P.O. Box 2600
Valley Forge, PA 19482-2600

January 6, 2016

Submitted electronically
Mr. Brent Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-9303

Re: **Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release – File No. S7-16-15**

Dear Mr. Fields:

We appreciate the opportunity to provide our comments to the Securities and Exchange Commission (the "Commission") on its recent proposal regarding liquidity risk management programs and swing pricing.[1] Vanguard is a Commission-registered investment adviser that offers more than 190 funds with aggregate assets of approximately $3.1 trillion. Vanguard supports the stated goals of the Proposing Release to: (1) promote effective liquidity risk management practices; (2) reduce redemption risk; (3) mitigate dilution of shareholder interests; and (4) enhance disclosure regarding fund liquidity and redemption practices.[2] We believe that the Commission is the appropriate regulator to address fund liquidity, which is an important component of effective portfolio management and serves a critical investor protection function.

Asset managers have effectively managed liquidity risk through various market conditions over time. The mutual fund industry has a strong record of satisfying shareholder redemptions in equity and fixed income funds over the past 75 years, which included periods of market turbulence and decreased levels of market liquidity.[3] While academic theories have speculated about the possibility that mutual funds pose significant liquidity or redemption risks, the Commission presents no data to support these theories.

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1 Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release, Investment Company Act Rel. No. 31835, 80 Fed. Reg. 62274 (proposed Oct. 15, 2015) (the "Proposing Release").

2 *See* Proposing Release at 62304, 62350. As used herein, the term "fund" means an open-end mutual fund, including an exchange-traded fund ("ETF") that is not a money market mutual fund.

3 *See* Vanguard Letter to the Financial Stability Oversight Council re: Notice Seeking Comment on Asset Management Products and Activities, (FSOC – 2014-0001), 14-15 (Mar. 25, 2015) ("Vanguard 2015 FSOC Comment Letter"); Vanguard Letter to the Financial Stability Board re: Consultative Document (2nd)—Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions, 11-12 (May 29, 2015) ("Vanguard 2015 FSB Comment Letter"). Each letter cites examples of fund redemption activity during periods of market stress.

Mutual funds account for only a fraction of the capital markets and are ultimately owned by tens of millions of individual investors, each with their own time horizons, risk preferences, and investment goals.[4] An investor's decision to reallocate assets or raise cash would occur whether he or she held assets in a mutual fund or held stocks and bonds directly. The diffuse ownership of mutual funds, combined with the robust regulatory regime governing the operations of funds, has served investors well. We believe that any liquidity risk management rulemaking by the Commission should be informed by the performance of the mutual fund industry over seven decades and various market conditions, while remaining flexible to allow the industry to adapt to future market conditions.

For these reasons, we believe the Commission should require funds to adopt and implement board-approved liquidity risk management programs that would permit funds to rely on portfolio-based, top-down analysis. Formalizing existing best practices and holding funds accountable through board oversight would accomplish the Commission's goals while allowing funds to tailor their practices to address each fund's unique liquidity needs. We have relied upon this approach to successfully manage the liquidity of our funds for over four decades.

Our response to the Commission details our concerns with respect to certain fundamental flaws in the assumptions underlying the Commission's prescriptive bottom-up classification framework ("Proposed Classification Framework"),[5] which include, among others:

1) defining liquidity based on asset prices rather than the ability to redeem investors in cash;
2) equating fund size with an increased liquidity risk; and
3) inferring a level of precision and predictability in portfolio position liquidity classifications across all asset classes that does not exist.

If the Commission does not adopt a rule permitting funds[6] to implement portfolio-based liquidity risk management programs, then we urge the Commission to adopt an alternative to the Proposed Classification Framework that addresses many of the deficiencies inherent in the Commission's proposal. Finally, we request that the Commission modify certain aspects of the proposed disclosure and compliance requirements.

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[4] Worldwide, equity mutual fund assets account for approximately 25% of global stock market capitalization (with U.S. mutual funds accounting for approximately 13%). Fixed income mutual fund assets account for an even smaller percentage of the global debt capital markets, with worldwide fixed income mutual funds accounting for approximately 10% (with U.S. mutual funds accounting for approximately 4%). International Investment Funds Association and the International Monetary Fund ("IMF"), as of Dec. 31, 2013, Global Financial Stability Report (Oct. 2014), *available at* https://www.imf.org/external/pubs/cat/longres.aspx?sk=41631.0.

[5] *See* Proposing Release at 62385 (proposing rule 22e-4(b)(2)).

[6] The use of the term "fund" here, and throughout this letter, is shorthand for a fund's investment adviser. As a fund has no employees, it relies on its investment adviser to invest fund assets and carry out other business activities.

I. Executive Summary

We summarize our key points below:

- **A portfolio-based liquidity risk management approach that evaluates the liquidity characteristics of a portfolio holistically, rather than at an individual holding level, is the most effective way to accomplish the Commission's goals.** We support the codification of a rule that would permit the adoption and implementation of a board-approved, portfolio-based liquidity risk management program that is reasonably designed to assess and manage liquidity risk. Such an approach would allow a fund to tailor its liquidity risk management program to the unique characteristics of the fund and account for differences in equity and fixed income market structures, portfolio composition, and investment objectives.

- **The Commission's Proposed Classification Framework is flawed and is unjustly biased against large funds.** The six bucket liquidity classification framework is flawed because it: (1) assumes funds suffer from a "first-mover" advantage; (2) inappropriately emphasizes portfolio asset price; (3) suffers from a bias against large funds; and (4) does not provide meaningful tools for the Commission and could mislead investors by implying a degree of precision in liquidity classifications that does not exist.

- **An alternate liquidity classification approach would accomplish the Commission's goals.** We urge the Commission to adopt a portfolio-based liquidity risk management framework. If the Commission determines not to adopt such an approach, we recommend that the Commission adopt an alternative classification framework that would require a fund to classify the relative liquidity of its portfolio assets into one of three different categories: "Highly Liquid Assets," "Illiquid Assets," and "Liquid Assets."

- **We oppose disclosure of the relative liquidity classification for each portfolio position held by a fund as currently defined.** The relative liquidity classifications required by the Proposed Classification Framework would not provide the Commission or the investing public with meaningful information, and could mislead investors. If the Commission adopts our alternative classification framework, we would support public disclosure of the liquidity classification of each of a fund's assets along with certain other important disclosures.

- **The Commission should extend the compliance period for all funds to 30 months.** This extended compliance period would allow all funds time to address system enhancements and other operational changes necessary to implement any final rule.

A more detailed discussion of each of these points follows.

II. A Portfolio-Based Liquidity Risk Management Approach Would Accomplish the Commission's Goals

We believe that the Commission should adopt a final rule that would require a fund to establish and implement a board-approved liquidity risk management program that is reasonably designed to assess and manage the fund's liquidity risk. Any final rule should provide funds and their boards with the flexibility to adopt a portfolio-based liquidity risk management program. We believe that such a rule,

combined with a three-day liquid asset minimum and certain disclosures described below, would successfully accomplish the Commission's goals.[7]

Managing portfolios in order to preserve the ability to satisfy investor redemption requests is a fundamental fiduciary duty of fund managers. Prudent liquidity risk management should be designed to ensure redemption requests may be satisfied in normal and reasonably foreseeable stressed markets without materially impacting a fund's risk profile, which could impair the interests of remaining shareholders. We believe that requiring funds to adopt a board-approved liquidity risk management program is an appropriate measure to ensure that a fund's redemption risk is managed in a manner that is consistent with its stated investment objectives and strategies and does not dilute the interests of remaining shareholders.[8]

Through our experience managing funds over the last four decades, we have found that a liquidity risk management approach that evaluates the liquidity characteristics of a fund's portfolio holistically (a principles-based or "top-down" portfolio-based approach) rather than at an individual holding level (a "bottom-up" approach) is the most effective way to achieve the Commission's goals.[9] A portfolio-based approach permits each fund to establish liquidity risk management policies and procedures that are tailored to the unique characteristics of its stated investment objectives and strategies, while remaining adaptive to changing market conditions.[10] Furthermore, an approach that relies on board oversight rather than prescriptive regulation is consistent with the Commission's prior rulemaking in other critical areas, such as fund compliance policies and procedures.[11]

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7 We generally support the requirement that a fund establish a board-approved three-day liquid asset minimum, as well as the requirement that a fund not be permitted to acquire any less liquid assets if, immediately after the acquisition, the fund would have invested less than its three-day liquid asset minimum in three-day liquid assets. We, however, suggest an alternative to the Commission's proposed definition of three-day liquid assets. *See infra* Section IV.a. We also encourage the Commission to consider a safe harbor for multi-managed funds where data flows may make it difficult, if not impossible, to monitor on a real time basis whether a fund "immediately after the acquisition" of a security is in compliance with its three-day liquid asset minimum.

8 Consistent with long-standing practice, the role of the board with respect to liquidity risk management should be one of oversight for the benefit of fund shareholders, not day-to-day management of liquidity risk management programs. Moreover, the board should not be required to assess prescriptive components of a fund's liquidity.

9 *See* Appendix A for an overview of our liquidity risk management practices.

10 This approach also permits flexibility to determine how to administer liquidity risk management programs for multi-manager advised funds.

11 *See* 17 C.F.R. § 270.38a-1 (requiring a fund's board to adopt written policies and procedures reasonably designed to prevent the fund from violating the federal securities laws). *See also* 17 C.F.R. § 270.2a-7(a)(25) (requiring a "retail money market fund" to adopt and implement policies and procedures reasonably designed to limit beneficial ownership of the fund to natural persons); 17 C.F.R. § 270.2a-41 (requiring a fund's board to determine in good faith a fair value for securities without readily available market quotations); 17 C.F.R. § 12b-1(h) (permitting a fund to use a selling broker to execute portfolio securities transactions if the fund or its adviser adopts and implements policies and procedures reasonably designed to ensure that the selection of a selling broker for portfolio securities transactions is not influenced by considerations about the sale of the fund's shares); 17 C.F.R. § 270.17e-1 (requiring a fund's board to adopt procedures reasonably designed to ensure that any remuneration paid by a fund to an affiliated broker is reasonable and fair compared to remuneration received by other brokers in connection with comparable transactions).

