circumstances that gave rise to the requirement to file Form N–LIQUID. As discussed above, for example, if a number of similarly-situated funds each file a report in close temporal proximity to one another, or if a single fund files a series of reports, such information is likely to be of value to the Commission in taking appropriate action to protect investors, if required. If Form N–LIQUID provides an early warning of potential fund liquidity issues that is sufficiently timely and clear to permit Commission involvement when needed to respond to the potential for disruptive fund closures and associated negative consequences, including fund shareholder dilution and any spillover effects, Form N–LIQUID could enhance efficiency to the extent that negative price pressure on investments due to fire sales is avoided and, to the extent mutual fund investors associate this with lower liquidity risk in the mutual fund industry, Form N–LIQUID may promote capital formation.

e. Reasonable Alternatives

The following discussion addresses significant alternatives to the disclosure and reporting requirements. More detailed alternatives to the individual elements of the requirements are discussed in detail above.[1199]

The Commission considered requiring each fund to disclose information about the liquidity of its portfolio positions in the fund's prospectus or on the fund's Web site, in addition to in reports filed on Form N–PORT. For example, we could have required a fund to disclose its highly liquid investment minimum, or the percentage of the fund's portfolio invested in each of the liquidity categories specified under rule 22e–4(b)(2)(i), in its prospectus or on its Web site. This additional disclosure could further increase transparency with respect to funds' portfolio liquidity and liquidity-related risks. But this additional disclosure could inappropriately emphasize risks relating to a fund's portfolio liquidity over other significant risks associated with an investment in the fund. In addition, funds are not precluded from voluntarily disclosing any of the information contained in the rule's required disclosure forms on their Web sites, so it is likely more efficient to allow investor demand for this information to drive whether or not funds publicly disclose this information of their own volition.

Conversely, the Commission also considered both limiting and expanding the enhancements to funds' liquidity-related disclosures on Form N–PORT. As discussed above, we are sensitive to the possibility that any amendments to the form could facilitate front-running, predatory trading, and other activities that could be detrimental to a fund and its investors. We likewise carefully considered costs and benefits with respect to the new liquidity-related disclosures required under Form N–PORT and concluded that these disclosures appropriately balance related costs with the benefits that could arise from the ability of the Commission, and members of the public, to monitor and analyze the liquidity of individual funds, as well as liquidity trends within the fund industry.

[1199] *See supra* sections III.G.1.a, III.G.1.b, III.G.2.d, and III.G.3.c.

In response to the proposal, which would have required that certain position-level data be reported publicly (albeit with a 60 day delay) commenters suggested that the Commission require (1) no reporting of any kind, or (2) no public disclosure, in light of potential negative competitive effects of public reporting and the limited benefits of stale data in understanding current fund liquidity levels.[1200] The Commission considered these alternatives, but rejected the first alternative because it would have provided no useful information to investors to permit them to better understand their funds' liquidity profiles, and no useful information to the Commission to enable the Commission to better monitor funds' liquidity. With regard to the second alternative, providing no information to investors would have the same defect of not permitting investors the opportunity to assess and make investment decisions based on better information about funds' liquidity. However, recognizing commenters' concern about voluminous, stale data, the final form provides investors with aggregated information—the percentage of the funds' portfolio falling into each of the four liquidity categories—and reserves the more detailed data for confidential submission to the Commission. We believe the approach in the final form strikes an appropriate balance, by mitigating many of the concerns expressed by commenters while preserving significant benefits for investors (both directly, and through the Commission's improved ability to monitor funds).

V. Paperwork Reduction Act Analysis

A. Introduction

New rule 22e–4 contains ''collections of information'' within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[1201] In addition, the amendments to Form N–1A will impact the collections of information burden under those rules and form. The new reporting requirements on Form N–CEN and Form N–PORT will impact the collections of information burdens associated with these forms described in the Investment Company Reporting Modernization Adopting Release.[1202] New rule 30b1–10 and new Form N–LIQUID also contain a collection of information within the meaning of the PRA.[1203]

The titles for the existing collections of information are: ''Form N–1A under the Securities Act of 1933 and under the Investment Company Act of 1940, Registration Statement of Open-End Management Investment Companies'' (OMB Control No. 3235–0307). In the Investment Company Reporting Modernization Adopting Release, we submitted new collections of information for Form N–CEN and Form N–PORT.[1204] The titles for these new collections of information are: ''Form N–CEN Under the Investment Company Act, Annual Report for Registered Investment Companies'' and ''Form N–PORT Under the Investment Company Act, Monthly Portfolio Investments Report.''

We are submitting new collections of information for new rule 22e–4, new rule 30b1–10, and new Form N–LIQUID under the Investment Company Act of 1940. The titles for these new collections of information will be: ''Rule 22e–4 Under the Investment Company Act of 1940, Liquidity risk management programs,'' ''Rule 30b1–10 Under the Investment Company Act of 1940, Current report for open-end management investment companies,'' and ''Form N–LIQUID, Current Report, Open-end Management Investment Company Liquidity.'' The Commission is submitting these collections of information to the OMB for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

The Commission is adopting new rule 22e–4, new rule 30b1–10, new Form N–LIQUID, and amendments to Form N–1A. The Commission also is adopting new items to Form N–CEN and Form N–PORT. The new rules and amendments are designed to promote effective liquidity risk management throughout the open-end fund industry and enhance disclosure and Commission oversight of fund liquidity and shareholder redemption practices. We discuss below the collection of information burdens associated with these reforms. In the Proposing Release, the Commission solicited comment on the collection of information requirements and the accuracy of the Commission's statements in the Proposing Release.

B. Rule 22e–4

Rule 22e–4 requires a ''fund'' and an In-Kind ETF, each within the meaning of rule 22e–4,[1205] to establish a written liquidity risk management program that is reasonably designed to assess and manage the fund's or In-Kind ETF's liquidity risk. This program includes policies and procedures that incorporate certain program elements, including: (i) For funds, the classification of the liquidity of a fund's portfolio positions; (ii) for funds and In-Kind ETFs, the assessment, management, and periodic review of liquidity risk (with such review occurring no less frequently than annually); (iii) for funds that do not primarily hold assets that are highly liquid investments, the determination of and periodic review of the fund's highly liquid investment minimum and establishment of policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors; and (iv) for funds and In-Kind ETFs, the establishment of policies and procedures regarding redemptions in kind, to the extent that the fund engages in or reserves the right to engage in redemptions in kind. The rule also requires board approval and oversight of a fund's or In-Kind ETF's liquidity risk management program and recordkeeping. Rule 22e–4 also requires a limited liquidity review, under which a UIT's principal underwriter or depositor determines, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues and retains a record of such determination for the life of the UIT and for five years thereafter.

The requirements under rule 22e–4 that a fund and In-Kind ETF adopt a written liquidity risk management program, report to the board, maintain a written record of how the highly liquid investment minimum was determined and written policies and procedures for responding to a shortfall of the fund's highly liquid investment

[1200] *See supra* section III.C.6.

[1201] 44 U.S.C. 3501 through 3521.

[1202] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1203] *See* rule 30b1–10 requiring certain funds to file Form N–LIQUID.

[1204] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1205] The term ''funds'' is defined under rule 22e–4(a)(4) to mean an open-end management investment company that is registered or required to be registered under section 8 of the Act and includes a separate series of such an investment company, *but does not include* a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or an In-Kind ETF, as defined under rule 22e–4(a)(9).

minimum, which includes reporting to the fund's board of directors (for funds that do not primarily hold highly liquid investments), establish written policies and procedures regarding how the fund will engage in redemptions in kind, and retain certain other records are all collections of information under the PRA. In addition, the requirement under rule 22e–4 that the principal underwriter or depositor of a UIT assess the liquidity of the UIT on or before the date of the initial deposit of portfolio securities into the UIT and retain a record of such determination for the life of the UIT, and for five years thereafter, is also a collection of information under the PRA. The respondents to rule 22e–4 will be open-end management investment companies (including, under certain circumstances, In-Kind ETFs but excluding money market funds), and the principal underwriters or depositors of UITs under certain circumstances.

1. Preparation of Written Liquidity Risk Management Program

We believe that some open-end funds regularly monitor the liquidity of their portfolios as part of the portfolio management function, but they may not have written policies and procedures regarding liquidity management. Rule 22e–4 requires funds and In-Kind ETFs to have a written liquidity risk management program. We believe such a program will minimize dilution of shareholder interests by promoting stronger and more effective liquidity risk management across open-end funds and will reduce the risk that a fund or In-Kind ETF will be unable to meet redemption obligations.

In the Proposing Release, we estimated that funds within 867 fund complexes would be subject to rule 22e–4.[1206] Compliance with rule 22e–4 would have been mandatory for all such funds. We further estimated that a fund complex would incur a one-time average burden of 40 hours associated with documenting the liquidity risk management programs adopted by each fund within the complex. Under the proposal, rule 22e–4 would have required fund boards to approve the liquidity risk management program and any material changes to the program, and we estimated a one-time burden of nine hours per fund complex associated with fund boards' review and approval of the funds' liquidity risk management programs and preparation of board materials. Amortized over a 3-year period, we estimated this would be an annual burden per fund complex of about 16 hours. Accordingly, we estimated that the total burden for initial documentation and review of funds' written liquidity risk management program would be 42,483 hours.[1207] We also estimated that it would cost a fund complex approximately $38,791 to document, review and initially approve these policies and procedures, for a total cost of approximately $33,631,797.[1208]

We did not receive any comments on the estimated hour and costs burdens associated with the overall preparation of written liquidity risk management programs under rule 22e–4 discussed above. We did, however, receive comments on the costs associated with the classification of the liquidity of a fund's portfolio positions, which we address below in connection with Form N–PORT. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the new written liquidity risk management requirements of rule 22e–4 based on certain modifications made to rule 22e–4 and updates to the industry data figures that were utilized in the Proposing Release. Based upon our review of industry data, we estimate that funds within 873 fund complexes would be subject to rule 22e–4,[1209] updated from 867 in our proposal. Compliance with rule 22e–4 will be mandatory for all such funds and In-Kind ETFs, with certain program elements applicable to certain funds within a fund complex based upon whether the fund is an In-Kind ETF or does not primarily hold assets that are highly liquid investments, as noted above. We discuss mandatory compliance with rule 22e–4 with respect to principal underwriters and depositors of UITs in section V.B.5. below.

The Commission continues to estimate that a fund complex will incur a one-time average burden of 40 hours associated with documenting the liquidity risk management programs adopted by each fund within a fund complex. In light of the requirement that a fund subject to the highly liquid investment minimum requirement adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, and responding to any potential excesses of the 15% illiquid asset limit, both of which include reporting to the fund's board of directors, we estimate a one-time burden of 10 hours, rather than 9 hours, per fund complex associated with fund boards' review and approval of the funds' liquidity risk management programs and preparation of board materials. Amortized over a 3-year period, we estimate this will be an annual burden per fund complex of about 16.67 hours. Accordingly, we estimate that the total burden for initial documentation and review of funds' written liquidity risk management program will be 43,650 hours.[1210] We also estimate that it will cost a fund complex approximately $41,467.5 to document, review, and initially approve these policies and procedures, for a total cost of approximately $36,201,127.5.[1211]

2. Reporting Regarding the Highly Liquid Investment Minimum

Rule 22e–4 requires any fund that does not primarily hold assets that are highly liquid investments to determine

[1206] *See* Proposing Release, *supra* footnote 9, at n.819 and accompanying text. This estimate excluded ETFs and UITs. *See also* 2016 ICI Fact Book, *supra* footnote 11, at Fig. 1.8.

[1207] This estimate was based on the following calculation: (40 + 9) hours × 867 fund complexes = 42,483 hours.

