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21 September 2016

Secretariat of the Financial Stability Board  
c/o Bank for International Settlements  
CH-4002  
Basel  
Switzerland

**Re: Consultation Document — Public Consultation Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities**

Dear Sirs/Madams,

Vanguard<sup>1</sup> appreciates this opportunity to comment on the proposed policy recommendations (“Policy Recommendations”) set forth in the consultative document (“Consultation”)<sup>2</sup> published by the Financial Stability Board (“FSB”).<sup>3</sup> Vanguard is an SEC-registered investment adviser to more than 190 U.S. mutual funds registered under the Investment Company Act of 1940 (“ICA”). Vanguard, through its wholly owned affiliated investment advisers, also operates in Europe, Asia, Australia, and Canada, where it provides investment advisory services to more than 160 mutual funds, and together with its US mutual funds manages approximately \$3.6 USD trillion in aggregate assets.<sup>4</sup> It is in this role, as an adviser/manager to comprehensively regulated investment funds that we respond to this Consultation.

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<sup>1</sup> The Vanguard Group, Inc. (“Vanguard”) began operations in the U.S. in 1975, is headquartered in Valley Forge, Pennsylvania, U.S., and is registered with the U.S. Securities and Exchange Commission (“SEC”) under the Investment Advisers Act of 1940 (“IAA”).

<sup>2</sup> FSB, Consultative Document – *Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities*, June 22, 2016, available at <http://www.fsb.org/wp-content/uploads/FSB-Asset-Management-Consultative-Document.pdf>.

<sup>3</sup> As reflected in our prior comment letters to related FSB consultations as well as with our local regulators, we strongly believe that the public comment process provides regulators with important insights and considerations to improve policy proposals as important and complex as the one before us. See Vanguard Comment Letter to FSB re: Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions, April 7, 2014, (“Vanguard 2014 FSB 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, May 29, 2015, (“Vanguard 2015 FSB Comment Letter”); Vanguard Letter to the Financial Stability Oversight Council (“FSOC”) re: Notice Seeking Comment on Asset Management Products and Activities (FSOC – 2014-0001), March 25, 2015, (“Vanguard 2015 FSOC Comment Letter”); Vanguard Letter to the SEC regarding 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, January 6, 2016, (“Vanguard SEC Liquidity Risk Management Letter”); Vanguard Letter to the SEC regarding Use of Derivatives by Registered Investment Companies and Business Development Companies – File No. S7-24-15, March 28, 2016, (“Vanguard SEC Use of Derivatives Letter”); and Vanguard Letter to the SEC regarding Adviser Business Continuity and Transition Plans – File No. S7-13-16, September 6, 2016, (“Vanguard SEC Business Continuity Letter”).

<sup>4</sup> As of July 31, 2016, Vanguard’s wholly owned affiliated entities that offer funds globally include Vanguard Asset Management, Ltd. (principal regulator – Financial Conduct Authority), Vanguard Investments Canada (principal regulator – Ontario Securities Commission), Vanguard Investments Australia, Ltd. (principal regulator – Australian Securities and Investment Commission), and Vanguard Investments Hong Kong Limited (principal regulator – Hong Kong Securities and Futures Commission).

Vanguard supports the evolution of the FSB's efforts to coordinate with the International Organization of Securities Commissions ("IOSCO") to focus on activities and gather data globally in order to ensure that appropriate checks and balances are in place to oversee the asset management industry. An activities-based approach to identifying systemic risk will ensure that all participants will be subject to the same rules, regardless of a more arbitrary metric, such as size. We believe systemic risk designations based on fund or firm size would harm capital markets and retail investors, whereas a transparent focus on investment-related activities can help foster more constructive outcomes.

Vanguard, however, does not agree with the FSB's claims that the asset management industry has structural vulnerabilities that could present systemic risk. As discussed in detail in prior comment letters, existing comprehensive regulatory regimes effectively mitigate risks posed by funds.<sup>5</sup> Despite the existence of this comprehensive regulatory regime, Vanguard fully supports the FSB's recommendations that seek to improve transparency to both regulators and investors in order to advance oversight of the industry. Additionally, we generally support the FSB's Policy Recommendations that promote best practices within the asset management industry, so long as each final recommended policy is proportionate and tailored to the risk it seeks to address and strikes an appropriate cost benefit balance.