A portfolio-based approach enables asset managers to account for differences in market structure and portfolio management objectives among asset classes, which can result in a variety of different factors informing the assessment of the liquidity of a particular portfolio position. We are concerned that a liquidity assessment conducted at the asset level rather than the portfolio level may distort the multi-dimensional nature of liquidity risk management and arbitrarily exclude differences in asset classes and market structures, as well as the substitutability of assets in liquidity risk management decisions and the consideration of other redemption management tools.[12]

Additionally, a portfolio-based liquidity risk management program would require managers to adjust liquidity risk management programs based on investor and portfolio composition changes within the context of current market conditions. We agree with the Commission that an examination of investor behavior is a critical component of a fund's liquidity risk management program.[13] In our experience, we have found that certain types of investors demonstrate countercyclical investment behaviors that decrease a fund's liquidity risk. For example, target date mutual funds create countercyclical investment flows that are beneficial to markets from a systemic risk perspective.[14] As the market fluctuates, a target date fund's manager has to invest new cash flows to meet the target asset allocation and/or rebalance the fund. This phenomenon is more pronounced in times of market stress.[15] Understanding underlying fund investors' investment goals and strategies enables advisers to manage a fund's liquidity risk effectively in the best interests of all shareholders.

We have successfully utilized a portfolio-based liquidity risk management program to provide for redemptions in cash during periods of market stress while still taking advantage of investment opportunities to benefit remaining fund shareholders. We believe that, unlike the Commission's Proposed Classification Framework, board oversight of a portfolio-based liquidity risk management program, coupled with a three-day liquid asset minimum and disclosure, will provide the Commission with valuable tools to ensure that fund shareholders throughout the industry are appropriately protected.

III. The Commission's Proposed Classification Framework is Flawed

The Commission's Proposed Classification Framework is flawed because it: (1) assumes funds suffer from a first-mover advantage; (2) inappropriately emphasizes portfolio asset price; (3) presents an unjust bias against large funds; and (4) does not provide meaningful tools for the Commission and could mislead investors by implying a degree of precision in liquidity classifications that does not exist. These

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12 The Commission acknowledges that "[g]iven that a fund's liquidity risk arises from the interaction of multiple discrete and overlapping factors, we believe that the most effective liquidity risk management programs would be multi-faceted and customized to reflect the sources of the fund's liquidity risk." Proposing Release at 62304.

13 *See* Proposing Release at 62385 (proposing rule 22e-4(b)(2)(iii)(A)).

14 These funds may also be called "target retirement funds." Target date funds are characterized by a changing investment mix or asset allocation among different asset categories over time and are typically designed to help investors invest for long-term goals such as retirement. The year in a target date fund name typically refers to the approximate year (the target date) when an investor in the fund would retire and leave the workforce. Target date funds are generally designed to gradually shift their portfolios from more aggressive investments (stocks) to more conservative ones (bonds and short-term reserves) over time.

15 Vanguard 2015 FSOC Comment Letter at 8-10; Vanguard 2015 FSB Comment Letter at 11-12.

flaws severely undermine the utility of the Proposed Classification Framework for funds, the Commission, and the investing public.

a. The Proposed Classification Framework assumes funds suffer from a first-mover advantage

We are concerned by the Commission's effort to require funds to engage in the costly exercise of classifying the liquidity of each asset based in part on a theoretical risk of a first-mover advantage that is already minimized by existing regulation.[16] We disagree with the Commission's assumption that there could be a first-mover advantage in mutual funds and that funds drive asset fire sales.[17] Existing regulations and practices mitigate the risk that mutual funds could be susceptible to dilution driven by a first-mover advantage because funds are valued on a mark-to-market basis.[18] Daily valuation diminishes the incentives for one shareholder to redeem before any other shareholder because there is generally no advantage to be gained over other investors by redeeming earlier. A fund's valuation processes are built to price securities so that prices assigned are indicative of the relative liquidation value of the asset, thereby minimizing the opportunity for a potential advantage to be gained by redeeming before other shareholders.[19] Moreover, since the overwhelming majority of mutual fund holdings are Tier 1 securities (i.e., securities with readily available prices) this risk is further diminished.

In response to previous regulatory inquiries speculating about first-mover advantage, we studied Vanguard's bond mutual fund shareholder redemption activity during periods of bond market decline. For a first-mover advantage to be present, a shareholder would need to believe that there would be a delay (beyond intraday movements captured by forward pricing of the redemption) in the decline of the fund's net asset value ("NAV"). If shareholders perceived such a delay, they would be incentivized to redeem

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16 *See* Proposing Release at 62280 n.49-50, 62358 n.694, 62358 n.697 (citing various theories on incentives, as well as an incomplete academic study that discounted the presence of retirement plan assets in funds).

17 In contrast, asset fire sales may occur within the banking sector where book value accounting regimes are market practice and assets are not generally marked-to-market. Under this regime, a depositor may rush to be the first to redeem if the market value of a firm's assets falls below the book value of its liabilities. Additionally, banking institutions are typically leveraged above the level permitted for funds. Leverage is a primary driver of asset fire sales since asset sales are required at dislocated prices in order to meet a fixed obligation, such as a margin or capital call.

18 *See* Section 22 of the Investment Company Act of 1940 ("ICA") and rule 22c-1(a) thereunder. Additionally, mutual funds have a simple capital structure and are limited in their ability to engage in transactions that may introduce leverage—short sales, the purchase of securities on margin, and derivative transactions. *See* Section 18 of the ICA; *see also* Section 1(b)(7) of the ICA. Issuer concentration is also limited due to diversification requirements in order to qualify as an investment company under the Internal Revenue Code. *See* Subchapter M of the Internal Revenue Code of 1986.

19 We note that forward pricing of fund shares results in investors receiving the price next calculated after receipt of a purchase order or redemption request. Thus, those investors must bear the risk of market price changes from the time of their decision to purchase or redeem, rather than being able to "lock in" a price based on stale valuation. When market values are not readily available, a mutual fund's board must ensure that the fund has a disciplined process for determining a security's "fair value." *See* Section 2(a)(41) of the ICA and rules 2a-4 and 22c-1 thereunder. "Fair value" refers to the amount the fund might reasonably expect to receive for the security upon its current sale. *See* Accounting Series Release No. 118, Investment Company Act Rel. No. 6295 (Dec. 23, 1970).

holdings on the day that a market event occurs in order to receive a higher valuation. We found no evidence that fund shareholders were motivated by a first-mover advantage.[20]

The existing forward pricing and fair valuation mechanisms, in conjunction with the broader ICA regulatory framework, neutralize any first-mover advantage that might be present in a fund absent these features. We also believe that this helps explain why mutual funds historically have not experienced large-scale redemptions relative to their asset base even in times of significant market stress.

b. The Proposed Classification Framework inappropriately emphasizes portfolio asset price

We believe that the Proposed Classification Framework inappropriately focuses liquidity classifications on the price impact that the sale of a portfolio position may have on an asset.[21] Such a focus misses the public policy objective of enhanced liquidity risk management regulation which should focus on mitigating the risk associated with investor portfolio asset allocation flows from one asset category to another.[22] These flows are likely to arise when market or economic conditions cause underlying investors to reevaluate their risk and return assumptions. The Proposed Classification Framework conflates liquidity and valuation by tying the liquidity of a security to its price. Price declines driven by asset flows are simply evidence of a basic capital markets function: to discover the price at which buyers and sellers are willing to exchange risk.

In well-functioning markets, especially when there are significant asset flows, there can be significant price changes required to clear the market. By including in the definition of liquidity a stipulation of immaterial impact on price, the Proposed Classification Framework implies that there will be little trading in the markets, in general, when a fund attempts to sell portfolio securities. In our

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[20] Vanguard 2015 FSOC Comment Letter at 11-13; Vanguard 2015 FSB Comment Letter at 12-15. A similar pattern held across our corporate and municipal bond fund product line in our study of redemption activity during a recent fixed income market decline, commonly referred to as the "Taper Tantrum." On May 22, 2013, the Taper Tantrum commenced when then Federal Reserve Chairman Ben Bernanke testified to Congress that the Federal Reserve would likely start slowing—that is, tapering—the pace of its bond purchases later in the year, conditional on continuing good economic news. At the July 19, 2013 Federal Open Market Committee meeting additional statements were made signaling that the Federal Reserve would moderate their purchases.

[21] The Proposed Classification Framework would require a fund to classify its entire position in a portfolio asset (or portions of a position in a particular asset) into certain prescribed categories based on the "number of days in which it is determined, using information obtained after a reasonable inquiry, that the fund's position in the asset (or portion thereof) would be convertible to cash at a price that *does not materially affect the value of that asset immediately prior to sale*" (emphasis added). Proposing Release at 62385. The term "immediately prior to sale" would require a fund to determine whether the sales price the fund would receive for the asset is reasonably expected to move the price of the asset in the market, independent of other market forces affecting the value of the asset. Proposing Release at 62292.

[22] In the mutual fund industry, we have seen that firm or fund specific events do not result in systemic risk but rather are idiosyncratic in nature. Markets are readily capable of intermediating the flows of client assets from one firm or fund to another. For example, a large bond fund experienced $81.7 billion in total outflows between September 2014 and December 2014, including $32.2 billion in outflows in October 2014 alone, the first full month after the sudden departure of a key portfolio manager. In the months before and after the news of the departure, in markets where the fund had large overweights, there was no sizable change in market valuation, volatility, and liquidity. Several concurrent global market events helped dictate market activity, and investors appeared to have taken the change in stride with no structural disruption in market dynamics.

experience, this is inconsistent with a very common, and quite normal, scenario of investor driven asset flows where trading volumes would likely be relatively large, and therefore, security prices may fluctuate, and sometimes materially. Rather than a focus on price, we believe that liquidity classifications should focus on the ability to convert an asset to cash over some time frame under reasonably foreseeable market stress.