[1208] These estimates were based on the following calculations: 20 hours × $301 (hourly rate for a senior portfolio manager) = $6,020; 20 hours × $455.5 (blended hourly rate for assistant general counsel ($426) and chief compliance officer ($485)) = $9,110; 5 hours × $4,465 (hourly rate for a board of 8 directors) = $22,325; 4 hours (for a fund attorney's time to prepare materials for the board's determinations) × $334 (hourly rate for a compliance attorney) = $1,336. $6,020 + $9,110 + $22,325 + $1,336 = $38,791; $38,791 × 867 fund complexes = $33,631,797. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The staff previously estimated in 2009 that the average cost of board of director time was $4,000 per hour for the board as a whole, based on information received from funds and their counsel. Adjusting for inflation, the staff estimates that the current average cost of board of director time is approximately $4,465.

[1209] *See* 2016 ICI Fact Book, *supra* footnote 11, at Fig. 1.8.

[1210] This estimate is based on the following calculation: (40 +10) hours × 873 fund complexes = 43,650 hours.

[1211] These estimates are based on the following calculations: 20 hours × $306 (hourly rate for a senior portfolio manager) = $6,120; 20 hours × $463 (blended hourly rate for assistant general counsel ($433) and chief compliance officer ($493)) = $9,260; 5.5 hours × $4,465 (hourly rate for a board of 8 directors) = $24,557.5; 4.5 hours (for a fund attorney's time to prepare materials for the board's determinations) × $340 (hourly rate for a compliance attorney) = $1,530. $6,120 + $9,260 + $24,557.5 + $1,530 = $41,467.5; $41,467.5 × 873 fund complexes = $36,201,127.5. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The staff previously estimated in 2009 that the average cost of board of director time was $4,000 per hour for the board as a whole, based on information received from funds and their counsel. Adjusting for inflation, the staff estimates that the current average cost of board of director time is approximately $4,465.

a highly liquid investment minimum for the fund, which must be reviewed at least annually, and may not be changed during any period of time that a fund's assets that are highly liquid investments are below the determined minimum without approval from the fund's board of directors.[1212] The fund's investment adviser or officers designated to administer the liquidity risk management program must provide a written report to the fund's board at least annually that describes a review of the adequacy and effectiveness of the fund's liquidity risk management program, including, if applicable, the operation of the highly liquid investment minimum.[1213] In addition, the fund must adopt and implement policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its highly liquid investment minimum, which must include reporting to the fund's board of directors with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response, and, if the shortfall lasts more than 7 consecutive calendar days, an explanation of how the fund plans to come back into compliance with its minimum within a reasonable period of time.[1214]

Similar to the highly liquid investment minimum, in the Proposing Release, we proposed that funds be required to establish a three-day liquid asset minimum as part of a fund's liquidity risk management program, subject to board review, and we estimated that, for each fund complex, compliance with this reporting requirement would entail: (i) Five hours of portfolio management time, (ii) five hours of compliance time, (iii) five hours of professional legal time and (iv) 2.5 hours of support staff time, requiring an additional 17.5 burden hours at a time cost of approximately $5,193 per fund complex to draft the required report to the board.[1215] We estimated that the total burden for preparation of the board report would be 15,173 hours, at an aggregate cost of $4,502,331.[1216]

We received several comments addressing, in general, the potential costs associated with a fund establishing and implementing a liquid asset minimum. To minimize the costs of implementing a liquid asset minimum, one commenter recommended that funds that have demonstrated a history of investing in only three-day liquid assets be excluded from the proposed three-day liquid asset minimum requirements and thus not incur the costs of related board reporting requirements.[1217] Other commenters characterized the program requirements under the proposal as a one-size-fits-all approach to liquidity risk management and expressed the belief that such requirements were expensive and unsuitable for many funds.[1218]

As discussed above, the Commission has modified the proposed three-day liquid asset minimum requirement to a highly liquid investment minimum requirement that is tailored to apply only to funds that do not primarily hold highly liquid investments, thereby potentially reducing the number of funds required to establish, maintain, and report a highly liquid investment minimum. In addition, the final rule retains a role for the board in overseeing the fund's liquidity risk management program, but eliminates certain of the more specific and detailed approval requirements originally proposed.[1219] Unlike the proposal, however, rule 22e–4 requires a fund that is subject to the highly liquid investment minimum requirement to also adopt and implement policies and procedures to respond to a shortfall of assets that are highly liquid investments below the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors.

In light of these modifications, we estimate that the burdens associated with board reporting will decrease overall in comparison to the proposal due to the elimination of certain board oversight requirements originally proposed and the potential reduction in the number of funds that would require board oversight of a highly liquid investment minimum. Therefore, we have modified the estimated annual burden hours and total costs that will result from the highly liquid investment minimum requirement under rule 22e–4.[1220] We estimate that, for each fund complex, compliance with the reporting requirement would entail: (i) 4 Hours, rather than five hours, of portfolio management time; (ii) 4 hours, rather than five hours, of compliance time; (iii) 4 hours, rather than five hours, of professional legal time; and (iv) 2 hours, rather than 2.5 hours, of support staff time, requiring an additional 14 burden hours at a time cost of approximately $4,224 per fund complex to draft the required report to the board.[1221] We estimate that fund complexes will have at least one fund that will be subject to the highly liquid investment minimum requirement. Thus, we estimate that 873 fund complexes will be subject to this requirement under rule 22e–4 and that the total burden for preparation of the board report associated will be 12,222 hours, at an aggregate cost of $3,687,552.[1222]

3. Recordkeeping

Final rule 22e–4 requires a fund or In-Kind ETF to maintain a written copy of the policies and procedures adopted pursuant to its liquidity risk management program for five years in

[1212] *See* rule 22e–4(b)(1)(iii)(A).

[1213] *See* rule 22e–4(b)(3)(iii).

[1214] *See* rule 22e–4(b)(1)(iii)(A)(3).

[1215] This estimate was based on the following calculation: 5 hours × $301 (hourly rate for a senior portfolio manager) = $1,505; 5 hours × $283 (hourly rate for compliance manager) = $1,415; 5 hours × $426 (hourly rate for assistant general counsel) = $2,130; and 2.5 hours × $57 (hourly rate for general clerk) = $143. $1,505 + $1,415 + $2,130 + $143 = $5,193. The hourly wages used were from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The hourly wage used for the general clerk was from SIFMA's Office Salaries in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 2.93 to account for bonuses, firm size, employee benefits, and overhead.

Because, under the proposal, each fund within a fund complex would be required to determine its own three-day liquid asset minimum, this estimate assumed that the report at issue would incorporate an assessment of the three-day liquid asset minimum for each fund within the fund complex.

[1216] These estimates were based on the following calculations: 867 fund complexes × 17.5 hours = 15,173 hours; and $5,193 × 867 fund complexes = $4,502,331.

[1217] *See* CFA Comment Letter.

[1218] *See, e.g.,* Dechert Comment Letter; Federated Comment Letter.

[1219] *See supra* section III.H.3.

[1220] Under the proposal, because each fund within a fund complex would have been required to determine its own three-day liquid asset minimum, the estimate under the proposal assumed that the report at issue would incorporate an assessment of the three-day liquid asset minimum for each fund within the fund complex. As adopted, rule 22e–4 only requires the assessment of the highly liquid investment minimum for funds that do not primarily hold assets that are highly liquid investments.

[1221] The estimate is based on the following calculation: 4 hours × $306 (hourly rate for a senior portfolio manager) = $1,224; 4 hours × $288 (hourly rate for compliance manager) = $1,152; 4 hours × $433 (hourly rate for assistant general counsel) = $1,732; and 2 hours × $58 (hourly rate for general clerk) = $116. $1,224 + $1,152 + $1,732 + $116 = $4,224. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The hourly wage used for the general clerk is from SIFMA's Office Salaries in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1222] These estimates are based on the following calculations: 873 fund complexes × 14 hours =12,222 hours; and $4,224 × 873 fund complexes = $3,687,552.

an easily accessible place.[1223] The rule also requires a fund to maintain copies of materials provided to the board in connection with its initial approval of the liquidity risk management program and any written reports provided to the board, for at least five years, the first two years in an easily accessible place.[1224] If applicable, a fund must also maintain a written record of how its highly liquid investment minimum and any adjustments to the minimum were determined, as well as any reports to the board regarding a shortfall in the fund's highly liquid investment minimum, for five years, the first two years in an easily accessible place.[1225] The retention of these records would be necessary to allow the staff during examinations of funds to determine whether a fund is in compliance with the liquidity risk management program requirements.

Under the proposal, the recordkeeping requirements were substantially similar to those being adopted. In the Proposing Release, we estimated that the burden to retain these records would be five hours per fund complex, with 2.5 hours spent by a general clerk and 2.5 hours spent by a senior computer operator, with an estimated time cost per fund complex of $361.[1226] We also estimated that the total burden for recordkeeping related to the liquidity risk management program would be 4,335 hours, at an aggregate cost of $312,987.[1227]

We did not receive any comments on the estimated hour and cost burdens associated with the recordkeeping requirements of rule 22e–4. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from these requirements in light of modifications to change those subject to the requirements to funds and In-Kind ETFs and to require them to maintain reports to boards concerning a shortfall of the fund's highly liquid investment minimum and the new requirement to retain records submitted to the board related to shortfalls of the minimum. We believe that, on an annual basis, the burden to retain records in connection with rule 22e–4 will be four hours, rather than five hours per fund complex, with 2 hours, rather than 2.5 hours, spent by a general clerk, and 2 hours, rather than 2.5 hours, spent by a senior computer operator, with an estimated time cost per fund complex of $292, rather than $361, based on updated data concerning funds and fund personnel salaries.[1228] In addition, we estimate that the total burden for recordkeeping related to the liquidity risk management program requirement of rule 22e–4 will be 3,492 hours, rather than 4,335 hours, at an aggregate cost of $254,916, rather than $312,987.[1229]

4. Estimated Total Burden for Open-End Funds

Amortized over a three-year period, we estimate that the hour burdens and time costs associated with rule 22e–4 for open-end funds, including the burden associated with (1) funds' initial documentation and review of the required written liquidity risk management program, (2) reporting to a fund's board regarding the fund's highly liquid investment minimum, and (3) recordkeeping requirements will result in an average aggregate annual burden of 26,190 hours, rather than 28,611 hours as proposed, and average aggregate time costs of $14,780,326.5, rather than $14,431,215 as proposed.[1230] We continue to estimate that there are no external costs associated with this collection of information.

5. UIT Liquidity Determination

As discussed above, we recognize that UITs may in some circumstances be subject to liquidity risk (particularly where the UIT is not a pass-through vehicle and the sponsor does not maintain an active secondary market for UIT shares). We believe that UITs may not have written policies and procedures regarding liquidity management and are adopting a new requirement under rule 22e–4 with respect to UITs. On or before the date of initial deposit of portfolio securities into a registered UIT, the UIT's principal underwriter or depositor is required to determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues, and maintain a record of that determination for the life of the UIT and for five years thereafter. The retention of these records would be necessary to allow the staff during examinations to determine whether a UIT is in compliance with the liquidity risk assessment required under rule 22e–4. This assessment would occur on or before the initial deposit of portfolio securities of a new UIT and thus would only need to occur once. Maintenance of the records would be required for the life of the UIT and for five years thereafter.

We estimate that 1615 newly registered UITs will be subject to the UIT liquidity determination requirement under rule 22e–4 each year.[1231] Compliance with rule 22e–4(c) will be mandatory for all principal underwriters or depositors of such UITs. We estimate that the principal underwriter or depositor of a UIT will incur a one-time average burden of 10 hours to document its determination that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues. Amortized over a 3 year period, we estimate this would be an annual burden per UIT of about 3 hours. Accordingly, we estimate that the total burden for the initial documentation and review of funds' written liquidity risk management program would be 16,150 hours.[1232] We also estimate that it will cost the principal underwriter or depositor of a UIT approximately $2,466 to perform and document this review, for a total cost of approximately $3,982,590.[1233]

We estimate that the burden to retain these records will be two hours per UIT, with 1 hour spent by a general clerk and 1 hour spent by a senior computer operator, with an estimated time cost

[1223] *See* rule 22e–4(b)(4)(i).