### ***Executive Summary***

We appreciate the FSB's acknowledgement of existing safeguards within the open-end fund and asset management industry, as well as the deference to securities regulators as the appropriate body to oversee further guidance and regulation.<sup>6</sup> We further appreciate the FSB's efforts with respect to these Policy Recommendations, and in the spirit of continuous improvement, we offer up the following thoughts and recommendations:

- **Funds are not susceptible to the banking phenomenon of first mover advantage.** There is little to no empirical evidence supporting the assertion by the FSB and other regulators of a first mover advantage in mutual funds that could lead to systemic risk. First mover advantage is a banking industry phenomenon resulting from leverage, mismatch of asset and liability duration, and book value accounting. We believe that policies based on these flawed assumptions may lead to regulations that are unwarranted and impair capital formation rather than safeguard markets.
- **Liquidity risk is most appropriately monitored and mitigated through disclosure and data transparency.** The liquidity characteristics of a fund's portfolio should be viewed holistically, utilizing a top-down portfolio-based approach. Regulators would benefit from gathering more detailed data regarding fund liquidity, and investors could benefit from fulsome disclosure of liquidity risk management practices, where appropriate. Managers should continue to maintain discretion in assessing appropriate liquidity management measures.
- **Operational market vulnerabilities are only effectively regulated through oversight of core utilities.** In order for operational risk to become systemic, it would have to occur in a way that would cause it to spread across many firms. This risk applies to central utilities such as exchanges, clearing houses, and custodian banks. Operational risks related to individual asset

<sup>5</sup> Vanguard 2014 FSB Comment Letter p. 4-10; Vanguard 2015 FSB Comment Letter p. 6-7. See also Vanguard 2015 FSOC Comment Letter p. 5-7.

<sup>6</sup> Vanguard appreciates the FSB's efforts to engage in a dialogue in order to promote best practices across the asset management industry. At the same time, we note that in line with the FSB's mandate, jurisdictional and regulatory authority in this space rests with the relevant authorities. Those authorities must comply with their own administrative and procedural requirements, including consideration of comments by local constituents, if they elect to consider further rulemaking.

management firms are idiosyncratic in nature and unlikely to be transmitted from one firm to another.

- **While Vanguard does not indemnify its securities lending program, asset managers' indemnifications do not pose a systemic risk to the financial system.** Asset managers do not provide securities lending services on a stand-alone basis to outside clients or other financial institutions. Therefore, the concern that agent lending activity will migrate away from banks is unfounded and the FSB is perceiving a risk to the financial system where none exists.
- **The use of derivatives by regulated funds (such as funds managed by Vanguard) is a fundamental component of prudent portfolio management that provides significant benefits to investors in terms of risk mitigation, lower costs and greater liquidity. Ongoing global regulatory reforms of the derivatives market have contributed to a more stable, transparent, and open market to mitigate against potential systemic risk.** Given the many benefits of derivatives usage, it is critical that regulators consider policies on a fully-informed basis to avoid inadvertent damage to investor interests. For that reason, we support the FSB's proposal that IOSCO study derivatives-related leverage, consider the merit of developing an appropriate definition recognizing market and regulatory drivers on a jurisdiction by jurisdiction basis, and assess if further rulemaking would be beneficial while preserving the benefits of derivatives usage.

## I. **Funds are not Susceptible to the Banking Phenomenon of First Mover Advantage**

Prior to providing our detailed responses to the Policy Recommendations, we would like to repeat our concerns regarding the overreliance on theoretical academic models that purport to demonstrate a first mover advantage within bond and equity funds.<sup>7</sup> We continue to be disappointed that systemic risk concerns are based on an insufficient empirical record and that asset management is viewed through a prudential banking lens. We believe that policies based on these flawed assumptions are likely to lead to regulations that are unwarranted and impair capital formation rather than safeguard markets.

The academic studies cited by the FSB incorporate unfounded assumptions about fund investor behavior and aggressive assertions regarding the impact of fund transactions that do not align with reality.<sup>8</sup> First mover advantage is a banking industry phenomenon resulting from leverage, mismatch of assets and liability duration, and book value accounting. Comparatively, comprehensively regulated investment funds are valued on a mark-to-market basis and are significantly less leveraged, if at all.<sup>9</sup>

In reality, fund investors do not react in unison to market stress and the perception of resulting negative fund returns.<sup>10</sup> As the models seek to prove out incentives for fund investors to sell, they ignore evidence that the same fund and market performance could also be an incentive for investors to buy.<sup>11</sup> If the asserted first mover incentives existed as proclaimed, then a reasonable assumption would be that

<sup>7</sup> See Vanguard 2015 FSOC Comment Letter p. 11-13 and Vanguard SEC Liquidity Risk Management Letter p. 6-7.