The goal of a successful liquidity risk management program should be to enable a fund to satisfy redemption requests in normal and reasonably foreseeable stressed market conditions in a manner that is consistent with the interests of the fund and its shareholders. By shifting the focus from price to the ability to convert to cash, the Proposed Classification Framework would be better positioned to address the Commission's objective of enhanced liquidity risk management. Therefore, we strongly urge the Commission to remove the emphasis on price from the Proposed Classification Framework.

c. The Proposed Classification Framework presents an unjust bias against large funds

We are concerned that the Proposed Classification Framework equates size with risk by requiring a bottom-up analysis based, in part, on an assessment of the size of a fund's position in a particular asset as well as tying the definition of liquidity risk to the market impact of liquidating the position.[23] This approach is counter to the Division of Economic and Risk Analysis' ("DERA") own findings that show that the volatility in fund cash flows generally decreases as fund size increases.[24] DERA concluded that funds with less than $100 million in assets demonstrate more volatility in cash flows (as measured by an average standard deviation of cash flows of 7.5%), as compared to funds with greater than $1 billion in assets (as measured by an average standard deviation of cash flows of only 2.3%).[25] Further research performed by DERA found that smaller funds are more likely to experience redemptions of a larger proportion of their assets under management ("AUM") by fund shareholders than larger funds. For example, about 10% of net cash flows to funds with less than $100 million in assets are less than –3.8% of a fund's AUM, compared to –2.2% of a fund's AUM for funds with greater than $1 billion in assets.[26]

Many fund investors, particularly those with long-term investment horizons, simply are not inclined to redeem during times of market stress. Based on industry data, approximately 56% of mutual fund assets consist of long-term retirement accounts.[27] We estimate that approximately 77% of our AUM is held in long-tenured mutual fund accounts.[28] Vanguard examined 401(k) participant behavior from September 2007 to December 2009 in Vanguard-administered retirement plans in order to examine their behavior during a stressed market. Over the course of that period, about three-quarters of participants

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[23] *See* Proposing Release at 62385 (proposing rule 22e-4(b)(2)(ii)(H)).

[24] Paul Hanouna, Jon Novak, Tim Riley, Christof Stahel, Liquidity and Flows of U.S. Mutual Funds, Division of Economic and Risk Analysis White Paper, 2 (Sept. 2015) (the "DERA Study"), *available at* http://wcm.sec.gov/dera/staff-papers/white-papers/liquidity-white-paper-09-2015.pdf. The DERA Study also concludes "as fund size increases, the liquidity of the equity portfolio of U.S. equity funds also increases." *Id.* at 30.

[25] DERA Study at 23.

[26] DERA Study at 20.

[27] Investment Company Institute ("ICI"): The U.S. Retirement Market, Fourth Quarter 2014 (Mar. 25, 2015), *available at* http://www.ici.org/research/stats/retirement.

[28] Vanguard calculation based on accounts that were open as of 2004 and continued to hold balances through 2013. We observed similar longevity in both retail and institutional (includes defined contribution and other retirement plans) account types, with 67% and 88%, respectively, of AUM in accounts open for this period.

made no investment changes to their accounts whatsoever, and only 3% eliminated all exposure to stocks.[29] On August 24, 2015, U.S. stock indexes declined by almost 4% over concerns about economic growth in China. And again, only 0.37% of 401(k) participants made a change in their asset allocation and, due to the netting of cash flows, only 0.31% of fund shares in these accounts were ultimately traded.

Additionally, even absent the benefits from a diverse investor base, funds with large holdings in a security relative to the average trading volume of that security have historically been able to source liquidity in the markets. The Proposed Classification Framework requirement that a fund must consider the size of its position in certain portfolio assets relative to the assets' average daily trading volume demonstrates a significant bias against larger funds without providing any meaningful measure for assessing the liquidity of those portfolio assets.[30] The Commission cites the DERA Study that small-capitalization securities and securities with low trade volumes are generally less liquid than large-capitalization securities or securities with high trade volumes.[31] The Commission reasoned that holding a large position in small-capitalization securities and securities with low trade volumes could diminish the ability of the fund to convert a significant portion of its position in the securities to cash in order to meet redemptions. However, the DERA Study showed that larger funds with exposure to the small-capitalization equity market were relatively more liquid than smaller funds.[32]

As discussed above, the primary risk of redemptions is investor reallocation from one asset category to another. When such an asset shift occurs, investors, including shareholders of large and small funds, may make portfolio allocation decisions that result in selling in the market. As a consequence, the price of the asset, all else equal, will decline. For example, under the Proposed Classification Framework, a small fund with a modest holding in a security relative to the average daily trading volume will appear to have little price impact, while under the same analysis, a large fund with a considerable holding relative to the average daily trading volume will appear to have a greater price impact. Nevertheless, during periods of market turbulence, the small fund will be impacted to the same extent as the large fund. We are concerned that the Proposed Classification Framework would give investors an undue sense of comfort in the liquidity of smaller funds when, in reality, if market events trigger reallocations from an asset class the underlying assets of all funds are impacted regardless of size.

d. The Proposed Classification Framework does not provide meaningful tools for the Commission and could mislead investors by implying a degree of precision in liquidity classifications that does not exist

Estimating the amount of an asset that could be sold over a specific time frame and the impact that the sale of a fund's position may have on the value of that asset inherently requires subjective judgments that are prone to different outcomes for similar portfolio positions across different funds.[33] Our

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[29] *See* Vanguard Research, Resilience in Volatile Markets: 401(k) Participant Behavior September 2007-December 2009 (Mar. 2010), *available at* https://pressroom.vanguard.com/content/nonindexed/Resilience_in_volatile_markets_401k_participant_behavior.pdf.

[30] Proposing Release at 62385. In proposing this liquidity factor, the Commission reasoned that "the size of a fund's portfolio position in a particular asset is a key element in determining a fund's ability to convert the entire position (or portions of a position in a particular asset) to cash . . . ." Proposing Release at 62301.

[31] *See* DERA Study at 30.

[32] *Id.*

[33] An example of the lack of precision that currently exists in security level liquidity estimates can be found in the recently announced liquidation of the Third Avenue Focused Credit Fund. The fund's liquidity score as

experience suggests that it is difficult, in hindsight, to determine with a high degree of precision what impact trades in a particular asset had on the price of that asset. Requiring a fund to undertake a forward-looking price impact analysis in the hypothetical manner required by the Proposed Classification Framework would add another layer of complexity and uncertainty to an already imprecise analysis. The Proposed Classification Framework would further compound this complexity and uncertainty by requiring a fund to consider the relative liquidity of its entire position in each of its portfolio assets, rather than the relative liquidity of a normal trading lot for each portfolio asset. Therefore, any classifications based upon the requirements of the Proposed Classification Framework will be based largely on subjective judgments, which will likely result in varied classifications of similar portfolio positions across funds.[34]

One of the primary benefits of the position-level classifications as espoused by the Commission is that reporting of the classifications on Form N-PORT will provide the Commission and the investing public with additional information that can be used to better understand the liquidity risks presented by funds and compare these risks across the industry.[35] However, we question the suitability of subjective and imprecise classifications for these purposes. We are concerned that any analyses or metrics based on such highly subjective classifications would be incomplete, inaccurate, or misleading, and, therefore, would not form an appropriate basis for sound policy or investment decisions.

We also are concerned about the impact that the Proposed Classification Framework may have on investor expectations. We fear that the highly prescriptive nature of the Proposed Classification Framework could mislead investors into believing that there is some objective measure of liquidity that funds could rely upon to determine how to classify their various portfolio positions under the Proposed Classification Framework. In fact, unlike other financial risk measures that have standardized objective measures, such as leverage and interest rates, no such standardized measures exist with respect to

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determined through a backward-looking analysis by an independent third-party after the fund had already closed did not indicate significant issues. Source: Interactive Data Corp. Despite this, on December 9, 2015, the fund's management team made the rare decision to halt shareholder redemptions and subsequently liquidate the fund. While the third-party liquidity score had indicated above-average liquidity (a score greater than 5) in the portfolio during normal market conditions, fund management deemed the portfolio holdings to be much less liquid when faced with significant redemptions.

34 The Commission explained that it would use the classification data reported on Form N-PORT to identify funds with outlier classifications and examine those funds to scrutinize the process for determining those classifications. Proposing Release at 62294. We question the effectiveness of the Commission's stated strategy to police outlier classifications effectively as the classifications will be highly dependent on the subjective judgments of the funds and their service providers.

35 The Commission explained that the proposed rules would "provide the framework for reporting and disclosure about the liquidity of funds' portfolio assets that would permit [Commission] staff to better monitor liquidity trends and funds' liquidity risk profiles, and also would help investors and other market participants assess funds' relative liquidity." Proposing Release at 62294. The Commission also noted that third-party data analyzers could develop certain metrics for dissemination to market participants that could compare the relative liquidity of a fund's portfolio against funds with similar investment objectives or strategies. *Id.* at 62346. We are unaware, however, of any evidence to suggest that third-party vendors are capable of performing a reliable analysis of a fund's portfolio positions consistent with the requirements of the Proposed Classification Framework. Moreover, we are concerned that the burdensome asset-level classifications required by the Proposed Classification Framework could incentivize many funds to rely heavily on data supplied by third-party vendors, which we believe could have unintended consequences for funds and their shareholders. Heavy reliance on third-party vendors could give rise to the same types of concerns that Congress found to be unacceptable with regard to credit rating agencies.

liquidity.[36] We view any such liquidity classifications, therefore, as being no more objective than a fund's predictions regarding its expected returns over a future period.