[1224] *See* rule 22e–4(b)(4)(ii).

[1225] *See* rule 22e–4(b)(4)(iii).

[1226] This estimate was based on the following calculations: 2.5 hours × $57 (hourly rate for a general clerk) = $143; 2.5 hours × $87 (hour rate for a senior computer operator) = $218. $143 + $218 = $361.

[1227] This estimate was based on the following calculations: 867 fund complexes × 5 hours = 4,335 hours. 867 fund complexes × $361 = $312,987.

[1228] This estimate is based on the following calculations: 2 hours × $58 (hourly rate for a general clerk) = $116; 2 hours × $88 (hour rate for a senior computer operator) = $176. $116 + $176 = $292.

[1229] This estimate is based on the following calculations: 873 fund complexes × 4 hours = 3,492 hours. 873 fund complexes × $292 = $254,916.

[1230] These estimates are based on the following calculations: 43,650 hours (year 1) + (2 × 12,222 hours) (years 2 and 3) + (3 × 3,492 hours) (years 1, 2 and 3) ÷ 3 = 26,190 hours; $36,201,127.5 (year 1) + (2 × $3,687,552) (years 2 and 3) + (3 × $254,916) (years 1, 2 and 3) ÷ 3 = $14,780,326.5.

[1231] This estimate is based upon staff review of new UIT registration statements and semi-annual reporting on Form N–SAR filed with the Commission and Monthly Unit Investment Trust Data released by the Investment Company Institute, *available at https://www.ici.org/research/stats*, for the months of January through December of 2015.

[1232] This estimate is based on the following calculation: 10 hours × 1615 new UITs = 16,150 hours.

[1233] These estimates are based on the following calculations: 5 hours × $308 (hourly rate for a senior programmer) = $1540; 2 hours × $463 (blended hourly rate for assistant general counsel ($433) and chief compliance officer ($493)) = $926. $1,540 + $926 = $2,466; $2,466 × 1615 estimated new UITs = $3,982,590. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

per UIT of $146.[1234] We also estimate that the total burden for recordkeeping related to the liquidity risk management program will be 3,230 hours, at an aggregate cost of $235,790.[1235] We estimate that there are no external costs associated with this collection of information.

C. Form N–PORT

Today, the Commission is adopting Form N–PORT, which will require funds to report information within thirty days after the end of each month about their monthly portfolio holdings to the Commission in a structured data format.[1236] Preparing a report on Form N–PORT is mandatory and a collection of information under the PRA, and the information required by Form N–PORT will be data-tagged in XML format. Except for certain reporting items specified in the form, responses to the reporting requirements will be kept confidential for reports filed with respect to the first two months of each quarter; the third month of the quarter will not be kept confidential, but made public sixty days after the quarter end.

In the Investment Company Reporting Modernization Adopting Release, we estimate that, for the 35% of funds that would file reports on Form N–PORT in house, the per fund average aggregate annual hour burden will be 144 hours per fund, and the average cost to license a third-party software solution will be $4,805 per fund per year.[1237] For the remaining 65% of funds that would retain the services of a third party to prepare and file reports on Form N–PORT on the fund's behalf, we estimate that the average aggregate annual hour burden will be 125 hours per fund, and each fund will pay an average fee of $11,440 per fund per year for the services of third-party service provider. In sum, we estimate that filing reports on Form N–PORT will impose an average total annual hour burden of 144 hours on applicable funds, and all applicable funds will incur on average, in the aggregate, external annual costs of $103,787,680, or $9,118 per fund.[1238]

Today, we are also adopting amendments to Form N–PORT concerning liquidity information that require a fund to report information about the fund's highly liquid investment minimum (if applicable),[1239] the liquidity classification for each portfolio investment among four liquidity categories (with the fourth category covering investments that qualify as ''illiquid investments'' under the 15% illiquid investment limit),[1240] certain information on the percentage of the fund's highly liquid investments that is segregated to cover, or pledged to satisfy margin requirements in connection with, fund's derivatives transactions in each of the other liquidity categories,[1241] and the aggregate percentage of the fund representing each of the four liquidity categories.[1242] Unlike the proposal, the amendments adopted today will not require funds to indicate the dollar amount attributable to different classifications for different portions within a given holding.[1243] We believe that requiring funds to report information about the liquidity of portfolio investments will enhance the Commission's ability to assess liquidity risk in the open-end fund industry and assist in our regulatory oversight efforts. Moreover, we believe that this information will help investors and other potential users of information on Form N–PORT better understand the liquidity risks in funds.

1. Liquidity Classification

Under rule 22e–4(b)(1)(ii), an open-end management investment company (other than a money market fund or an In-Kind ETF) is required as part of its liquidity risk management program to classify the liquidity of each of its portfolio investments (including each of the fund's derivatives transactions) as a highly liquid investment, moderately liquid investment, less liquid investment, or illiquid investment.

Under the proposal, all open-end funds would be required to classify portfolio assets under a days-to-cash framework and report such classifications on Form N–PORT.[1244] In the Proposing Release, we estimated that 8,734 funds would be required to file, on a monthly basis, additional information on Form N–PORT as a result of the proposed amendments to N–PORT to require funds provide additional liquidity information.[1245] We stated our expectation that funds would incur a one-time internal burden to initially classify a fund's portfolio securities and program existing systems to conduct the ongoing classifications and reviews required under the proposal for reporting purposes. We estimated that each fund would incur an average one-time burden of 54 hours at a time cost of $15,330.[1246] Amortized over a three-year period, we estimated that this would result in an average annual hour burden of approximately 18 burden hours and a time cost of $5,110.[1247]

Many commenters expressed concerns over the operational costs associated with the assignment of liquidity classifications and the reporting of this information on Form N–PORT. Several commenters expressed the belief that the liquidity classification requirement could impose significant direct costs to a fund and its shareholders (*e.g.,* new operational systems, trade order management systems, and other processes to handle complex classification schemes), which commenters anticipated to be in excess of the Commission's estimates under the proposal.[1248] One commenter estimated that the costs associated with building a liquidity classification system could range in the millions of dollars for fund complexes that have large numbers of portfolio positions.[1249] Another commenter estimated $2 million in initial implementation costs and more than $650,000 in annual recurring costs in connection with automating the classification process for over 63,000 portfolio positions.[1250] This commenter also expressed the belief that substantial resources, including additional investment professionals and

[1234] This estimate is based on the following calculations: 1 hour × $58 (hourly rate for a general clerk) = $58; 1 hours × $88 (hour rate for a senior computer operator) = $88. $58 + 88 = $146.

[1235] This estimate is based on the following calculations: 1615 UITs × 2 hours = 3,230 hours. 1615 UITs × $146 = $235,790.

[1236] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1237] *See id.* at n. 1426 and accompanying text.

[1238] *See id.* at n. 1499 and accompanying text.

[1239] *See* Item B.7 of Form N–PORT.

[1240] *See* Item C.7.a of Form N–PORT.

[1241] *See* Item C.7.b of Form N–PORT. The fourth classification category incorporates data that, under the proposal, would have been reported as a 15% standard asset in response to proposed Item C.7 of proposed Form N–PORT.

[1242] *See* Item C.7.c of Form N–PORT.

[1243] *See supra* section III.C

[1244] *See id.; see also* Proposing Release, *supra* footnote 9, at section III.B.

[1245] *See* Proposing Release, *supra* footnote 9, at n.850 and accompanying text. This was based on estimates that there were 8,734 open-end funds (excluding money market funds, and including ETFs (for purposes of these calculations, we excluded non-1940 Act ETFs)) as of the end of 2014.

[1246] *See* Proposing Release, *supra* footnote 9, n.851 and accompanying text. We estimated that these systems modifications would include the following costs: (i) Project planning and systems design (24 hours × $260 (hourly rate for a senior systems analyst) = $6,240) and (ii) systems modification integration, testing, installation and deployment (30 hours × $303 (hourly rate for a senior programmer) = $9,090. $6,240 + $9,090 = $15,330.

[1247] $15,330 ÷ 3 = $5,110. *See* Proposing Release, *supra* footnote 9, at n.852 and accompanying text.

[1248] *See, e.g.,* CFA Comment Letter; Federated Comment Letter; ICI Comment Letter; Voya Comment Letter.

[1249] *See* T. Rowe Comment Letter (noting that its fund complex has just under 44,000 portfolio positions combined as of December 31, 2015).

[1250] *See* Invesco Comment Letter.

compliance personnel, and additional expenses associated with third-party service providers would increase costs associated with the classification requirement.[1251] Some commenters also expressed concern that the costs of diverting resources and key personnel were not considered in the Commission's cost estimates.[1252]

As discussed above, we are adopting a liquidity classification requirement under rule 22e–4 with a number of modifications to address commenters' concerns. Unlike the proposal which would have applied to all open-end funds, In-Kind ETFs are not subject to the classification requirements under rule 22e–4(b)(ii). The classification categories have been reduced from six to four and the timeframe for projections substantially reduced, with the fourth category designated for those investments that qualify as ''illiquid investments'' harmonized with the codified 15% illiquid investment limit. Furthermore, a fund may classify portfolio investments based on asset class, rather than position-by-position, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment and would suggest a different classification for that investment.

We believe that these modifications to the liquidity classification requirements will reduce the number of funds subject to the liquidity classification requirements and will address some of the costs commenters anticipate funds and fund shareholders would bear to establish new operational, trade, and other systems to process and report fund liquidity classification information. However, we recognize, as discussed above, that several commenters suggested that implementation of liquidity classification systems would be more costly than we estimated. Accordingly, we believe, on balance, that the per fund estimates that we proposed are reasonable and are not reducing them, despite having adopted some modifications to rule 22e–4 that we believe reduce the burden relative to the proposal.

We estimate that 9,347 funds, rather than 8,734 funds, will be required to file, on a monthly basis, additional information on Form N–PORT as a result of the modifications to Form N–PORT to require additional liquidity information.[1253] We continue to expect that funds will incur a one-time internal burden to initially classify a fund's portfolio securities and program new and/or existing systems to conduct the ongoing classifications and reviews required under rule 22e–4 for reporting purposes. We continue to estimate that each fund will incur an average one-time burden of 54 hours, at a time cost of $15,576, rather than $15,330 based on updated data concerning funds and fund personnel salaries.[1254] Amortized over a three-year period, we estimate that this will result in an average annual hour burden of approximately 18 burden hours, and a time cost of $5,192, rather than $5,110.[1255]

2. Reporting on Form N–PORT

In addition to the classification and review of securities, we estimated in the Proposing Release that 8,734 [1256] funds would be required to file, on a monthly basis, additional information on Form N–PORT. We estimated that each fund that files reports on Form N–PORT in house (35%, or 3,057 funds) would require an average of approximately 3 burden hours to compile (including review of the information), tag, and electronically file the additional information in light of the proposed additions regarding liquidity information for the first time and an average of approximately 1 burden hours for subsequent filings. Therefore, we estimated the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the proposed additions for these funds would be an additional 14 hours for the first year [1257] and an additional 12 hours for each subsequent year.[1258] Amortized over three years, we estimated that the average annual hour burden would be an additional 12.67 hours per fund.[1259]

In the Proposing Release, we also estimated that 65% of funds (5,677) would retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on proposed Form N–PORT on the fund's behalf.[1260] For these funds, we estimated that each fund would require an average of approximately 4 hours to compile and review the information with the service provider prior to electronically filing the report for the first time and an average of 0.5 burden hours for subsequent filings.