<sup>8</sup> We recognize that in Annex 3 of the Consultation, the FSB correctly concludes that the structure of exchange traded funds ("ETFs") does not inherently present these theoretical investor incentives.

<sup>9</sup> See Vanguard 2014 FSB Comment Letter p. 4-5 and Vanguard 2014 FSB Comment Letter p. 11-13 and 18-22.

<sup>10</sup> See ICI, "Matching Models to Reality: The Real-World Challenges to Regulators' "First-Mover" Hypothesis," Sean Collins, available at [https://www.ici.org/viewpoints/view\\_16\\_bond\\_fund\\_series\\_02](https://www.ici.org/viewpoints/view_16_bond_fund_series_02) (July 14, 2016).

<sup>11</sup> See ICI, "Matching Models to Reality: In a Falling Market, the Real "Movers" May Be...the Buyers," Brian Reid, available at [https://www.ici.org/viewpoints/view\\_16\\_bond\\_fund\\_series\\_03](https://www.ici.org/viewpoints/view_16_bond_fund_series_03) (July 15, 2016). See also Vanguard 2015 FSOC Comment Letter p. 4-5 and Vanguard SEC Liquidity Risk Management Letter p. 5-7.

“runs on funds” would be commonplace during distressed markets or with the announcement of negative news about a particular fund.<sup>12</sup> There is simply no empirical evidence that fund investor cash flows are driven by first mover advantage considerations. Rather than destabilizing markets, market data shows that funds and their investors historically have exerted a stabilizing force during periods of market stress.<sup>13</sup> Recent market events again have demonstrated that fund investors do not seek to run to redeem fund investments during distressed markets. Counter to the Bank of England’s articulated speculation that open-end funds would generate a high demand for liquidity in the markets after the United Kingdom’s European Union referendum vote, it found that “open-ended investment funds invested in UK equities, sterling corporate bonds and gilts have not, in aggregate, experienced material outflows.”<sup>14</sup>

We are concerned that the focus on theoretical and simplistic depictions of liquidity and fund structures contained within these academic assumptions of investor incentives will lead the FSB to recommend regulations that increase the cost of investing without a counterbalancing benefit, or request data that fails to provide realistic insights into financial stability risk.<sup>15</sup> Regulations targeted at preventing hypothetical situations impose real costs that decrease investor returns and the capital invested in the markets.<sup>16</sup>

We urge the FSB to reevaluate the Policy Recommendations based on the perceived existence of first mover advantage.<sup>17</sup> As stated in prior letters, the FSB’s and IOSCO’s objective must remain targeted on genuine systemic risk concerns. The goal should not be distracted by considerations of idiosyncratic risk, market price declines, and investment fund redemptions – these are a normal and acceptable function of basic capital markets. As authorities gather and assess more extensive data, not just related to funds, but broadly across markets, policymakers will be better positioned to identify key areas of systemic risk.

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<sup>12</sup> In December 2015, when the Third Avenue Focused Credit Fund announced a redemption suspension, despite the very unusual and serious actions taken by Third Avenue, coupled with existing stress in the high yield market at the time, redemptions from high yield bond mutual funds were modest and within historical ranges. As a category, U.S. high yield bond funds experienced -4.3% net cash flow as a proportion of AUM in December 2015 (Vanguard analysis of ICI data, available at <https://www.ici.org/portal/site/ICI/querytool>). Although Third Avenue was a recent example of a mutual fund suspending redemptions, we are aware of only five instances over the last 76 years in which U.S. mutual funds have suspended redemptions (Letter to Brent J. Fields, Secretary, SEC, from David W. Blass, General Counsel, ICI, dated Jan. 13, 2016, p. 46-47 and Appendix B (available at [https://www.ici.org/pdf/16\\_ici\\_sec\\_lrm\\_rule\\_comment.pdf](https://www.ici.org/pdf/16_ici_sec_lrm_rule_comment.pdf))).

<sup>13</sup> For example, in the same period, when Third Avenue announced suspension of redemptions, high yield bond ETFs provided additional liquidity to the high yield market, handling record trade volumes. The iShares iBoxx High Yield Corporate Bond ETF (“HYG”) experienced \$4.3 billion in trading volume on December 11 amid the volatility sparked by the Third Avenue fund closure. Only 13% of the total trading resulted in outflows (\$560 million), meaning that 87% of the trading did not involve selling the underlying bonds held by HYG (Vanguard calculations based on data from Bloomberg).