Finally, we disagree with the Commission's proposed approach to require funds to consider nine specific factors when assessing the relative liquidity of their portfolio assets (the "Liquidity Factors"). At a high level, the Liquidity Factors, which focus on security level volume and trading dynamics, fail to contemplate the structure of large, broadly diversified, high quality, over the counter bond markets such as the investment-grade corporate and municipal bond markets. The low turnover of the corporate bond market—which can be expressed as trading volume as a percentage of market value—has been well established. This is driven by the buy and hold nature of bond investing; the distribution of an issuer's borrowing across many different bond issues; and the fact that many bonds are substitutes for one another based on common characteristics, such as issuer, sector, credit quality, and maturity. Despite these conditions, participants in large, broadly diversified markets consistently manage to find a market-clearing price for high quality securities.

Instead of the highly prescriptive requirements proposed by the Commission, we believe that the better approach would be for the Commission to adopt a final rule that would give a fund the flexibility to determine, subject to the oversight of its board, what factors it should consider when assessing the liquidity of its portfolio. Although we would expect a fund to consider certain Liquidity Factors in the assessment of the relative liquidity of its portfolio, we believe that several of the proposed Liquidity Factors are inappropriate for such consideration. In particular, we believe that:

- Requiring a fund to assess the frequency of trades or quotes for a portfolio asset and the average daily trading volume of the asset fails to acknowledge the dynamic nature of liquidity in many fixed income assets;[37]

- The information necessary to conduct an accurate assessment of the trade volume of many fixed income securities is not available;[38]

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36 *See* William C. Dudley, Regulation and Liquidity Prevention, Remarks at the SIFMA Liquidity Forum (Sept. 30, 2015), *available at* https://www.newyorkfed.org/newsevents/speeches/2015/dud150930.html ("Liquidity is dynamic, unobservable and multi-dimensional in nature, and, as such, can only be measured indirectly."). *See also* Measuring Liquidity in Financial Markets, Abdourahmane Sarr and Tonny Lybek, IMF Working Paper (Dec. 2002), *available at* https://www.imf.org/external/pubs/ft/wp/2002/wp02232.pdf ("Market liquidity is a multifaceted concept. Many of the various dimensions of the characteristics of market liquidity—tightness, immediacy, depth, breadth, and resiliency—can be covered by traditional liquidity measures, such as bid-ask spreads, turnover ratios, and selected price-based indicator . . . . However, these indicators are incomplete, and they may send mixed signals, particularly during a crisis.").

37 *See* Appendix B, Figures 1 and 2. Many fixed income instruments are properly understood as reflecting a variety of different attributes, such as issuer, sector, credit quality, and maturity. Similar attributes may be present in various assets concurrently. Viewing fixed income instruments in this manner facilitates price discovery in those assets because it allows market makers to price and trade fixed income instruments with historically low trading volumes. As a result, when a market participant wants to sell a fixed income asset with a low trading volume, liquidity for that asset will often emerge and the asset's trading volume will increase.

38 *See* Appendix B, Figure 3. FINRA's Trade Reporting and Compliance Engine ("TRACE") is an industry standard reporting platform that aims to capture over-the-counter secondary market transactions in certain U.S. fixed income securities, including corporate debt, agency mortgage backed securities, and certain asset backed securities and other securitized products. However, TRACE does not provide trade volume

- Asset level trade volume is not a meaningful indicator of a fixed income asset's liquidity;[39] and

- Funds should not be required to consider the relationship of a portfolio asset to other portfolio assets when assessing the liquidity of a portfolio asset.[40]

Because the Proposed Classification Framework will require funds to engage in a speculative analysis of the relative liquidity of their portfolio positions, we believe that any resulting classifications will be highly subjective. Accordingly, these classifications will not provide the Commission or the investing public with meaningful information to assess mutual fund liquidity risks. We hope that the Commission reassesses the flawed assumptions underlying the prescriptive Proposed Classification Framework and adopts a final rule that permits funds to follow portfolio-based liquidity risk management practices that would allow funds to continue their prudent management of liquidity risks.

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information for the U.S. Treasury market or non-U.S. fixed income securities. Furthermore, TRACE does not provide real-time information regarding the actual trade volumes for many of the transactions it tracks. Accurate trade volume for some transactions can be provided on a lag of up to 18 months. Other data services are prone to similar trade volume limitations for fixed income securities. *See* DERA Study at 32 (conceding that "infrequent trading of many fixed-income securities can introduce both stale and inaccurate measures of liquidity into the calculation of a fund's bottom-up liquidity").

[39] *See* Appendix B, Figure 4. Additionally, recent research by Barclays has found a weak correlation between the trade volume of a fixed income asset and the impact on that asset's price. *See generally* Vadim Konstantinovsky, Kwok Yuen Ng, Bruce Phelps, A Price Impact Measure of Corporate Bond Liquidity (Oct. 19, 2015). The Commission presumes that securities with lower trading volumes are less liquid, and therefore, will suffer greater price concessions at the time of sale. However, Barclays' research challenges the notion that funds with fixed income holdings showing low reported trade volume will suffer a large negative return if they need to sell those assets to meet shareholder redemptions. *Id.*

[40] The Proposed Classification Framework would require a fund to consider the relationship between assets in the same portfolio when assessing the relative liquidity of a portfolio position. The Commission discusses this requirement in two primary contexts: (i) when liquid assets are segregated to cover a fund's derivative transactions; and (ii) when a derivative is used to hedge the risk of another portfolio asset. In both cases, the Commission asserts that the relative liquidity of the segregated or hedged assets should change due to their relationship with other assets (e.g., derivatives). Many funds use derivatives to achieve a number of benefits for investors including hedging portfolio risk, lowering transaction costs, and achieving more favorable execution compared to traditional investments. The risk posed by any particular derivatives position is based not only on the nature of the derivative but also on how the derivative is used and how it fits into a fund's overall portfolio. In the case of cover and segregation, the Commission confuses "encumbered" assets with "illiquid" assets, which fails to comport with long-standing cover practices and would raise significant operational complexities to construct a purely artificial linkage. Funds rarely identify and segregate a specific liquid asset against an individual derivative on a one-for-one relationship. Instead, managers assess their aggregate derivatives positions with each clearing house and dealer on a daily basis and ensure they have the requisite amount of liquid assets available. Funds also may substitute liquid assets within the segregation pool while assuring the overall amount in segregation provides sufficient cover. Hedging practices also are more likely to involve the dynamic assessment and adjustment of overall portfolio risk parameters rather than a one-for-one linkage between a particular derivative and a hedged asset. Especially as hedging is meant to mitigate perceived risk, and the markets for such hedging tools themselves are quite liquid, even if a liquidity linkage was possible, it would be inappropriate to assume that the mere practice of hedging through use of a derivative would impact the hedged asset liquidity one way or another. Simply stated, a one-to-one linkage analysis is therefore antithetical to prudent derivatives use and portfolio risk management. Therefore, we urge the Commission to abandon this Liquidity Factor as inappropriate and unworkable.

IV. An Alternate Approach Would Accomplish the Commission's Goals

We support the Commission's goal of strengthening the liquidity risk management practices of funds. Although the mutual fund industry has a long history of successfully managing liquidity risk in various market conditions, we believe that the Commission, as the primary regulator, should adopt rules that are designed to address legitimate concerns with current liquidity risk management practices in the industry. However, as discussed above, we have significant concerns with the Proposed Classification Framework.

We are concerned that the Proposed Classification Framework would materially increase the costs of a fund's compliance without providing a corresponding benefit in terms of materially enhancing a fund's liquidity risk management practices or strengthening the Commission's oversight capabilities. Because shareholders would ultimately bear the burden of these increased costs without any commensurate benefit, we strongly urge the Commission to reconsider this proposal.

We believe that the Commission should adopt a portfolio-based approach to liquidity risk management that permits a fund, under the oversight of its board, to establish liquidity policies and procedures that are tailored to the unique characteristics of the fund. We also believe that a portfolio manager should have the flexibility to manage liquidity risk consistent with the risk profile approved by the fund's board and disclosed by the fund. Therefore, we encourage the Commission to adopt a liquidity risk management rule that encompasses a portfolio-based approach to liquidity risk management as described above. However, if the Commission determines that a prescriptive rule is in the interests of funds and their shareholders, we urge the Commission to adopt a more streamlined classification framework (the "Alternative Classification Framework") that would meaningfully advance the Commission's goals without materially increasing costs for shareholders.

a. Alternative Classification Framework

Under our proposed Alternative Classification Framework, a fund would be required to classify the relative liquidity of its portfolio assets into one of three different categories: "Highly Liquid Assets," "Illiquid Assets," and "Liquid Assets." The term "Highly Liquid Assets" would include cash and any asset that can be converted into cash in the ordinary course of business within three business days in a manner that is consistent with the interests of the fund and its shareholders.[41] The term "Illiquid Assets" would be defined to mean any asset that may not be sold or disposed of in the ordinary course of business within seven calendar days in a manner that is consistent with the interests of the fund and its shareholders. Finally, the term "Liquid Assets" would be defined to mean any asset that is not a Highly Liquid Asset or an Illiquid Asset.

The Alternative Classification Framework would generally follow the approach outlined in the Proposed Classification Framework and would require funds to classify their assets based on typical expected settlement periods for transactions in that asset in the particular jurisdiction. However, where market practice commonly permits accelerated settlements or otherwise allows funds to retain cash that can be used to satisfy redemption requests, funds would be permitted to classify their assets based on the negotiated settlement cycle or their reasonable belief about their ability to convert the asset to cash.[42]

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41 This definition also would be used to establish a fund's three-day liquid asset minimum.