Therefore, in the Proposing Release, we estimated that the per-fund average annual hour burden associated with the incremental changes to proposed Form N–PORT as a result of the proposed additions related to liquidity information for these funds would be an additional 9.5 hours for the first year [1261] and an additional 6 hours for each subsequent year.[1262] Amortized over three years, we estimated that the average aggregate annual hour burden would be an additional 7.17 hours per fund.[1263] In sum, we estimated that the proposed additions to Form N–PORT would impose an average total annual hour burden of an additional 79,436.28 hours on applicable funds.[1264] We did not anticipate any change to the total external annual costs of $97,674,221 associated with Form N–PORT.[1265]

As discussed in section V.E.2 above, many commenters expressed concerns over the operational costs associated with the assignment of liquidity classifications and the reporting of this information on Form N–PORT. In addition, one commenter recommended that estimated costs to purchase third-party liquidity assessment data be included in the total estimated costs to comply with proposed rule given the

[1251] *Id.*

[1252] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; Nuveen Comment Letter; Wells Fargo Comment Letter.

[1253] This is based on estimates that there are 9,039 open-end mutual funds (excluding money market funds) and 1,594 ETFs as of the end of 2015. *See supra* footnote 1045 and accompanying text. Based on staff experience, we estimate that more than 75% of ETFs or 1,196 ETFs will identify as In-Kind ETFs and thus will not be subject to the classification requirement. 9,039 + (1,594 − 1,196) = 9,437.

[1254] We estimate that these systems modifications will include the following costs: (i) Project planning and systems design (24 hours × $264 (hourly rate for a senior systems analyst) = $6,336) and (ii) systems modification integration, testing, installation and deployment (30 hours × $308 (hourly rate for a senior programmer) = $9,240. $6,336 + $9,240 = $15,576.

[1255] $15,576 ÷ 3 = $5,192.

[1256] *See* Proposing Release, *supra* footnote 9, at section V.E. There were 8,734 open-end funds (excluding money market funds, and including ETFs) as of the end of 2014. *See* 2016 ICI Fact Book, *supra* footnote 11, at 177, 184.

[1257] The estimate was based on the following calculation: (1 filing × 3 hours) + (11 filings × 1 hour) = 14 burden hours in the first year.

[1258] This estimate was based on the following calculation: 12 filings × 1 hour = 12 burden hours in each subsequent year.

[1259] The estimate was based on the following calculation: (14 + (12 × 2)) ÷ 3 = 12.67.

[1260] Proposing Release, *supra* footnote 9.

[1261] The estimate was based on the following calculation: (1 filing × 4 hours) + (11 filings × 0.5 hour) = 9.5 burden hours in the first year.

[1262] This estimate was based on the following calculation: 12 filings × 0.5 hour = 6 burden hours in each subsequent year.

[1263] The estimate was based on the following calculation: (9.5 + (6 × 2)) ÷ 3 = 7.17.

[1264] The estimate was based on the following calculation: (3,057 funds × 12.67 hours) + (5,677 funds × 7.17 hours) = 79,436.28 hours.

[1265] *See* Proposing Release, *supra* footnote 9*; see also* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

likelihood that many funds will subscribe to such services to operationally comply with the rule 22e–4.[1266]

The Commission has modified the estimated increase in annual burden hours and total time costs that will result from Form N–PORT and the liquidity related amendments to Form N–PORT in consideration of commenters' concerns that the Commission underestimated the operational requirements for reporting and to reflect updates to the industry data figures that were utilized in the Proposing Release. We estimate that 9,347 funds would be required to file, on a monthly basis, additional information on Form N–PORT as a result of the additional liquidity-related reporting items adopted today.[1267]

We estimate that each fund that files reports on Form N–PORT in house (35%, or 3,271) will require an average of approximately 6 burden hours, rather than 3 burden hours, to compile (including review of the information), tag, and electronically file the additional liquidity information required on Form N–PORT for the first time and an average of approximately 2 burden hours, rather than 1 burden hour, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the added liquidity information for these funds would be an additional 28 hours, rather than 14 hours for the first year [1268] and an additional 24 hours for each subsequent year.[1269] Amortized over three years, the average annual hour burden would be an additional 25.33 hours per fund.[1270]

We further estimate that 65% of funds (9,076) will retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on Form N–PORT on the fund's behalf. For these funds, we estimate that each fund will require an average of approximately 8 hours, rather than 4 hours, to compile and review the added liquidity-related information with the service provider prior to electronically filing the report for the first time and an average of 1 burden hour, rather than 0.5 burden hours, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the liquidity-related changes to Form N–PORT for these funds would be an additional 19 hours, rather than 9.5 hours, for the first year [1271] and an additional 12 hours, rather than 6 hours, for each subsequent year.[1272] Amortized over three years, the average aggregate annual hour burden would be an additional 14.33 hours per fund, rather than 7.17 hours per fund.[1273]

In sum, we estimate that the adopted additional liquidity reporting information on Form N–PORT will impose an average total annual hour burden of an additional 169,923.51 hours, rather than 79,436.28 hours, on applicable funds.[1274] As we stated in the Proposing Release, we believe that the changes to Form N–PORT associated with reporting liquidity classifications will not result in third party service providers charging additional fees above those estimated in the Investment Company Modernization Proposing Release. Therefore, we have revised our estimates of number of funds affected as discussed previously, but are continuing to estimate the same external costs for hiring third party service providers as in the Investment Company Modernization Adopting Release. Accordingly, we estimate that the total external annual cost burden of compliance with the information collection requirements of Form N–PORT will be $103,787,680, or $9,118 per fund.[1275]

D. Form N–LIQUID and Rule 30b1–10

As discussed above, we are adopting a new requirement that open-end investment companies, including In-Kind ETFs but not including money market funds, file a current report on Form N–LIQUID on a non-public basis when certain events related to their liquidity occur.[1276] Similar to Form 8–K under the Exchange Act,[1277] or Form N–CR under the Investment Company Act for money market funds,[1278] Form N–LIQUID requires disclosure, by means of a current report filed with the Commission, of certain specific reportable events. The information reported on Form N–LIQUID concerns events under which more than 15% of a fund's or In-Kind ETF's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4 and when holdings in illiquid investments are assets that previously exceeded 15% of a fund's net assets have changed to be less than or equal to 15% of the fund's net assets.[1279] The information reported on Form N–LIQUID also regards events under which a fund's holdings in assets that are highly liquid investments fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days. A report on Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of one or more of these events.[1280]

This reporting requirement on Form N–LIQUID is a collection of information under the PRA. The information provided on Form N–LIQUID will enable the Commission to receive information on fund liquidity events more uniformly and efficiently and will enhance the Commission's oversight of funds when significant liquidity events occur and its ability to respond to market events. The Commission will be able to use the information provided on Form N–LIQUID in its regulatory, disclosure review, inspection, and policymaking roles. This collection of information will be kept confidential.

The staff estimates that the Commission will receive, in the aggregate, an average of 30 reports [1281] per year filed in response to an event specified on Part B (''Above 15% Illiquid Investments''), an average of 30 reports [1282] per year filed in response to an event specified on Part C (''At or Below 15% Illiquid Investments''), and

[1266] *See* Interactive Data Comment Letter.

[1267] *See* footnote 1253 and accompanying text.

[1268] The estimate is based on the following calculation: (1 filing × 6 hours) + (11 filings × 2 hour) = 28 burden hours in the first year.

[1269] This estimate is based on the following calculation: 12 filings × 2 hour = 24 burden hours in each subsequent year.

[1270] The estimate is based on the following calculation: (28 + (24 × 2)) ÷ 3 = 25.33.

[1271] The estimate is based on the following calculation: (1 filing × 8 hours) + (11 filings × 1 hour) = 19 burden hours in the first year.

[1272] This estimate is based on the following calculation: 12 filings × 1 hour = 12 burden hours in each subsequent year.

[1273] The estimate is based on the following calculation: (19 + (12 × 2)) ÷ 3 = 14.33.

[1274] The estimate is based on the following calculation: (3,271 funds × 25.33 hours) + (6,076 funds × 14.33 hours) = 169,923.51 hours.

[1275] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1276] This requirement will be implemented through our adoption of new rule 30b1–10, which requires funds to file a report on new Form N–LIQUID in certain circumstances. *See* rule 30b1–10; Form N–LIQUID. For purposes of the PRA analysis, therefore, the burden associated with the requirements of rule 30b1–10 is included in the collection of information requirements of Form N–LIQUID.

[1277] 17 CFR 249.308.

[1278] 17 CFR 270.30b1–8.

[1279] *See* Item C.1 and Item C.2 of Part A of Form N–LIQUID.

[1280] *See* General Instruction A.2 of Form N–LIQUID.

[1281] Commission staff estimates this figure based, in part, by reference to the total of 28 Form N–CR filings received by the Commission from mid-July 2015 to mid-July 2016. We recognize that the circumstances under which money market funds report events on Form N–CR are not the same as the liquidity events reported on Form N–LIQUID and that reported occurrences may be less than or more than 30. We believe, however, that Form N–CR provides a helpful guidepost for estimation purposes and believe an estimation of 30 reports is appropriate for purposes of this PRA.

[1282] See id.

an average of 30 reports [1283] per year filed in response to an event specified on Part D (''Highly Liquid Investments Below the Highly Liquid Investment Minimum'') of the form.

When filing a report on Form N–LIQUID,[1284] staff estimates that a fund will spend on average approximately 4 hours [1285] of an in-house attorney's time and one [1286] hour of an in-house accountant's time to prepare, review, and submit Form N–LIQUID, at a total time cost of $1,745.[1287] Accordingly, in the aggregate, staff estimates that compliance with new rule 30b1–10 and Form N–LIQUID will result in a total annual burden of approximately 450 burden hours and total annual time costs of approximately $157,050.[1288] Given an estimated 10,633 funds will be required to comply with new rule 30b1–10 and Form N–LIQUID,[1289] this would result in an annual burden of approximately 0.04 burden hours and annual time costs of approximately $15 on a per-fund basis. Staff estimates that there will be no external costs associated with this collection of information.

E. Form N–CEN

On May 20, 2015, we proposed to amend rule 30a–1 to require all funds to file reports with certain census-type information on proposed Form N–CEN with the Commission on an annual basis. Proposed Form N–CEN would have been a collection of information under the PRA, and was designed to facilitate the Commission's oversight of funds and its ability to monitor trends and risks. The collection of information under Form N–CEN would be mandatory for all funds, and responses would not be kept confidential.

In the Investment Company Reporting Modernization Proposing Release, we estimated that the average annual hour burden per response for proposed Form N–CEN for the first year would be 32.37 hours and 12.37 hours in subsequent years.[1290] Amortizing the burden over three years, we estimated that the average annual hour burden per fund per year would be 19.04 and the total average annual hour burden would be 59,900 hours.[1291] We also estimated that all applicable funds would incur, in the aggregate, external annual costs of $1,748,637, which would include the costs of registering and maintaining LEIs for funds.

We are adopting, substantially as proposed, amendments to Form N–CEN to enhance the reporting of a fund's liquidity risk management practices. Specifically, the amendments to Form N–CEN will require a fund to report information about lines of credit, but in a modification to the proposal, funds will report about both committed *and uncommitted* lines of credit.[1292] As proposed, funds will be required to report information such as the size of the line of credit, the number of days that the line of credit was used, and the identity of the institution with whom the line of credit is held.[1293] The amendments to Form N–CEN also will require a fund to report whether it engaged in interfund lending or interfund borrowing.[1294] In addition, amendments to Form N–CEN will require an ETF to report whether it qualifies as an ''In-Kind ETF'' for purposes of rule 22e–4.[1295]

In the Proposing Release, we estimated that 8,734 funds would be required to file responses on Form N–CEN as a result of the proposed amendments to the form. We estimated that the average annual hour burden per additional response to Form N–CEN as a result of the proposed amendments would be 0.5 hour per fund per year for a total average annual hour burden of 4,367 hours.[1296] We did not estimate any change to the external costs associated with proposed Form N–CEN.