<sup>14</sup> See Bank of England, Financial Stability Report (July 2016) p. 22, available at <http://www.bankofengland.co.uk/publications/Documents/fsr/2016/fsrjul16.pdf> (“BOE Stability Report”).

<sup>15</sup> For example, Policy Recommendation 5 proposes that authorities make available tools that could have significant implementation costs, such as swing pricing in the U.S., without evidence of either a problem or a benefit. Furthermore, even when the Consultation cites an academic study based on empirical data, the FSB draws conclusions beyond the findings of the study. See Consultation footnote 30, p. 11, citing a Harvard University study for the conclusion that fund flows could cause a price impact. This broad statement ignores the study’s conclusion regarding its economic significance that “a fund faces relatively trivial ex ante expected costs from the possibility of being forced by fund outflows to sell holdings at discounted prices” (available at <http://www.people.hbs.edu/estafford/papers/afs.pdf>, p.509).

<sup>16</sup> See Mark N. Carhart, “On Persistence in Mutual Fund Performance” Journal of Finance, Vol. 51 Iss. 1, March 1997 concluding that expenses have at least a one-for-one negative impact on performance.

<sup>17</sup> To the extent there is residual concern that fund structures will evolve in a way that creates a first-mover advantage, we believe increased data collection by local regulators will enable regulators to take appropriate actions. We note that local regulators are already seeking to gather such data under existing or pending legislation beyond the banking sector. For example, legislation requires additional data from European alternative investment funds (under the Alternative Investment Fund Managers Directive or AIFMD), whilst pending regulation will require additional data from U.S. mutual funds (from a series of pending rule proposals promulgated by the SEC).

## **II. Liquidity Risk is Most Appropriately Monitored and Mitigated through Disclosure and Data Transparency**

With respect to the FSB’s Policy Recommendations related to fund liquidity, we appreciate that the FSB has recognized that liquidity risk management is a key area for both asset managers and authorities.<sup>18</sup> We support the FSB’s efforts to recommend policies that seek to enhance the provision of fund liquidity data and information to regulators and investors alike.<sup>19</sup> We further support recommendations to report to a fund’s board and the appropriate regulator when a fund has crossed a pre-determined illiquidity threshold.

- A. Collection of data accompanied by appropriate disclosures serves as the most effective regulatory tool to ensure prudent liquidity management by funds.

We commend the FSB’s efforts to issue Policy Recommendations that enhance regulators’ ability to collect fund liquidity data, as well as the FSB’s support of IOSCO’s coordination of data collection across the global asset management industry.<sup>20</sup> We caution the FSB, however, that market liquidity is subjective and hard to define.<sup>21</sup> Broad variation exists in defining liquidity or a liquid instrument even among regulators.<sup>22</sup> Yet in its 2016 Peer Review, the FSB solicited from member countries a simplistic liquidity transformation ratio.<sup>23</sup> Such data collection should not be reduced to a simplistic calculation, which will provide inconclusive and inaccurate results, but rather should take into account the nuances of liquidity risk management.

We are generally supportive of regulators’ efforts to analyze data submitted in existing fund filings as well as proposals to provide regulators with additional data.<sup>24</sup> We believe, however, that data reported to regulators should provide information regarding 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).<sup>25</sup> Data requests that solicit objective liquidity characteristics of fund portfolios would enable regulators to compare liquidity characteristics across funds and potentially jurisdictions. One approach that regulators could take is to solicit liquidity asset type

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<sup>18</sup> Consultation p. 11.

<sup>19</sup> Consultation Recommendations 1-2. We have also generally supported efforts by our local regulators to enhance such disclosures. For example, see Vanguard SEC Liquidity Risk Management Letter p. 16-19.

<sup>20</sup> Consultation p. 15.

<sup>21</sup> Unlike other financial risk measures that have standardized objective measures, such as leverage and interest rate sensitivity, no such standardized measures exist with respect to liquidity. See William C. Dudley, Regulation and Liquidity Prevention, Remarks at the SIFMA Liquidity Forum (Sept. 30, 2015), available at <https://www.newyorkfed.org/news/events/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,” December 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”).

<sup>22</sup> The diversity of definitions of standards summarized in the December 2015 IOSCO survey, which states in part that “[t]he range of responses spans from no formal definition at all to having quite granular specifications, including lists of asset classes considered to be ‘liquid’ in nature,” available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD517.pdf> (“IOSCO Liquidity Survey”).