42 While the Commission directs funds to look to the typical expected settlement periods for transactions in that asset in a particular jurisdiction, we believe that asset managers should be able to make a reasonable

Unlike the Proposed Classification Framework, this Alternative Classification Framework would permit a fund to classify the relative liquidity of a portfolio asset on the basis of the fund's assessment of its ability to sell a normal trading lot of that asset. The Commission argues that classifying the liquidity of a portfolio position based on the ability to convert a normal trading lot to cash would not provide an accurate picture of the actual liquidity of the fund's position in that asset. In support of this position, the Commission claims that during a liquidity event a fund may be required to sell more than one trading lot of a particular portfolio position in order to satisfy its redemption requests. Although this may be true in some circumstances, the Commission's proposed requirement that a fund must assess the relative liquidity of its entire position in an asset goes too far. Our experience suggests that a fund will rarely be forced to sell its entire position in a particular portfolio asset in response to a liquidity event. Furthermore, requiring a fund to assess its entire position in a portfolio asset infers a much greater level of precision than is currently possible.

Accordingly, we believe that assessing the relative liquidity of a normal trading lot is a valid approach and should be adopted by the Commission for two reasons. First, assessing the relative liquidity of a normal trading lot would provide more consistency in classifications across funds and would remove a significant degree of subjectivity from classification determinations, which would promote the ability of the Commission to compare classifications across funds. As noted above, requiring a fund to assess the relative liquidity of its entire position in a portfolio asset would force the fund to engage in highly speculative and imprecise classifications that would rely heavily on subjective judgments, which would make any resulting classifications unsuitable for comparison across funds. Second, funds have a historical track record of managing portfolio liquidity successfully under this standard. The Commission has failed to demonstrate a legitimate problem with assessing the relative liquidity of a portfolio asset on the basis of the ability to sell or dispose of a normal trading lot of that asset. We object to any approach that would alter what, to date, has been a successful tool in mitigating mutual fund portfolio liquidity risk.

The Alternative Classification Framework would adopt the Proposed Classification Framework's definition for "convertible to cash." As a result, an asset could be classified as a Highly Liquid Asset only if it was determined that the asset could be sold, with the sale settled, within three business days. Not only would this definition assist in the establishment and monitoring of a three-day liquid asset minimum, it

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determination about the prospect of gaining expedited settlement of the purchase or sale upon request, in particular with respect to the to-be-announced ("TBA") forward market. Proposing Release at 62295 n.198. Following the Commission's proposal could potentially prevent funds from classifying agency mortgage-backed securities ("MBS") as Highly Liquid Assets. Over 90% of agency MBS trading occurs in the TBA forward market, where the trade date of the TBA will usually precede settlement by between 2 and 60 days. *Id.* (citing James Vickery & Joshua Wright, TBA Trading and Liquidity in the Agency MBS Market, 19 FRBNY Econ. Policy Review 1 (May 2013)). However, the agency MBS market is one of the deepest and most liquid sectors of the U.S. fixed income market, with trade volumes second only to the U.S. Treasury market. In a typical agency MBS TBA transaction, a fund commits to purchase a TBA, but does not immediately make settlement on the transaction. The fund will typically hold the cash committed to the TBA at its custodian bank until the settlement date (typically 30 days forward). A fund that holds the committed cash at its custodian bank prior to settlement can simply sell the TBA and use the cash on-hand to meet shareholder redemptions. In other circumstances when the fund makes settlement on the TBA it has purchased, it takes delivery of the underlying mortgage pools. The fund can then sell the underlying pools in order to convert the assets to cash. The fund and the buyer of the pools can agree on the settlement date, a practice that is common in the market for specified pool bonds. Accordingly, the ability to convert an agency MBS TBA to cash should not be determined based solely upon the typical expected settlement cycle for that transaction because this would misrepresent the actual liquidity of such an instrument.

would also permit a more nuanced approach to portfolio construction and liquidity risk management than an approach under which an asset would simply be designated as being either liquid or illiquid. Determining with particularity those assets that comprise the fund's Highly Liquid Assets would help with a better understanding of what assets are available to meet redemption requests within three business days, which would align with the requirement of rule 15c6-1 under the Securities Exchange Act of 1934 that obligates broker-dealers to settle their trades in mutual fund shares within three business days.

Unlike the Proposed Classification Framework, the Alternative Classification Framework would not require the consideration of specific factors when assessing the relative liquidity of a fund's portfolio assets and would avoid the more problematic issues we have outlined with respect to the application of the Commission's proposed factors. The Alternative Classification Framework would permit the consideration of any factors determined to be reasonable and appropriate to inform an assessment of the relative liquidity of portfolio assets. In the event of insufficient information with respect to a particular portfolio asset, the Alternative Classification Framework would allow the consideration of information of a comparable asset.[43]

Like the Proposed Classification Framework, the Alternative Classification Framework would permit funds to classify the relative liquidity of their portfolio assets based on information obtained after a reasonable inquiry. However, the Alternative Classification Framework would provide funds with the flexibility to make their classification determinations on the basis of asset type or some other measure determined to be appropriate.[44] This flexibility would permit funds to engage in the type of top-down analysis that many funds currently use to manage their liquidity risk successfully. Although a fund would be able to engage in this type of top-down analysis, the Alternative Classification Framework would require a fund to take into account asset-specific information obtained by the fund to determine whether such information would require the fund to classify the asset into a liquidity category that differs from the category generally assigned to that class of assets. Unlike the expensive, inflexible, and imprecise bottom-up analysis mandated by the Proposed Classification Framework, the Alternative Classification Framework would permit funds to utilize a top-down analysis that takes into account asset-specific information thereby mitigating the costs of the program borne by shareholders.

Following the requirements outlined in the Proposed Classification Framework, the Alternative Classification Framework would obligate a fund to review the liquidity classifications of each of the fund's portfolio assets on an ongoing basis. However, the Alternative Classification Framework would not prescribe procedures for conducting this review or mandate that certain factors or conditions be analyzed when conducting this review. We would expect that any reasonably designed liquidity risk management program would include policies and procedures requiring a fund to consider relevant information in reviewing its liquidity classifications. Nevertheless, we believe these policies and procedures should be developed by the fund subject to the oversight of its board.

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[43] Allowing the consideration of relevant information for similar assets would be largely consistent with the Commission's proposal and also would be consistent with the fact that certain fixed income instruments are largely substitutable for one another. *See* Proposing Release at 62297. *See also supra* Section III.d.

[44] The Proposed Classification Framework does not specify that certain asset classes fall within particular liquidity categories. Proposing Release at 62293. The Commission expressed its belief that "individual funds would be more effective in assessing and reviewing their portfolio positions' liquidity based on an evaluation of market and asset-specific factors." *Id.* We agree. Accordingly, the Alternative Classification Framework would allow funds to maintain discretion to determine what portfolio assets fall within the three liquidity categories.

Finally, consistent with the proposed amendments to Form N-PORT, a fund would be required to disclose on Form N-PORT the liquidity classification for each of its portfolio assets using the Highly Liquid Assets, Liquid Assets, and Illiquid Assets categories defined above.[45] Only the liquidity classifications reported for the third month of a fund's fiscal quarter on Form N-PORT would be publicly available, and such information would not be made public until 60 days after the end of the third month of the fund's fiscal quarter.

The Alternative Classification Framework avoids many of the concerns we have with the Proposed Classification Framework while also helping the Commission advance its goal of promoting stronger and more effective liquidity risk management practices across open-end mutual funds. We also believe that the Alternative Classification Framework would provide the Commission with useful information that the Commission could use to improve its monitoring and oversight of liquidity risks in the mutual fund industry. Accordingly, we strongly recommend that the Commission replace the Proposed Classification Framework with our Alternative Classification Framework.

b. Swing Pricing

In addition to the liquidity risk management standards proposed by the Commission and discussed above, the Commission also proposed a new swing pricing method that, if adopted, would allow a fund to allocate costs more effectively to shareholders that enter or exit the fund and mitigate the dilution of existing shareholder interests. We believe that the proposed swing pricing method would be an effective tool in allocating the costs of liquidity to transacting shareholders.[46] However, certain operational hurdles common across the industry currently prevent funds from effectively implementing

[45] Because the Alternative Classification Framework would only require funds to classify their portfolio assets based on the relative liquidity of a normal trading lot for those assets, a fund would not classify portions of a position in a portfolio asset into multiple categories.

[46] We believe that swing pricing can be used successfully by the conventional share classes of a fund that also operates an ETF as a share class. We do not believe that implementing swing pricing for conventional shares would jeopardize the arbitrage mechanism that operates to keep the market price of the ETF's shares at or close to the NAV per share of the ETF. Furthermore, we support flexibility in the composition of ETF portfolio deposit and redemption baskets as an important and beneficial practice. We believe that such flexibility benefits liquidity risk management practices as well as the overall ability of ETFs to meet their investment objectives, such as tracking an index, more efficiently. Maintaining flexibility to create custom ETF baskets is vital to the health of the ETF market and reduces the cost of investing for the end investor. This flexibility allows the fund to include securities in the basket that align with the investment profile of the fund and reduce associated transaction costs, thereby facilitating tighter premiums and discounts. This benefit is even greater as the liquidity, or ease of sourcing the underlying securities, diminishes. In over-the-counter or fixed income markets, the custom process allows the fund manager to include securities within the basket that are in the best interests of fund shareholders.

swing pricing.[47] Accordingly, we encourage the Commission to delay implementation of the swing pricing proposal while the Commission and the industry work to resolve these concerns.[48]

V. Disclosure Requirements and Compliance Dates

We generally support the codification and disclosure of a portfolio-based approach to liquidity risk management, as well as the Commission's desire to provide investors with increased information to assess the key features of a fund's liquidity risk management program.

a. Redemption of Fund Shares

The Commission believes that investors would benefit from additional information about redemptions.[49] We generally agree. The proposed amendments to Item 11 of Form N-1A would require a fund to disclose fund policies concerning the redemption of fund shares in conjunction with the number of days in which the fund will pay redemption proceeds to redeeming shareholders and the methods used by the fund, under both normal and stressed market conditions, to satisfy redemption requests.[50] We support the Commission's desire to provide investors with increased information on fund policies concerning redemption of shares on Form N-1A.