We did not receive any comments on these estimated hour and cost burdens. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the amendments based on the modifications to the proposal to require funds to report information on uncommitted lines of credit in addition to committed lines of credit as well as in light of updated data concerning funds and fund personnel salaries. We estimate that 10,633 funds, rather than 8,734 funds will be required to file responses on Form N–CEN as a result of the amendments to the form based on updates to the industry data figures that were utilized in the Proposing Release.[1297] We estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted additions to Form N–CEN will be one hour per fund per year, instead of 0.5 hour per fund per year, for a total average annual hour burden of 10,633, rather than 4,367 hours.[1298] We do not estimate any change to the external costs associated with proposed Form N–CEN.

F. Form N–1A

Form N–1A is the registration form used by open-end investment companies. The respondents to the amendments to Form N–1A adopted today are open-end management investment companies registered or registering with the Commission. Compliance with the disclosure requirements of Form N–1A is mandatory, and the responses to the disclosure requirements are not confidential. We currently estimate for Form N–1A a total hour burden of 1,579,974 hours, and the total annual external cost burden is $124,820,197.[1299]

We are adopting amendments to Form N–1A that require funds to disclose additional information concerning the procedures for redeeming a fund's shares. Funds will be required to describe the number of days following receipt of shareholder redemption requests in which the fund reasonably

[1283] See id.

[1284] For purposes of this estimate, the staff expects that it would take approximately the same amount of time to prepare and file a report on Form N–LIQUID, regardless under which Part of Form N–LIQUID it is filed.

[1285] This estimate is derived in part from our current PRA estimate for Form N–CR and Form 8–K.

[1286] *Id.*

[1287] This estimate is based on the following calculations: (4 hours × $386/hour for an attorney = $1,544), plus (1 hour × $201/hour for a senior accountant = $201), for a combined total of 5 hours at total time costs of $1,745.

[1288] This estimate is based on the following calculations: (30 reports filed per year with respect to Part B) + (30 reports filed per year with respect to Part C) + (30 reports filed per year with respect to Part D) = 90 reports filed per year. 90 reports filed per year × 5 hours per report = approximately 450 total annual burden hours. 90 reports filed per year × $1,745 in costs per report = $157,050 total annual costs.

[1289] This estimate is based on the number of funds the staff estimates will be required to file reports on Form N–PORT with the Commission. For purposes of this PRA, the staff assumes that the universe of funds affected by rule 30b1–9 for Form N–PORT would be similar to the universe of funds affected by rule 30b1–10 for Form N–LIQUID.

[1290] Investment Company Reporting Modernization Proposing Release, *supra* footnote 120.

[1291] *Id.* at n.765 and accompanying text.

[1292] *See* Item C.20.a. of Form N–CEN.

[1293] See Id.

[1294] *See* Item C.20.b. of Form N–CEN.

[1295] *See* Item E.5 of Form N–CEN. We do not estimate any change in burden as a result of Item E.5 of Form N–CEN because the item only requires a yes or no response. In the Proposing Release, we also proposed to add to Form N–CEN a requirement for funds to report whether the fund required that an authorized participant post collateral to the fund or any of its designated service providers in connection with the purchase or redemption of fund shares during the reporting period. We are adopting this requirement in the Reporting Modernization Release. *See supra* footnote 898.

[1296] This estimate was based on the following calculation: 8,734 funds × 0.5 hours = 4,367 hours.

[1297] *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183.

[1298] This estimate is based on the following calculation: 10,633 funds × 1 hour = 10,633 hours.

[1299] These estimates are based on the last time the rule's information collections were submitted for PRA renewal in 2014.

expects to pay redemption proceeds to redeeming shareholders.[1300] Funds also will be required to describe the methods used to meet redemption requests in stressed and non-stressed market conditions.[1301] Funds, however, will not be required to file as exhibits to their registration statements credit agreements as originally proposed. Overall, we believe that requiring funds to provide this additional disclosure regarding redemption procedures will provide Commission staff, investors, and market participants with improved information about the procedures funds use to meet their redemption obligations.

Form N–1A generally imposes two types of reporting burdens on investment companies: (i) The burden of preparing and filing the initial registration statement; and (ii) the burden of preparing and filing post-effective amendments to a previously effective registration statement (including post-effective amendments filed pursuant to rule 485(a) or 485(b) under the Securities Act, as applicable). In the Proposing Release, we estimated that each fund would incur a one-time burden of an additional 2 hours,[1302] at a time cost of an additional $637,[1303] to draft and finalize the required disclosure and amend its registration statement in response to the proposed Form N–1A disclosure requirements. In aggregate, we estimated that funds would incur a one-time burden of an additional 17,468 hours,[1304] at a time cost of an additional $5,563,558,[1305] to comply with the Form N–1A disclosure requirements originally proposed. We estimated that amortizing the one-time burden over a three-year period would result in an average annual burden of an additional 5,823 hours at a time cost of an additional $1,854,519.[1306]

In the Proposing Release, we also estimated that each fund would incur an ongoing burden of an additional 0.25 hours, at a time cost of an additional $80,[1307] each year to review and update the proposed disclosure in response to Item 11 and Item 28 of Form N–1A regarding the pricing and redemption of fund shares and the inclusion of credit agreements as exhibits, respectively. In aggregate, we estimated that funds would incur an annual burden of an additional 2,184 hours,[1308] at a time cost of an additional $695,604,[1309] to comply with the proposed Form N–1A disclosure requirements.

In the Proposing Release, we further estimated that amortizing these one-time and ongoing hour and cost burdens over three years would result in an average annual increased burden of approximately 0.50 hours per fund,[1310] at a time cost of $265.42 per fund.[1311]

In total, we estimated in the Proposing Release that funds would incur an average annual increased burden of approximately 8,007 hours,[1312] at a time cost of approximately $2,550,123,[1313] to comply with the proposed Form N–1A disclosure requirements. We did not estimate any change to the external costs associated with the proposed amendments to Form N–1A.

One commenter stated that the cost estimates under the proposal were overly optimistic, including as an example our estimated $637 cost per fund to implement the proposed Form N–1A disclosure requirements.[1314] As discussed above, our amendments to Form N–1A include several modifications or clarifications from the proposal that address concerns raised by commenters and that are intended, in part, to decrease implementation burdens relative to the proposal. For example, we are not adopting the proposed requirement that funds file credit agreements as exhibits to their registration statements. Furthermore, instead of a requirement for funds to disclose the exact number of days in which a fund would pay redemption proceeds, including the number of days that apply for each distribution channel of the fund, funds are required to disclose the number of days a fund reasonably expects to pay redemption proceeds and are not required to account for all distribution channels, only varied payment methods, if applicable. We believe that these modifications will increase the quality of information provided to fund shareholders about the timing of their redemption proceeds and, at the same time, reduce the likelihood that disclosures regarding such timing will be overly granular and complex for investors and overly burdensome for registrants.

We believe that certain modifications from and clarifications to the proposal that we are adopting today as well as the removal of the swing pricing disclosure requirements from this Release will generally reduce the estimated burden hours and costs associated with the adopted amendments to Form N–1A relative to the proposal. Furthermore, we have considered the concern expressed by one commenter that the burdens and costs estimated in the proposal were overly optimistic and believe that any possible underestimates in burdens and costs expressed in the proposal have been offset by the adopted modifications that reduce such burdens. For these reasons, we believe that the amendments to Form N–1A adopted today, including modifications from the proposal, will reduce the estimated burden hours and costs stated in the Proposing Release.

We estimate that each fund will incur a one-time burden of an additional hour, rather than 2 hours, to draft and finalize the required disclosure and amend its registration statement,[1315] but at a time cost of an additional $324, rather than $637,[1316] based on updated data concerning funds and fund personnel salaries and the removal of the swing pricing disclosure requirement. In

[1300] *See* Item 11(c)(7) of Form N–1A.

[1301] *See* Item 11(c)(8) of Form N–1A.

[1302] This estimate was based on the following calculation: 1 hour to update registration statement to include swing pricing-related disclosure statements + 1 hour to update registration statement disclosure about redemption procedures = 2 hours.

[1303] This estimate was based on the following calculation: 2 hours × $318.5 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $637.

[1304] This estimate was based on the following calculations: 2 hours × 8,734 funds = 17,468 hours.

[1305] This estimate was based on the following calculation: 17,468 hours × $318.50 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $5,563,558.

[1306] This estimate was based on the following calculation: 17,468 hours ÷ 3 = 5,823 average annual burden hours; $5,563,558 burden costs ÷ 3 = $1,854,519 average annual burden cost.

[1307] This estimate was based on the following calculations: 0.25 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $79.63.

[1308] This estimate was based on the following calculation: 0.25 hours × 8,734 funds = 2,183.5 hours.

[1309] This estimate was based on the following calculation: 2,184 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $695,604.

[1310] This estimate was based on the following calculation: 1 burden hour (year 1) + 0.25 burden hour (year 2) + 0.25 burden hour (year 3) ÷ 3 = 0.50 hours.

[1311] This estimate was based on the following calculation: $637 (year 1 monetized burden hours) + $79.63 (year 2 monetized burden hours) + $79.63 (year 3 monetized burden hours) ÷ 3 = $265.42.

[1312] This estimate was based on the following calculation: 5,823 hours + 2,184 hours = 8,007 hours.

[1313] This estimate was based on the following calculation: $1,854,519 + $695,604 = $2,550,123.

[1314] *See* FSR Comment Letter (noting that changes to a fund's disclosure typically involve a number of stakeholders and several rounds of drafting and review, such that costs associated with even modest changes to fund disclosure can have a serious cost component). With the exception of this comment, we did not receive comments on the estimated hour and costs burdens associated with the disclosure amendments to Form N–1A under the proposal.

[1315] This estimate is based on the following calculation: 1 hour to update registration statement disclosure about redemption procedures = 1 hour.

[1316] This estimate is based on the following calculation: 1 hour × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $324.

aggregate, we estimate that funds will incur a one-time burden of an additional 11,114 hours,[1317] rather than 17,468 hours, at a time cost of an additional $3,600,936,[1318] rather than $5,563,558, to comply with the Form N–1A disclosure requirements as adopted. We estimate that amortizing the one-time burden over a three-year period will result in an average annual burden of an additional 3,705 hours, rather than 5,823 hours at a time cost of an additional $1,200,312, rather than $1,854,519.[1319]

In addition, we estimate that each fund will incur an ongoing burden of an additional 0.25 hours, but at a time cost of an additional $81,[1320] each year to review and update disclosures required in response to the amendments to Form N–1A. In aggregate, we estimate that funds will incur an annual burden of an additional 2,778.50 hours,[1321] at a time cost of an additional $900,234,[1322] to comply with the Form N–1A disclosure requirements adopted today.

Furthermore, we estimate that amortizing these one-time and ongoing hour and cost burdens over three years will result in an average annual increased burden of approximately 0.50 hours per fund,[1323] at a time cost of $162 per fund.[1324]

In total, we estimate that funds will incur an average annual increased burden of approximately 6,483.17 hours,[1325] at a time cost of approximately $3,300,858,[1326] to comply with the Form N–1A disclosure requirements adopted today. We do not estimate any change to the external costs associated with these amendments to Form N–1A.