<sup>23</sup> The FSB ignored the dynamic nature of liquidity in its 2016 Peer Review and requested that jurisdictions calculate a simplistic ratio that was inherently flawed, as it failed to recognize that redemptions are processed at a pro rata share of the fund’s market value rather than book value. See FSB, “Thematic Review on the Implementation of the FSB Policy Framework for Shadow Banking Entities” p. 18 (May 25, 2016), available at <http://www.fsb.org/wp-content/uploads/Shadow-banking-peer-review.pdf>. This request echoed the erroneous fund liquidity calculation proposed in the prior FSB consultation. FSB and IOSCO, Consultative Document (2nd) – *Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions*, March 4, 2015, p. 43, available at <http://www.financialstabilityboard.org/wp-content/uploads/2nd-Con-Doc-on-NBNI-G-SIFI-methodologies.pdf>.

<sup>24</sup> Vanguard Comment Letter to SEC re: Investment Company Reporting Modernization and Amendments to Form ADV and Investment Advisers Act Rules, August 11, 2015 (“Vanguard SEC Reporting Modernization Letter”); Vanguard SEC Liquidity Risk Management Letter; and Vanguard SEC Use of Derivatives Letter.

<sup>25</sup> See Vanguard SEC Liquidity Risk Management Letter detailing Vanguard’s approach to liquidity risk management.

classifications for fund portfolio holdings.<sup>26</sup> A regimented classification based on asset type liquidity characteristics provides regulators with consistent data that can be aggregated across the fund industry and minimize the subjective assessments embedded into the data. Objective data classifications also enable regulators to identify potential industry trends as well as outliers.

Any policy recommendation to request fund data should require authorities to maintain the confidentiality of any data that could lead to harmful front-running of fund transactions. As acknowledged by the FSB, fund investors would be harmed if holdings level data is publicized in a manner that could forecast fund trades or trading patterns to the market.<sup>27</sup> In addition, to the extent that regulators seek to share data globally, care should be taken to acknowledge differences in investor composition as well as market and fund structures that could impact comparability of the data.<sup>28</sup>

We also commend the FSB's focus on providing investors with liquidity risk disclosures proportionate to a fund's overall risk profile.<sup>29</sup> As a best practice, many jurisdictions require funds to clearly disclose principal risks as well as redemption policies in their offering documents.<sup>30</sup> We believe that any disclosure with respect to liquidity risk should be considered holistically in the context of this broader disclosure. It is important for investors to receive information regarding liquidity and redemption risks in the context of, and proportionate to, the collective risks of investing in a fund including the investment risks. Furthermore, it should be noted that certain jurisdictions currently require periodic reporting of objective fund information (for example, quarterly portfolio holdings reports) that provides investors with an additional opportunity to assess a fund's risk profile. Finally, fund liquidity risks should be characterized to investors in the context of overall market dynamics.<sup>31</sup>

We caution the FSB and IOSCO that investors will likely be confused by disclosure of standardized and speculative measures of liquidity risk.<sup>32</sup> Therefore, we agree with the FSB's suggestion that disclosure to investors should differ in both format and content from the detailed data provided to regulators for industry level analysis.<sup>33</sup>

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<sup>26</sup> See Supplemental Letter to Brent J. Fields, Secretary, SEC, from Timothy W. Cameron, Esq. and Lindsey Weber Keljo, Esq., dated April 12, 2016, Exhibit A (*available at* <https://www.sec.gov/comments/s7-16-15/s71615-120.pdf>). This letter proposed to the SEC that funds provide holdings data categorized into five liquidity categories. The proposed categorization would permit exceptions to be made for positions that have liquidity characteristics that a fund believes are different from those that are typical for the asset type.

<sup>27</sup> Consultation p. 15-16.

<sup>28</sup> We are encouraged by IOSCO's efforts to encourage sharing information regarding fund liquidity, particularly their initial step in surveying members in order to understand liquidity management tools. See IOSCO Liquidity Survey.

<sup>29</sup> We note that disclosure is not an appropriate mitigant in all situations. We agree with the FSB that certain fund strategies may not be appropriate for a retail fund structure and that redemption risks should be evaluated at fund inception and on an ongoing basis. *See* Consultation Recommendation 3, p. 37.