Notwithstanding our support for overall industry-wide consistency and increased disclosure about redemptions to investors, we believe that continued flexibility regarding the number of days and methods for meeting redemption requests remains critical. Vanguard reserves the right, without notice, to revise or terminate certain redemption methods previously disclosed, at any time, for any reason. We continue to reserve the right of each Vanguard fund to pay the redemption price in whole or in part by a distribution in kind of readily marketable securities held by the fund in lieu of cash in conformity with applicable rules of the Commission.

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[47] In order for a fund to properly implement its swing pricing policies and procedures, a fund would need to know with a high degree of certainty the total value of its net cash flows on a given business day before the time the fund strikes its NAV. Although some shareholders engage in transactions directly with a fund, many other shareholders engage in transactions with a fund through third-party financial intermediaries, including broker-dealers, retirement plans, and banks. Due to the way many intermediaries transmit these transactions to funds, funds often do not receive final flow information reflecting the value of these transactions until after the time the funds strike their NAVs on a business day. Accordingly, many funds will lack the necessary information to determine whether their swing thresholds have been crossed and their swing factors must be implemented at or before the time the funds strike their NAVs.

[48] We believe that any potential solution to this problem will result from increased collaboration and communication between funds, their service providers, and intermediaries. However, any industry solution will necessarily take time to develop. Therefore, the Commission should delay implementation of the swing pricing rule until such time as intermediaries can demonstrate an ability to transmit accurate and complete order information to funds in a reliable, cost-effective, and timely manner. Once the industry is able to implement swing pricing effectively, we believe that swing pricing will be a valuable tool funds may use to supplement the liquidity risk management practices that we propose above.

[49] *See* Proposing Release at 62344.

[50] *Id*.

b. Disclosure of Liquidity Classifications

The Commission proposes to amend proposed Form N-PORT to require disclosure of the liquidity classification of each of a fund's positions in a portfolio asset based upon six classification categories set forth in proposed Rule 22e-4.[51] We do not support such disclosure since we do not believe that it would provide meaningful information to either the Commission or investors.[52] Rather, we believe the proposed disclosure would confuse investors by encouraging investors to: (i) place undue emphasis on a fund's subjective liquidity classifications; and (ii) misinterpret differences in liquidity classifications for similar portfolio positions across various funds.[53] We support, however, disclosures addressing how a fund manages its liquidity risk in a fund's registration statement. This disclosure would provide investors with information to assess the key features of a fund's liquidity risk management program without providing investors with a false sense of precision regarding the liquidity of any given asset (or portion thereof).

c. Disclosure of Three-Day Liquid Asset Minimum

The Commission also proposes an amendment to proposed Form N-PORT that would require disclosure of a fund's three-day liquid asset minimum to increase the likelihood that the fund will hold adequate liquid assets to meet redemption requests.[54] While we would not support public disclosure of the three-day liquid asset minimum as currently proposed by the Commission, we would support public disclosure of a fund's three-day liquid asset minimum if the Commission adopts the definition of Highly Liquid Asset as defined above in our Alternative Classification Framework.[55]

d. Interfund Lending and Borrowing Information

The Commission proposes to amend proposed Form N-CEN to allow the Commission and other users to track certain mutual fund liquidity risk management practices.[56] With the exception of disclosures

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51 *Id*. at 62346 (proposing to add Item C.13 to Part C of proposed Form N-PORT).

52 If the Commission adopts our Alternative Classification Framework, we would support disclosure on Form N-PORT of the liquidity classifications of each of a fund's holdings as described above. *See supra* Section IV.a.

53 Furthermore, we are concerned that the Commission's cost analysis overestimates the economies of scale that can be achieved in establishing the systems and resources required to implement the Proposed Classification Framework. *See* Proposing Release at 62360. Many of our funds have diverse portfolios with over 3,000 different holdings. We believe that the Proposed Classification Framework is materially different from the money market fund reform cost analysis. Making initial determinations upon purchases of new assets (or across all fund holdings, when the rule would first take effect) would be an extremely challenging resource-intensive endeavor. These significant costs would only be compounded by the Commission's suggestion that funds review the liquidity classifications of certain assets "up to daily, or even hourly, depending on the facts and circumstances." *Id.* at 62303.

54 *See* Proposing Release at 62312.

55 The Commission's proposed definition of "three-day liquid asset" presents many of the same concerns as the Proposed Classification Framework discussed above. *See supra* Section III. Our alternative definition, which would include cash and any asset that can be converted into cash in the ordinary course of business within three business days in a manner that is consistent with the interests of the fund and its shareholders, would avoid many of these concerns.

56 *See* Proposing Release at 62347.

related to swing pricing,[57] we generally support the inclusion of information regarding the tools funds use to manage liquidity. Therefore, we support the disclosure of information relating to interfund lending and borrowing on proposed Form N-CEN. We believe that it is beneficial to disclose information about whether a fund engaged in interfund lending or borrowing, the average amount of the interfund loan when the loan was outstanding, and the number of days the interfund loan was outstanding during the reporting period.

e. Compliance Dates

The Commission proposes a two-tiered set of compliance dates based on asset size with generally shorter compliance periods for larger entities.[58] This division is based on an assumption by the Commission that a shorter 18-month compliance period for larger entities would be adequate, while asserting that smaller entities would benefit from the extra time of a 30-month compliance period.[59] We disagree and believe that all funds will need a 30-month compliance period in order to implement any final rules. We, therefore, strongly advocate that the Commission avoid a two-tiered set of compliance dates based on asset size.

A 30-month compliance period will allow for the extensive systems enhancements that would be necessary in order to establish and implement a written liquidity risk management program with ongoing monitoring, as well as to make the necessary disclosures required by proposed Forms N-PORT[60] and N-CEN. We believe that this compliance period extension for Form N-PORT is particularly important with the introduction of the proposed amendments that involve disclosure of liquidity classifications and three-day liquid asset minimums. The Commission should also extend the 6-month compliance period for all entities to implement Form N-1A amendments from 6 months to 30 months to allow for information about redemptions and the incorporation of the components of the liquidity risk management into the disclosure documents at the same time that the liquidity risk management program proposal is being implemented.[61] In short, given the operational complexity of gathering, monitoring, and evaluating the information that will be disclosed, all entities regardless of size should have at least 30 months to implement the necessary changes.

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[57] We believe that certain operational hurdles in the industry currently make swing pricing impracticable and thus any implementation and related disclosure would be premature. *See supra* Section IV.b.

[58] The Commission defines larger entities as 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. *See* Proposing Release at 62348-49 (citing rule 0-10 under the ICA).

[59] *See id*.

[60] We have previously advocated the extension of the compliance period of proposed Form N-PORT from 18 months to 30 months. *See* Vanguard Letter to the Commission re: Investment Company Reporting Modernization and Amendments to Form ADV and Investment Advisers Act Rules – File Nos. S7-08-15, S7-09-15, 1-2 (Aug. 11, 2015).

[61] Additionally, while we believe that the Commission should delay the adoption of the proposed amendments to rule 22c-1 that would permit the use of swing pricing by certain open-end funds, if the Commission decides to adopt the proposed amendments we strongly urge the Commission to delay the effectiveness of the amendments for 30 months to provide funds with the opportunity to develop the necessary systems to ensure swing pricing is done accurately and reliably.

We appreciate the opportunity to comment on the Commission's proposals. If you have any questions about Vanguard's comments or would like any additional information, please contact Laura Merianos, Principal, at [redacted], or Tara Buckley, Senior Counsel, at ([redacted].

Sincerely,

/s/ Mortimer J. Buckley

Mortimer J. Buckley
Chief Investment Officer
Vanguard

cc: The Honorable Mary Jo White, Chair
The Honorable Kara M. Stein, Commissioner
The Honorable Michael S. Piwowar, Commissioner
David Grim, Director, Division of Investment Management

Appendix A: Overview of Vanguard's Liquidity Risk Management Practices

Vanguard carefully considers liquidity risk in managing portfolios and employs a variety of liquidity risk management practices offering multiple layers of protection. This process is flexible and takes into account changing market liquidity conditions and the unique circumstances of each Vanguard fund. In assessing liquidity risk, we evaluate a number of factors including:

- **The construction of the portfolio**. We assess the portion of the portfolio invested in securities that are likely to remain highly liquid even in times of market stress. In bond markets this would typically be cash, U.S. Treasuries and similar high quality cash equivalents, and highly rated investment-grade sovereign bonds and supranational issuers such as the World Bank. Our experience is that broadly diversified, investment-grade bond markets remain liquid under stress, but may have increased transaction costs. In equity markets, we generally find that exchange-traded equities remain liquid, and that equity index futures and ADRs provide additional liquidity. Additionally, Vanguard funds may hold a minimal position in derivatives for purposes of efficient portfolio management, providing economic exposure to an asset or asset category. Derivatives exposure and potential collateral needs are incorporated into the holdings analysis for purposes of assessing liquidity risk. For example, Vanguard uses equity futures to track a fund's index even more tightly and overcome marginal frictions due to cash balances or dividends that have not yet been received, but are forecasted to be reinvested under the fund's index methodology.

- **The liquidity of the underlying market**. Individual securities can demonstrate great variation in statistics, such as trading volume, through time. The market of an asset class as a whole is a much more effective and consistent indicator of liquidity. The liquidity of a market, or specific market segment, is assessed using various metrics and factors such as market depth, the quality and breadth of diversification of the market, as well as its completeness. In fixed income markets, many securities with similar features within a given market segment are highly substitutable for one another, making a top-down assessment of market liquidity a more reliable indicator of the liquidity of that market segment. We also obtain and assess qualitative information provided by the dealer community regarding current and anticipated market liquidity conditions, in addition to monitoring the release of key economic indicators, discussions and decisions by central bank regulators, and activity in the new issuance market. We utilize all of this information to develop an assessment of the liquidity of the market of an asset class as a whole. The substitutability of assets generally results in numerous asset sale combinations that could be executed in response to shareholder redemptions while still maintaining a fund's liquidity risk profile.