VI. Final Regulatory Flexibility Act Analysis

This Final Regulatory Flexibility Analysis has been prepared in accordance with section 3 of the Regulatory Flexibility Act (''RFA'').[1327] It relates to: new rule 22e–4; new Rule 30b–10, Form N–LIQUID; and amendments to Form N–1A, Form N–PORT, and Form N–CEN. We prepared an Initial Regulatory Flexibility Analysis (''IRFA'') in conjunction with the Proposing Release in September 2015.[1328] The Proposing Release included, and solicited comment, on the IRFA. In the Proposing Release, we also proposed amendments to rule 22c–1, rule 31a–2, and Form N–1A as well as additions to Form N–CEN regarding the use of swing pricing.[1329]

A. Need for the Rule

With the exception of money market funds, open-end funds (including both in-kind and other ETFs) and UITs are not currently subject to requirements under the federal securities laws or Commission rules that specifically require them to manage their liquidity risk,[1330] although there are guidelines stating that such entities should limit their investments in illiquid assets.[1331] In addition, funds are only subject to limited disclosure and reporting requirements concerning a fund's liquidity risk and risk management.[1332] We understand that funds today engage in a variety of different practices, with varying levels of comprehensiveness, for classifying the liquidity of their portfolio investments, assessing and managing liquidity risk, and disclosing information about their liquidity risk, redemption practices, and liquidity risk management practices to investors.[1333]

The Commission is adopting a new rule, amendments to current rules, a new form and amendments to current forms to promote effective liquidity risk management throughout the open-end fund industry and thereby reduce the risk that funds will be unable to meet redemption obligations and mitigate dilution of the interests of fund shareholders. The changes also seek to enhance disclosure regarding fund liquidity and redemption practices. Specifically, a primary objective of these liquidity regulations is to promote shareholder protection by elevating the overall quality of liquidity risk management across the fund industry, as well as by increasing transparency of funds' liquidity risks and risk management. The liquidity regulations are also intended to lessen the possibility of investor dilution created by insufficient liquidity risk management. Finally, the liquidity regulations are meant to address recent industry developments that have underscored the significance of funds' liquidity risk management practices. Each of these objectives is discussed in detail in section III above.

B. Significant Issues Raised by Public Comment

In the Proposing Release, we requested comment on the IRFA, requesting in particular comment on the number of small entities that would be subject to the proposed liquidity regulations and whether the proposed liquidity regulations would have any effects that have not been discussed. We requested that commenters describe the nature of any effects on small entities subject to the proposed liquidity regulations and provide empirical data to support the nature and extent of such effects. We also requested comment on the estimated compliance burdens of the proposed liquidity regulations and how they would affect small entities. We received a number of comments related to the impact of our proposal on small entities, with some commenters expressing concern that liquidity risk management programs, as proposed, would require building entirely new systems and/or maintaining parallel system, which certain of the commenters believed could generate disproportionate burdens on small funds.[1334] We discuss these costs in detail in section V., above, and conclude that such costs are justified by the benefits of liquidity risk management programs.

C. Small Entities Subject to the Rule

An investment company is a small entity if, together with other investment companies in the same group of related investment companies, it has net assets of $50 million or less as of the end of its most recent fiscal year.[1335] Commission staff estimates that, as of

[1317] This estimate was based on the following calculations: 1 hour × 11,114 funds (including money market funds and ETFs) = 11,114 hours.

[1318] This estimate is based on the following calculation: 11,114 hours × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $3,600,936.

[1319] This estimate is based on the following calculation: 11,114 hours ÷ 3 = 3,704.67 average annual burden hours; $3,600,936 burden costs ÷ 3 = $1,200,312 average annual burden cost.

[1320] This estimate is based on the following calculations: 0.25 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $81.

[1321] This estimate is based on the following calculation: 0.25 hours × 11,114 funds = 2,778.50 hours.

[1322] This estimate is based on the following calculation: 2,778.50 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $900,234.

[1323] This estimate is based on the following calculation: 1 burden hour (year 1) + 0.25 burden hour (year 2) + 0.25 burden hour (year 3) ÷ 3 = 0.50 hours.

[1324] This estimate is based on the following calculation: $324 (year 1 monetized burden hours) + $81 (year 2 monetized burden hours) + $81 (year 3 monetized burden hours) ÷ 3 = $162.

[1325] This estimate is based on the following calculation: 3,704.67 hours + 2,778.50 hours = 6,483.17 hours.

[1326] This estimate is based on the following calculation: $1,200,312 + $900,234 = $2,100,546.

[1327] 5 U.S.C. 604.

[1328] *See* Proposing Release, *supra* footnote 9, at section VI.

[1329] *See* Proposing Release, *supra* footnote 9, at section III.G.1.b.

[1330] *See supra* sections II.D and IV.B.1.a.

[1331] See id.

[1332] *See supra* sections II.D and IV.B.1.c.

[1333] *See supra* sections II.D, IV.B.1.a and IV.B.1.c.

[1334] *See* Dechert Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; T. Rowe Comment Letter.

[1335] *See* rule 0–10(a) under the Act.

December 31, 2015, there were 78 small open-end investment companies (within 76 fund complexes) that would be considered small entities; this number includes open-end ETFs.

D. Projected Reporting, Recordkeeping, and Other Compliance Requirements

1. New Rule 22e–4

Rule 22e–4 generally requires each registered open-end fund (but not including money market funds), including each small entity, to establish a written liquidity risk management program.[1336] A fund's board will be required to approve the fund's liquidity risk management program, as well as the fund's designation of the fund's investment adviser or officers as responsible for administering the fund's liquidity risk management program, and review a report on the program's effectiveness no less than annually. In addition, for funds that do not primarily hold assets that are highly liquid investments, the new rule requires the determination of and periodic review of the fund's highly liquid investment minimum and establishment of policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors. The new rule also requires a fund's liquidity risk management program to incorporate certain specified elements.[1337] Rule 22e–4 includes tailored liquidity risk management program requirements for ETFs, intended to target ETFs' unique risks while eliminating requirements that are largely inapplicable to ETFs that redeem in kind.[1338] The rule also includes liquidity-related requirements for UITs, intended to recognize the unmanaged structure of UITs while requiring that principal underwriters or depositors of UITs to determine, on or before the date of the initial deposit of portfolio securities into a UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities that it issues.[1339] Rule 22e–4 also includes certain recordkeeping requirements.[1340] We estimate that 76 fund complexes are small fund groups that have funds that would be required to comply with the proposed liquidity risk management program requirement.[1341] As discussed above, we estimate that a fund complex would incur one-time costs ranging from $0.8 million to $10.2 million, depending on the fund's particular circumstances and current liquidity risk management practices, to establish and implement a liquidity risk management program.[1342] We further estimate that a fund complex would incur ongoing annual costs associated with proposed rule 22e–4 that would range from $40,000 to $3.3 million.[1343] Finally, we estimate that any UITs launched after the rule's compliance date will incur one-time costs associated with rule 22e–4 of $8,000 to $52,000.[1344]

2. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

New Form N–LIQUID, along with amendments to Form N–1A, Form N–PORT, and Form N–CEN are intended to enhance fund disclosure and reporting regarding a fund's redemption practices, portfolio liquidity, and certain liquidity risk management practices. New Form N–LIQUID will require a fund to confidentially notify the Commission if the fund's illiquid investment holdings exceed 15% of its net assets or if its highly liquid investments decline below its minimum for more than a brief period of time.[1345] The amendments to Form N–1A require funds to disclose additional information concerning the procedures for redeeming a fund's shares.[1346] The amendments to Forms N–PORT and N–CEN require reporting of certain information regarding the liquidity of a fund's holdings and the fund's liquidity risk management practices. We estimate that 78 funds are small entities that would be required to comply with the proposed disclosure and reporting requirements.[1347]

As discussed above, for each fund, including a fund that is a small entity, when filing a report on Form N–LIQUID, staff estimates that a fund will spend on average approximately 4 hours[1348] of an in-house attorney's time and one[1349] hour of an in-house accountant's time to prepare, review, and submit Form N–LIQUID, at a total time cost of $1,745.[1350] Staff estimates that there will be no external costs associated with this collection of information.

As discussed above, we estimate that each fund, including funds that are small entities, would incur a one-time burden of an additional 1 hour,[1351] at a time cost of an additional $324 (plus printing costs), to comply with the amendments to Form N–1A.[1352] We also estimate that each fund, including small entities, would incur an ongoing burden of an additional 0.25 hours, at a time cost of approximately an additional $81 each year associated with compliance with the amendments to Form N–1A.[1353] We do not estimate any change to the external costs associated with the proposed amendments to Form N–1A.

We also estimate that each fund that files reports on Form N–PORT (35% of funds) in house will require an average of approximately 6 burden hours to compile (including review of the information), tag, and electronically file the additional liquidity information required on Form N–PORT for the first time and an average of approximately 2 burden hours, rather than 1 burden hour, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the added liquidity information for these funds would be an additional 28 hours for the first year and an additional 24 hours for each subsequent year.[1354] Amortized over three years, the average annual hour burden would be an additional 25.33 hours per fund.[1355] We further estimate that 65% of funds will retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on Form N–PORT on the fund's behalf. For these funds, we estimate that each fund will require an average of approximately 8 hours to compile and review the added liquidity-related information with the service provider prior to electronically filing the report for the first time and an average of 1 burden hour for subsequent filings. Therefore, we estimate the per fund

[1336] *See supra* footnote 113.

[1337] *See id.* and accompanying and preceding text.

[1338] See id.

[1339] *See supra* section III.K.

[1340] *See supra* section III.I.

[1341] Commission staff estimate as of December 31, 2015.

[1342] *See supra* paragraph accompanying footnote 1101.

[1343] *See supra* paragraph accompanying footnote 1104.

[1344] *See supra* footnote 1116 and accompanying text.

[1345] *See supra* section III.L.2.

[1346] *See supra* section III.L.1.

[1347] Commission staff estimate as of December 31, 2015.

[1348] *See supra* footnote 1285 and accompanying text.

[1349] *Id.*

[1350] *See supra* footnote 1287 and accompanying text.

[1351] *See supra* footnote 1302 and accompanying text.

[1352] *See supra* footnote 1303 and accompanying text.

[1353] *See supra* footnote 1307 and accompanying text.

[1354] *See supra* footnote 1269 and accompanying paragraph.

[1355] *See supra* footnote 1270 and accompanying text.

average annual hour burden associated with the liquidity-related changes to Form N–PORT for these funds would be an additional 19 hours for the first year [1356] and an additional 12 hours for each subsequent year.[1357] Amortized over three years, the average aggregate annual hour burden would be an additional 14.33 hours per fund.[1358] We further estimate that the total external annual cost burden of compliance with the information collection requirements of Form N–PORT will be $9,118 per fund.[1359]

As discussed above, we also estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted additions to Form N–CEN will be one hour per fund per year.[1360] We do not estimate any change to the external costs associated with proposed Form N–CEN.[1361]

E. Agency Action To Minimize Effect on Small Entities

The Regulatory Flexibility Act directs the Commission to consider significant alternatives that would accomplish the stated objective, while minimizing any significant impact on small entities. Alternatives in this category would include: (i) Establishing different compliance or reporting standards that take into account the resources available to small entities; (ii) clarifying, consolidating, or simplifying the compliance requirements under the rules and amendments for small entities; (iii) using performance rather than design standards; and (iv) exempting small entities from coverage of the rules and amendments, or any part of the rules and amendments.

The Commission does not presently believe that these rules and amendments would require the establishment of special compliance requirements or timetables for small entities. These rules and amendments are specifically designed to reduce any unnecessary burdens on all funds (including small funds). To establish special compliance requirements or timetables for small entities may in fact disadvantage small entities by encouraging larger market participants to focus primarily on the needs of larger entities when making the operational changes envisioned by certain of the rules and amendments, and possibly ignoring the needs of smaller funds.