- **Historical levels of peak redemption under market stress**. We use historical cash flow data for each Vanguard fund, as well as comparable funds within the industry, to examine redemption activity under times of stress. Redemption activity during historical market events such as the Taper Tantrum, global financial crisis, and the U.S. bond bear market of 1987 is assessed in the context of current portfolio construction, market liquidity, and composition of the fund's investor base. The worst three-month period of negative cash flow over the past 20 years for a given fund category serves as a typical baseline. While there is no guarantee that redemption levels will not increase at some time in the future, we develop a starting point for stress testing a portfolio by considering this data. In considering time frames for measuring prior stressed redemption periods, we generally apply more conservative periods for bonds, where liquidity is historically lower. We have over 25 years of data that is used for additional relevant historical perspective.

- **Composition of the fund's investor base**. As discussed above, shareholders and their asset allocation decisions drive asset flows. Ownership of Vanguard funds tends to be very well diversified across many different investors and types of investors. It is possible that a fund may have a higher concentration among a few large investors, which would necessitate a more detailed assessment of liquidity risk. In practice, as funds grow, their client base becomes more diversified and the volatility of their cash flow declines.[1]

Additionally, we factor into our liquidity risk assessment the percentage of a fund's assets held in shares of exchange-traded funds ("ETF"). Our ETF structure is unique, in that Vanguard's funds have ETF and conventional share classes of the same fund. Most of our ETFs redeem in kind, and are not required to convert securities to cash through sales in order to meet redemptions. This flexibility results in funds with a greater percentage of assets held in ETF shares having a lower liquidity risk assessment.[2]

Based on this comprehensive analysis, a liquidity management approach is established for each fund and its portfolio is constructed and managed to align with this approach (also referred to as a fund's "Liquidity Risk Profile"). The approach can be further tailored to address changing market conditions.

In managing shareholder redemption requests, a number of tools are available that allow requests to be fulfilled, while preserving portfolio liquidity consistent with a fund's Liquidity Risk Profile. We monitor shareholder transaction activity on a real-time basis throughout the day, providing a fund's portfolio manager advance notice of the need to purchase or sell securities on the current trading day.

As a first line of defense, redemptions are offset with other positive cash flows. When this is not an option, our objective is to maintain a fund's risk exposure by selling a cross section of the fund's holdings to meet redemptions, while also factoring in trading costs. We work with larger clients to implement their redemptions in a manner that is least disruptive to the portfolio. The client might choose to redeem over a period of days or redeem in-kind with a cross section of the fund's holdings. Many larger clients prefer in-kind redemptions because this approach can minimize their own costs, as well as, reducing or eliminating the trading cost impact to the Vanguard fund. Where appropriate, we assess redemption fees to ensure that those investors transacting bear the cost.[3]

Additionally, there are certain tools that we may look to in the event of stressed market conditions. In unusual circumstances, we can advance the settlement of market trades with counterparties to match investor redemption payments (T+1 trade settlement), or delay settlement of an investor's transaction to match trade settlement within regulatory requirements. We may also suspend payment of redemption proceeds for up to seven days consistent with the Investment Company Act of 1940 ("ICA").[4]

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[1] *See* Vanguard Letter to the Securities and Exchange Commission re: Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release – File Nos. S7-16-15, S7-08-15 (Jan. 6, 2016) (the "Vanguard Comment Letter").

[2] *See* Vanguard Comment Letter at n.46.

[3] Furthermore, certain funds have frequent trading policies to discourage high levels of abusive trading of fund shares by clients.

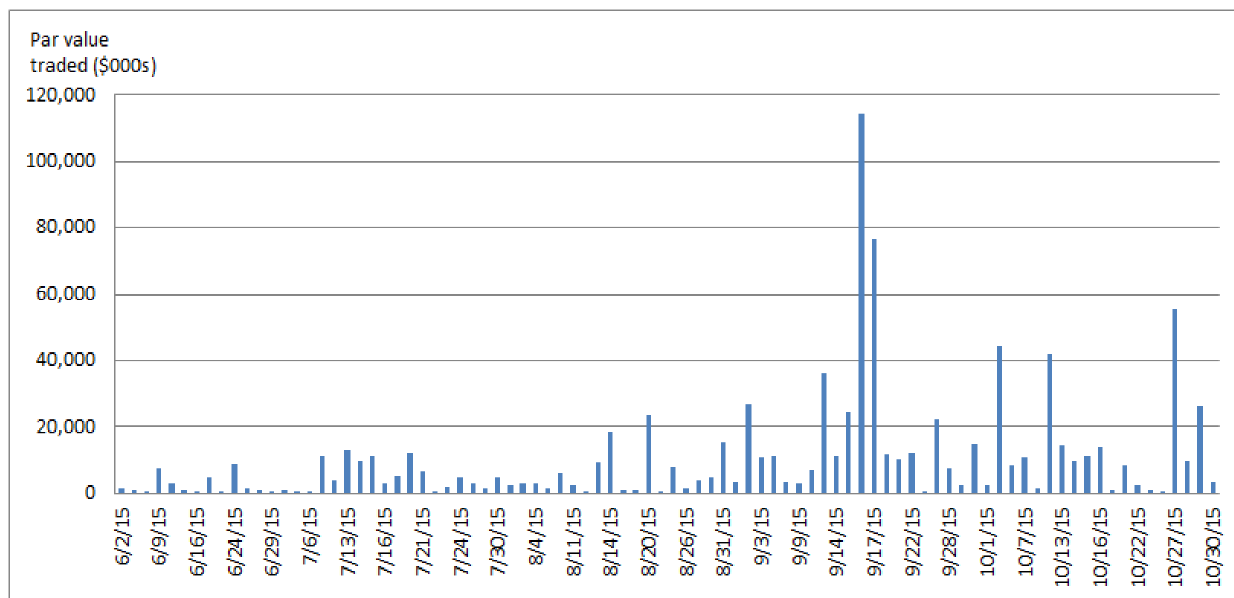
[4] Section 22(e) of the ICA. Additionally, for any period during which an emergency exists, the Commission may grant a mutual fund the authority to suspend redemptions entirely, or suspend payment of redemptions for more than seven days. *See* Section 22(e) of the ICA which defines emergency as a period when: (i) disposal of securities is not reasonably practicable; or (ii) it is not reasonably practicable for mutual funds to determine the value of their net assets.

Furthermore, as a prudent measure, we have secured an interfund lending exemptive order from the Commission to enhance our liquidity risk management options. Finally, we also maintain a committed line of credit with a syndicated group of banks.

A portfolio-based, top-down approach that takes into consideration a multi-dimensional assessment of liquidity risk as well as the various tools available to fund managers in fulfilling shareholder redemption requests has proven to be an effective approach to managing liquidity risk.

Appendix B- Proposed Classification Framework:

Figure 1: Low reported trade volume is not an indication that a bond cannot be traded



Asset level data can yield misleading and confusing measures of liquidity risk, particularly for fixed-income securities. Figure 1 depicts the daily trading volume of a generally liquid U.S. investment-grade bond from June 1, 2015 and August 28, 2015.[1] Over this 13 week period, an average estimated $4.5 million par value was traded on a daily basis. Considering the frequency of trades and daily trading volume for this asset as required by the Proposed Classification Framework results in a conclusion that this asset's liquidity is relatively low during the first few weeks of this period.[2] However, the average estimated daily trade volume, nearly quadrupled to approximately $17.3 million over the subsequent 9 weeks (August 31, 2015 – October 30, 2015). We believe this data shows that trade volume statistics may provide a misleading measure of the liquidity that exists for a particular asset.

Figure 2 illustrates that this same phenomenon occurs in the municipal bond market. Between December 2010 and January 2011, municipal bond markets returned –2.5% with significant volatility[3] and investors redeemed $25.7 billion from municipal bond funds during that time.[4] These redemptions represented 5.4% of municipal bond fund assets. Our analysis of the trading volumes for more widely held municipal bonds prior to December 2010 would have indicated little-to-no liquidity in these assets; however, liquidity emerged when investors sought to sell bonds. The figure below examines the trading volume of one of the municipal bonds held by Vanguard High-Yield Tax-Exempt Fund in December

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1 AB InBev Worldwide. $3 billion face value outstanding. Source: TRACE.

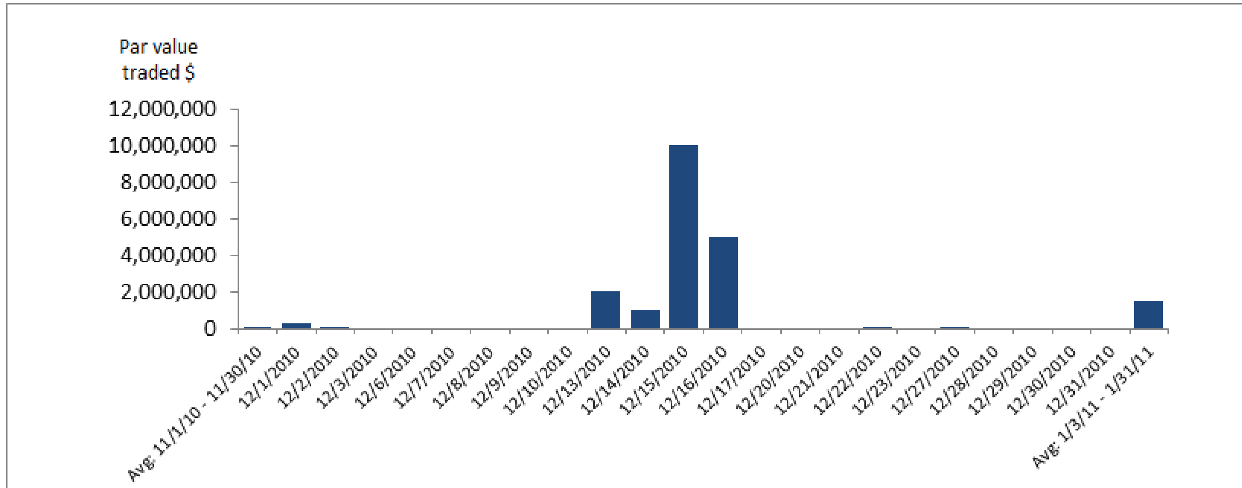
2 *See* Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release, Investment Company Act Rel. No. 31835, 80 Fed. Reg. 62274, 62298 (proposed Oct. 15, 2015) (the "Proposing Release") ("[h]igh average trading volume also tends to be correlated with greater liquidity.").