With respect to further clarifying, consolidating, or simplifying the compliance requirements of the rules and amendments, using performance rather than design standards, and exempting small entities from coverage of these rules and amendments or any part of the rules and amendments, we believe additional such changes would be impracticable. Small entities are as vulnerable to the risks of being unable to meet redemption obligations and of dilution of the interests of fund shareholders as larger funds. We believe that the rules and amendments are necessary to help mitigate these risks. Exempting small funds from coverage under these rules and amendments or any part of the rules and amendments could compromise the effectiveness of the rules and amendments or any part of the rules and amendments.

VII. Statutory Authority and Text of Amendments

The Commission is adopting new rule 22e–4 under the authority set forth in sections 22(c), 22(e), 34(b) and 38(a) of the Investment Company Act [15 U.S.C. 80a–22(c), 80a–22(e), 80a–35(b), and 80a–37(a)], the Investment Advisers Act, particularly, section 206(4) thereof [15 U.S.C. 80b–6(4)], the Exchange Act, particularly section 10(b) thereof [15 U.S.C. 78a *et seq.*], the Securities Act, particularly section 17(a) thereof [15 U.S.C. 77a *et seq.*]. The Commission is adopting amendments to Form N–1A, Form N–PORT, and Form N–CEN under the authority set forth in the Securities Act, particularly section 19 thereof [15 U.S.C. 77a *et seq.*], the Trust Indenture Act, particularly, section 19 thereof [15 U.S.C. 77aaa *et seq.*], the Exchange Act, particularly sections 10, 15, and 23, and 35A thereof [15 U.S.C. 78a *et seq.*], and the Investment Company Act, particularly, sections 8, and 38 thereof [15 U.S.C. 80a *et seq.*].

List of Subjects in 17 CFR Parts 270 and 274

Investment companies, Reporting and recordkeeping requirements, Securities.

For the reasons set out in the preamble, title 17, chapter II of the Code of Federal Regulations is amended as follows:

PART 270—RULES AND REGULATIONS, INVESTMENT COMPANY ACT OF 1940

■ 1. The authority citation for part 270 continues to read, in part, as follows:

Authority: 15 U.S.C. 80a–1 *et seq.,* 80a–34(d), 80a–37, 80a–39, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

■ 2. Section 270.22e–4 is added to read as follows:

§ 270.22e–4 Liquidity risk management programs.

(a) *Definitions.* For purposes of this section:

(1) *Acquisition (or acquire)* means any purchase or subsequent rollover.

(2) *Business day* means any day, other than Saturday, Sunday, or any customary business holiday.

(3) *Convertible to cash* means the ability to be sold, with the sale settled.

(4) *Exchange-traded fund* or *ETF* means an open-end management investment company (or series or class thereof), the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule adopted by the Commission.

(5) *Fund* means an open-end management investment company that is registered or required to register under section 8 of the Act (15 U.S.C. 80a–8) and includes a separate series of such an investment company, but does not include a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or an In-Kind ETF.

(6) *Highly liquid investment* means any cash held by a fund and any investment that the fund reasonably expects to be convertible into cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(7) *Highly liquid investment minimum* means the percentage of the fund's net assets that the fund invests in highly liquid investments that are assets pursuant to paragraph (b)(1)(iii) of this section.

(8) *Illiquid investment* means any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(9) *In-Kind Exchange Traded Fund* or *In-Kind ETF* means an ETF that meets redemptions through in-kind transfers

[1356] *See supra* footnote 1271 and accompanying text.

[1357] *See supra* footnote 1272 and accompanying text.

[1358] *See supra* footnote 1273 and accompanying text.

[1359] *See supra* footnote 1275 and accompanying text.

[1360] *See supra* footnote 1298 and accompanying paragraph.

[1361] *Id.*

of securities, positions, and assets other than a *de minimis* amount of cash and that publishes its portfolio holdings daily.

(10) *Less liquid investment* means any investment that the fund reasonably expects to be able to sell or dispose of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section, but where the sale or disposition is reasonably expected to settle in more than seven calendar days.

(11) *Liquidity risk* means the risk that the fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.

(12) *Moderately liquid investment* means any investment that the fund reasonably expects to be convertible into cash in current market conditions in more than three calendar days but in seven calendar days or less, without the conversion to cash significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(13) *Person(s) designated to administer the program* means the fund or In-Kind ETF's investment adviser, officer, or officers (which may not be solely portfolio managers of the fund or In-Kind ETF) responsible for administering the program and its policies and procedures pursuant to paragraph (b)(2)(ii) of this section.

(14) *Unit Investment Trust* or *UIT* means a unit investment trust as defined in section 4(2) of the Act (15 U.S.C. 80a–4).

(b) *Liquidity Risk Management Program.* Each fund and In-Kind ETF must adopt and implement a written liquidity risk management program (''program'') that is reasonably designed to assess and manage its liquidity risk.

(1) *Required program elements.* The program must include policies and procedures reasonably designed to incorporate the following elements:

(i) *Assessment, management, and periodic review of liquidity risk.* Each fund and In-Kind ETF must assess, manage, and periodically review (with such review occurring no less frequently than annually) its liquidity risk, which must include consideration of the following factors, as applicable:

(A) The fund or In-Kind ETF's investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives;

(B) Short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions;

(C) Holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources; and

(D) For an ETF:

(1) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including, the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and

(2) The effect of the composition of baskets on the overall liquidity of the ETF's portfolio.

(ii) *Classification.* Each fund must, using information obtained after reasonable inquiry and taking into account relevant market, trading, and investment-specific considerations, classify each of the fund's portfolio investments (including each of the fund's derivatives transactions) as a highly liquid investment, moderately liquid investment, less liquid investment, or illiquid investment. A fund must review its portfolio investments' classifications, at least monthly in connection with reporting the liquidity classification for each portfolio investment on Form N–PORT in accordance with § 270.30b1–9, and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.

Note to paragraph (b)(1)(ii)introductory text: If an investment could be viewed as either a highly liquid investment or a moderately liquid investment, because the period to convert the investment to cash depends on the calendar or business day convention used, a fund should classify the investment as a highly liquid investment. For a discussion of considerations that may be relevant in classifying the liquidity of the fund's portfolio investments, see Investment Company Act Release No. IC–32315 (Oct. 13, 2016).

(A) The fund may generally classify and review its portfolio investments (including the fund's derivatives transactions) according to their asset class, provided, however, that the fund must separately classify and review any investment within an asset class if the fund or its adviser has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class.

(B) In classifying and reviewing its portfolio investments or asset classes (as applicable), the fund must determine whether trading varying portions of a position in a particular portfolio investment or asset class, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect its liquidity, and if so, the fund must take this determination into account when classifying the liquidity of that investment or asset class.

(C) For derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, identify the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories.

Note to paragraph (b)(1)(ii)(C): For purposes of calculating these percentages, a fund that has segregated or pledged highly liquid investments and non-highly liquid investments to cover derivatives transactions classified as moderately liquid, less liquid, or illiquid investments first should apply segregated or pledged assets that are highly liquid investments to cover these transactions, unless it has specifically identified segregated non-highly liquid investments as covering such derivatives transactions.

(iii) *Highly liquid investment minimum.* (A) Any fund that does not primarily hold assets that are highly liquid investments must:

(1) Determine a highly liquid investment minimum, considering the factors specified in paragraphs (b)(1)(i)(A) through (D) of this section, as applicable (but considering those factors specified in paragraphs (b)(1)(i)(A) and (B) only as they apply during normal conditions, and during stressed conditions only to the extent they are reasonably foreseeable during the period until the next review of the highly liquid investment minimum). The highly liquid investment minimum determined pursuant to this paragraph may not be changed during any period of time that a fund's assets that are highly liquid investments are below the determined minimum without approval from the fund's board of directors, including a majority of directors who are not interested persons of the fund;

(2) Periodically review, no less frequently than annually, the highly liquid investment minimum; and

(3) Adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investments below its highly liquid investment minimum, which must include requiring the person(s) designated to administer the program to report to the fund's board of directors no later than its next regularly scheduled meeting with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response, and if the shortfall lasts more than 7 consecutive calendar days, must include requiring the person(s) designated to administer the program to report to the board within one business day thereafter with an explanation of how the fund plans to restore its minimum within a reasonable period of time.

(B) For purposes of determining whether a fund primarily holds assets that are highly liquid investments, a fund must exclude from its calculations the percentage of the fund's assets that are highly liquid investments that it has segregated to cover all derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, or pledged to satisfy margin requirements in connection with those derivatives transactions, as determined pursuant to paragraph (b)(1)(ii)(C) of this section.

(iv) *Illiquid investments.* No fund or In-Kind ETF may acquire any illiquid investment if, immediately after the acquisition, the fund or In-Kind ETF would have invested more than 15% of its net assets in illiquid investments that are assets. If a fund or In-Kind ETF holds more than 15% of its net assets in illiquid investments that are assets:

(A) It must cause the person(s) designated to administer the program to report such an occurrence to the fund's or In-Kind ETF's board of directors within one business day of the occurrence, with an explanation of the extent and causes of the occurrence, and how the fund or In-Kind ETF plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time; and

(B) If the amount of the fund's or In-Kind ETF's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the fund or In-Kind ETF's board of directors, including a majority of directors who are not interested persons of the fund or In-Kind ETF, must assess whether the plan presented to it pursuant to paragraph (b)(1)(iv)(A) continues to be in the best interest of the fund or In-Kind ETF.

(v) *Redemptions in Kind.* A fund that engages in, or reserves the right to engage in, redemptions in kind and any In-Kind ETF must establish policies and procedures regarding how and when it will engage in such redemptions in kind.

(2) *Board oversight.* A fund or In-Kind ETF's board of directors, including a majority of directors who are not interested persons of the fund or In-Kind ETF, must:

(i) Initially approve the liquidity risk management program;

(ii) Approve the designation of the person(s) designated to administer the program; and

(iii) Review, no less frequently than annually, a written report prepared by the person(s) designated to administer the program that addresses the operation of the program and assesses its adequacy and effectiveness of implementation, including, if applicable, the operation of the highly liquid investment minimum, and any material changes to the program.

(3) *Recordkeeping.* The fund or In-Kind ETF must maintain:

(i) A written copy of the program and any associated policies and procedures adopted pursuant to paragraphs (b)(1) through (b)(2) of this section that are in effect, or at any time within the past five years were in effect, in an easily accessible place;

(ii) Copies of any materials provided to the board of directors in connection with its approval under paragraph (b)(2)(i) of this section, and materials provided to the board of directors under paragraph (b)(2)(iii) of this section, for at least five years after the end of the fiscal year in which the documents were provided, the first two years in an easily accessible place; and

(iii) If applicable, a written record of the policies and procedures related to how the highly liquid investment minimum, and any adjustments thereto, were determined, including assessment of the factors incorporated in paragraphs (b)(1)(iii)(A) through (B) of this section and any materials provided to the board pursuant to paragraph (b)(1)(iii)(A)(*3*) of this section, for a period of not less than five years (the first two years in an easily accessible place) following the determination of, and each change to, the highly liquid investment minimum.

(c) *UIT liquidity.* On or before the date of initial deposit of portfolio securities into a registered UIT, the UIT's principal underwriter or depositor must determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues, and must maintain a record of that determination for the life of the UIT and for five years thereafter.

■ 3. Section 270.30b1–10 is added to read as follows:

§ 270.30b1–10 Current report for open-end management investment companies.

Every registered open-end management investment company, or series thereof but not a fund that is regulated as a money market fund under § 270.2a–7, that experiences any event specified on Form N–LIQUID, must file with the Commission a current report on Form N–LIQUID within the period specified in that form.

PART 274—FORMS PRESCRIBED UNDER THE INVESTMENT COMPANY ACT OF 1940

■ 4. The general authority citation for part 274 continues to read, in part, as follows, and the sectional authorities for §§ 274.101 and 274.130 are removed:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 78c(b), 78*l,* 78m, 78n, 78o(d), 80a–8, 80a–24, 80a–26, 80a–29, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

§ 274.11A [Amended]

■ 5. Amend Form N–1A (referenced in § 274.11A) by:

■ a. In General Instruction A. Definitions, revising the definition of Exchange-Trade Fund;

■ b. In Item 11 removing paragraph (c)(3) and redesignating paragraphs (c)(4), (c)(5), (c)(6) and (c)(7) as paragraphs (c)(3), (c)(4), (c)(5) and (c)(6), respectively; and

■ c. In Item 11 adding new paragraph (c)(7) and paragraph (c)(8);

The revisions and additions read as follows:

Note: The text of Form N–1A does not, and this amendment will not, appear in the Code of Federal Regulations.

Form N–1A

* * * * *

General Instructions

A. Definitions * * *

''Exchange-Traded Fund'' means a Fund or Class, the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order granted by the Commission or in reliance on an exemptive rule adopted by the Commission.

* * * * *

Item 11. Shareholder Information

(a) * * *

(c) * * *

(7) The number of days following receipt of shareholder redemption requests in which the fund typically expects to pay out redemption proceeds to redeeming shareholders. If the number of days differs by method of payment (*e.g.,* check, wire, automated clearing house), then disclose the typical number of days or estimated range of days that the fund expects it will take to pay out redemptions proceeds for each method used.

(8) The methods that the fund typically expects to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions (*e.g.,* sales of portfolio assets, holdings of cash or cash equivalents, lines of credit, interfund lending, and/or ability to redeem in kind).

* * * * *

§ 274.101 [Amended]

■ 6. Effective June 1, 2018, amend Form N–CEN [(referenced in § 274.101), as published elsewhere in this issue by:

■ a. In Part C, adding Item C.20; and

■ b. In Part E, adding Item E.5.

The additions read as follows:

Form N–Cen

Annual Report for Registered Investment Companies

* * * * *

Part C. Additional Questions for Management Investment Companies

* * *

Item C.20. Lines of credit, interfund lending, and interfund borrowing. For open-end management investment companies, respond to the following:

a. Does the Fund have available a line of credit? [Yes/No] If yes, for each line of credit, provide the information requested below:

i. Is the line of credit a committed or uncommitted line of credit? [committed/uncommitted]

ii. What size is the line of credit? [insert dollar amount]

iii. With which institution(s) is the line of credit? [list name(s)]

iv. Is the line of credit just for the Fund, or is it shared among multiple funds? [sole/shared]

1. If shared, list the names of other funds that may use the line of credit. [list names and SEC File numbers]

v. Did the Fund draw on the line of credit this period? [Yes/No]

vi. If the Fund drew on the line of credit during this period, what was the average amount outstanding when the line of credit was in use? [insert dollar amount]

vii. If the Fund drew on the line of credit during this period, what was the number of days that the line of credit was in use? [insert amount]

b. Did the Fund engage in interfund lending? [Yes/No] If yes, for each loan provide the information requested below:

i. What was the average amount of the interfund loan when the loan was outstanding? [insert dollar amount.]

ii. What was the number of days that the interfund loan was outstanding? [insert amount]

c. Did the Fund engage in interfund borrowing? [Yes/No] If yes, for each loan provide the information requested below:

i. What was the average amount of the interfund loan when the loan was outstanding? [insert dollar amount.]

ii. What was the number of days that the interfund loan was outstanding? [insert amount]

* * * * *

Part E. Additional Questions for Exchange-Traded Funds and Exchange-Traded Managed Funds

* * * * *

Item E.5

* * * * *

In-Kind ETF. Is the Fund an ''In-Kind Exchange-Traded Fund'' as defined in rule 22e–4 under the Act? [Y/N]

* * * * *

§ 274.150 [Amended]

■ 7. Amend Form N–PORT (referenced in § 274.150), as published elsewhere in this issue by:

■ a. In the General Instructions E. Definitions, adding definitions of ''Highly Liquid Investment Minimum'' and ''Illiquid Investment'' in alphabetical order;

■ b. In the General Instructions, revising the second paragraph of F. Public Availability;

■ c. In Part B, adding Item B.7 and Item B.8; and

■ d. In Part C, adding Item C.7.

The revisions and additions read as follows:

Form N-Port

Monthly Portfolio Investments Report

* * * * *

E. Definitions

* * * * *

''Highly Liquid Investment Minimum'' has the meaning defined in rule 22e–4(a)(7).

''Illiquid Investment'' has the meaning defined in rule 22e–4(a)(8).

* * * * *

F. Public Availability

* * * * *

The SEC does not intend to make public the information reported on Form N–PORT for the first and second months of each Fund's fiscal quarter that is identifiable to any particular Fund or adviser, or any information reported with regards to a Fund's Highly Liquid Investment Minimum (Item B.7 of this Form), country of risk and economic exposure (Item C.5.b), delta (Items C.9.f.5, C.11.c.vii, or C.11.g.iv), liquidity classification for portfolio investments (Item C.7), or miscellaneous securities (Part D of this Form), or explanatory notes related to any of those topics (Part E) that is identifiable to any particular Fund or adviser. However, the SEC may use information reported on this Form in its regulatory programs, including examinations, investigations, and enforcement actions.

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Part B. Information About the Fund

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Item B.7 Highly Liquid Investment Minimum Information.

a. If applicable, provide the Fund's current Highly Liquid Investment Minimum.

b. If applicable, provide the number of days that the Fund's holdings in Highly Liquid Investments fell below the Fund's Highly Liquid Investment Minimum during the reporting period.

c. Did the Fund's Highly Liquid Investment Minimum change during the reporting period? [Y/N]

1. If yes, provide any Highly Liquid Investment Minimums set by the fund during the reporting period.

Item B.8 Liquidity aggregate classification information. For portfolio investments of open-end management investment companies, provide the following information:

a. The aggregate percentage of investments that are assets (excluding any investments that are reflected as liabilities on the Fund's balance sheet) compared to total investments that are assets of the Fund for each of the following categories as specified in rule 22e–4:

1. Highly Liquid Investments
2. Moderately Liquid Investments
3. Less Liquid Investments
4. Illiquid Investments

b. Derivatives Transactions. The percentage of the Fund's highly liquid investments that it has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as:

1. Moderately Liquid Investments
2. Less Liquid Investments
3. Illiquid Investments

* * * * *

Part C. Schedule of Portfolio Investments

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Item C.7. Liquidity classification information. For portfolio investments of open-end management investment companies, provide the liquidity classification for each portfolio investment among the following categories as specified in rule 22e–4:

1. Highly Liquid Investments
2. Moderately Liquid Investments
3. Less Liquid Investments
4. Illiquid Investments

* * * * *

■ 8. Section 274.223 is added to subpart C to read as follows:

§ 274.223 Form N–LIQUID, Current report, open-end investment company liquidity.

This form shall be used by registered open-end management investment companies, or series thereof, but not including a company or series thereof that is regulated as a money market fund under § 270.2a–7 of this chapter, to file reports pursuant to § 270.30b1–10 of this chapter.

Note: The text of Form N–LIQUID will not appear in the *Code of Federal Regulations.*

United States Securities and Exchange Commission

Washington, DC 20549

Form N–LIQUID

Current Report

Open-End Management Investment Company Liquidity

Form N–LIQUID is to be used by a registered open-end management investment company, or series thereof (''fund''), under the Investment Company Act of 1940 [15 U.S.C. 80a] (''Act'') but not including a fund that is regulated as a money market fund under rule 2a–7 under the Act (17 CFR 270.2A–7), to file current reports with the Commission pursuant to [rule 30b1–10] under the Act [(17 CFR 270.30b1–10)]. The Commission may use the information provided on Form N–LIQUID in its regulatory, disclosure review, inspection, and policymaking roles.

General Instructions

A. Rules as to Use of Form N–LIQUID

(1) Form N–LIQUID is the reporting form that is to be used for current reports of open-end management investment companies (''registrants'') required by section 30(b) of the Act and rule 30b1–10 under the Act. The Commission does not intend to make public information reported on Form N–LIQUID that is identifiable to any particular registrant, although the Commission may use Form N–LIQUID information in an enforcement action.

(2) Unless otherwise specified, a report on this Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of the event specified in Parts B–D of this form. If the event occurs on a Saturday, Sunday, or holiday on which the Commission is not open for business, then the one business day period shall begin to run on, and include, the first business day thereafter.

B. Application of General Rules and Regulations

The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements should be carefully read and observed in the preparation and filing of reports on this form, except that any provision in the form or in these instructions shall be controlling.

C. Information To Be Included in Report Filed on Form N–LIQUID

Upon the occurrence of the event specified in Parts B–D of Form N–LIQUID, a registrant must file a report on Form N–LIQUID that includes information in response to each of the items in Part A of the form, as well as each of the items in the applicable Parts B–D of the Form.

D. Filing of Form N–LIQUID

A fund must file Form N–LIQUID in accordance with rule 232.13 of Regulation S–T (17 CFR part 232). Form N–LIQUID must be filed electronically using the Commission's Electronic Data Gathering, Analysis and Retrieval System (''EDGAR'').

E. Paperwork Reduction Act Information

A registrant is not required to respond to the collection of information contained in Form N–LIQUID unless the form displays a currently valid Office of Management and Budget (''OMB'') control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. 3507.

F. Definitions

References to sections and rules in this Form N–LIQUID are to the Investment Company Act (15 U.S.C. 80a), unless otherwise indicated. Terms used in this Form N–LIQUID have the same meaning as in the Investment Company Act or rule 22e–4 under the Investment Company Act, unless otherwise indicated. In addition, as used in this Form N–LIQUID, the term registrant means the registrant or a separate series of the registrant.

United States Securities and Exchange Commission

Washington, DC 20549

Form N–LIQUID

Current Report

Open-End Management Investment Company Liquidity

Part A. General Information

Item A.1. Report for [mm/dd/yyyy].
Item A.2. CIK Number of registrant.
Item A.3. EDGAR Series Identifier.
Item A.4. Securities Act File Number.
Item A.5. Provide the name, email address, and telephone number of the person authorized to receive information and respond to questions about this Form N–LIQUID.

Part B. Above 15% Illiquid Investments

If more than 15 percent of the registrant's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4, then report the following information:

Item B.1. Date(s) on which the registrant's illiquid investments that are assets exceeded 15 percent of its net assets.
Item B.2. The current percentage of the registrant's net assets that are illiquid investments that are assets.
Item B.3. Identification of Illiquid investments. For each investment that is an asset that is held by the registrant that is considered illiquid, disclose (1) the name of the issuer, the title of the issue or description of the investment, the CUSIP (if any), and at least one other identifier, if available (*e.g.,* ISIN, Ticker, or other unique identifier (if ticker and ISIN are not

available)) (indicate the type of identifier used), and (2) the percentage of the fund's net assets attributable to that investment.

Part C. At or Below 15% Illiquid Investments

If a registrant that has filed part B of Form N–LIQUID determines that its holdings in illiquid investments that are assets have changed to be less than or equal to 15 percent of the registrant's net assets, then report the following information:

Item C.1. Date(s) on which the registrant's illiquid investments that are assets fell to or below 15 percent of net assets.

Item C.2. The current percentage of the registrant's net assets that are illiquid investments that are assets.

Part D. Assets That Are Highly Liquid Investments Below the Highly Liquid Investment Minimum

If a registrant's holdings in assets that are highly liquid investments fall below its highly liquid investment minimum for more than 7 consecutive calendar days, then report the following information:

Item D.1. Date(s) on which the registrant's holdings of assets that are highly liquid investments fell below the fund's highly liquid investment minimum.

Signatures

Pursuant to the requirements of the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

____

(Registrant)

Date ___________________________________

____

(Signature)*

* Print name and title of the signing officer under his/her signature.

By the Commission.

Dated: October 13, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–25348 Filed 11–17–16; 8:45 am]

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