3 Source: Barclays Municipal Bond Index.

4 Source: ICI.

2010.[5] Reported trading volume in the market was negligible for this bond prior to December 13, 2010. Applying the liquidity factors proposed by the Commission, this bond may have been classified as relatively less liquid than other assets with higher trading volumes.[6] We found, however, that liquidity emerged when investors sold this bond over the period from December 13 to 16, 2010.

Figure 2: Liquidity emerges when it is needed, despite misleading trade volume statistics



5 Tallahassee Health. Source: MSRB.

6 *See* Proposing Release at 62385 (proposing rule 22e-4(b)(2)(ii)).

Figure 3: Weekly trade activity reported by TRACE significantly understates the amount of liquidity in the U.S. corporate bond market by capping large trade data[7]

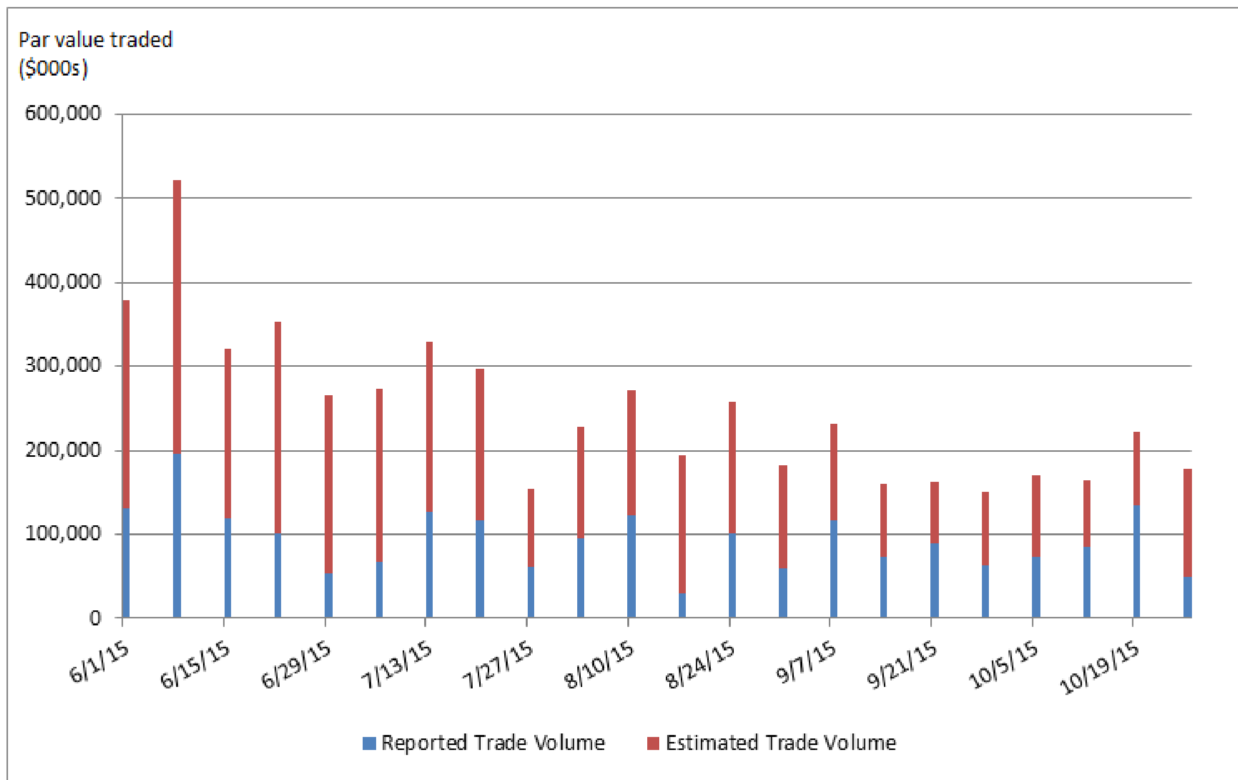


Figure 3 summarizes our analysis of the trade volume data for 17 U.S. investment-grade bonds.[8] In TRACE, a trade greater than $5 million is categorized in a single $5 million+ category. This categorization leads to an underestimation of trade volume until actual large trade data is available.[9] Based on estimates provided by Bloomberg, we calculated that the daily trade volume for an asset may be 2.2x the volume reported by TRACE. We are concerned that the data available regarding current (or near term future) liquidity conditions for a particular asset is significantly limited and therefore would distort an asset's liquidity classification under the Commission's proposal.

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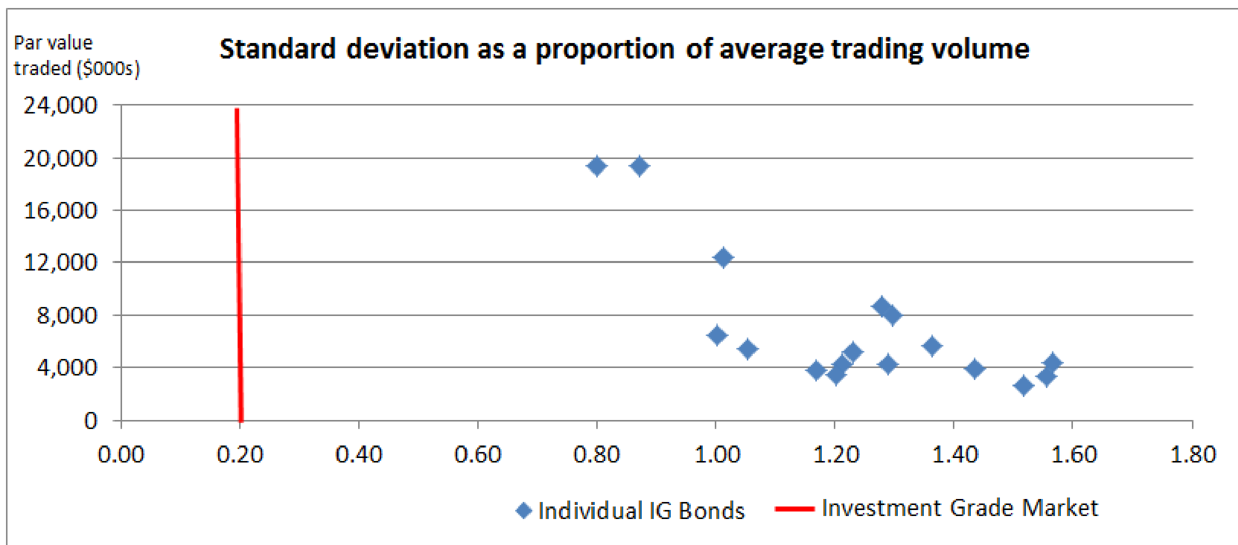
7 FINRA/TRACE does not provide actual trade sizes and volumes for capped trades. Bloomberg calculates an estimated trade volume for capped trades as follows: estimates are based on historical averages for TRACE trades. FINRA provides end of day total trade numbers in aggregate that include the actual trade values of uncapped trades. Subtracting out the non-capped trades from the total aggregate trade volume gives the actual trade volume of the capped trades for the day. Dividing the day's actual trade volume of capped trades by the number of capped trades for the day gives the average capped trade. This results in an estimated volume for the average capped trades of investment-grade bonds of $11,425,000.

8 We sampled the data available for 17 U.S. investment-grade bonds selected based on the following criteria: issued greater than one year ago; greater than $1 billion in deal size; Barclays Trade Efficiency Score of 1, 2, or 3, where 1 is most liquid and 10 is least liquid; sample across different names, sectors, and maturities. Source: TRACE.

9 This information is available from TRACE on an 18-month delay for a $25,000 annual fee.

Figure 4: Market-level trading volume is a more reliable indicator of liquidity than the trading volume of individual bonds



The high variability of individual bond trading volume demonstrates the challenge in using asset level trade volume data to predict the liquidity of a bond with a high degree of precision. Figure 4 shows the average reported daily trading volume of each bond included in the sample over the five-month period (June - October 2015) was $7 million (ranging from $2.6 million to $19.4 million). For the bonds shown in Figure 4, the average standard deviation as a proportion of the average daily trading volume was 1.23. During the five month period, the average daily trading volume of the U.S. investment-grade bond market was $13.6 billion; while the standard deviation as a proportion of market trading volume was 0.20.[10] For the individual bonds included in Figure 4, the par value traded varied by 1.23x each bond's mean, while the same daily variance was only 0.2x for the investment-grade market as a whole. Many fixed-income bond fund strategies seek to emulate the performance of the bond market. For these funds in particular, market level data is not only a more stable measure, but is also more relevant than asset level data given their broad diversification and the substitutability of bonds within their portfolios.

Figure 4 Explanatory Notes:

- Individual bond data points represent the standard deviation in daily trading volume of the bond divided by the average daily trading volume of the bond. The trading volume data for individual bonds was normalized for comparison with the larger investment-grade market trading volume.

- The solid line represents the standard deviation in daily trading volume of the investment-grade market divided by the average daily trading volume of the investment-grade market. Daily volume was not shown due to the difference in scale.

- The vertical axis measures the average daily par value traded of the individual bonds over the sample period.

[10] Source: TRACE.