<sup>30</sup> See Vanguard 2014 FSB Comment Letter, Appendix, which summarizes U.S. and E.U. regulatory regimes. *See e.g.*, Form N-1A Items 4, 11, and 23 under the ICA.

<sup>31</sup> Although the Consultation expresses concern regarding the increase in fund assets in certain sectors, we note that recent FSB analysis recognizes the evolution changes in market liquidity in corporate and sovereign fixed income markets. The announcement states in part, "To date, there is limited evidence of a decrease in market liquidity conditions in normal times, but there is some evidence of less depth in some sovereign and corporate debt markets, raising questions about the resilience of those markets under stressed conditions. On balance the evidence to date is that the reforms have reduced the likelihood that a deterioration in market liquidity could result in wider financial stability problems. The FSB will continue to monitor and analyze market liquidity conditions." *See* FSB Press Release, "Meeting of the Financial Stability Board in Chengdu" (July 21, 2016), available at <http://www.fsb.org/wp-content/uploads/Chengdu-plenary-press-release.pdf>.

<sup>32</sup> See SEC Liquidity Risk Management Letter, p. 9-12 and 18, outlining the likelihood that differences in liquidity classifications due to subjective criteria would lead to misinterpretations by investors. See also Vanguard Letter to the SEC regarding Investment Company Advertising: Target Date Retirement Fund Names and Marketing Release Nos. 33-9126; IC-29301 – File No. S7-12-10 (January 6, 2015), available at <https://www.sec.gov/comments/s7-12-10/s71210-105.pdf> ("Vanguard SEC Target Date Retirement Letter") discussing the inappropriateness of mandating a particular measure of risk when risk is managed differently in different funds. p. 2.

<sup>33</sup> Consultation p. 15. *See also* Vanguard SEC Reporting Modernization Letter, p. 3 (Supporting the provision of raw data to the SEC that enable "apples-to-apples" comparisons). In contrast, see Vanguard SEC Liquidity Risk Management Letter p. 18 that holdings classifications would be confusing to investors.

By gathering data regarding fund liquidity risk management practices as well as information that reflects how liquidity is actually managed, regulators will be better positioned to identify funds that deviate from those safeguards and industry best practices. Additionally, we support requirements to report illiquidity concerns over a material threshold to a fund's board as well as the fund's local securities regulator. Such reporting would allow fund boards and/or the appropriate regulatory body to suspend redemptions or take other steps to protect investors.

Overall, we are supportive of efforts by local securities regulators to modernize and enhance fund requirements, particularly, with respect to data collection and disclosure of liquidity risk management practices as the most robust way to ensure that funds do not create residual financial stability risks.<sup>34</sup>

**B. Managers should continue to maintain discretion in assessing appropriate liquidity management measures.**

For decades, the asset management industry has effectively managed liquidity risk utilizing a top-down portfolio-based approach.<sup>35</sup> We agree with the FSB's explanation of the Policy Recommendations that the goal of a successful liquidity risk management program should be to enable a fund to satisfy redemption requests in normal market conditions, as well as stressed market conditions that can be reasonably foreseen, in a manner that is consistent with the interests of the fund and its shareholders.<sup>36</sup> At Vanguard, we carefully consider liquidity risk in both portfolio construction and daily fund management.<sup>37</sup> We appreciate that the FSB seeks to promote clear decision-making processes with respect to the use of extraordinary liquidity risk management practices.<sup>38</sup> However, we would not support Policy Recommendations that direct managers to use specific tools.<sup>39</sup> Prescribing tools encourages herding in fund portfolios and trading, which could amplify market stress. We believe managers should continue to maintain discretion in assessing appropriate liquidity management measures.

In our own experience managing funds, flexibility to account for the dynamic nature of liquidity is critical to successful liquidity risk management. Vanguard carefully considers liquidity risk in managing portfolios and employs a variety of liquidity risk management practices that offer multiple layers of protection. This process is flexible and takes into account the unique circumstances of each individual Vanguard fund as well as changing market liquidity conditions. This dynamic evaluation assesses a multitude of factors including, but not limited to: 1) the construction of a portfolio; 2) liquidity of the underlying market; 3) historical levels of peak redemptions during periods of stress; and 4) composition of the fund's investor base.<sup>40</sup> Such 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 fulfil shareholder redemption requests, has proven to be a very effective approach to managing liquidity risk.

Liquidity risk management decisions are made on a fund by fund basis and cannot be effectively made without real-time information. For example, the substitutability of assets generally results in

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<sup>34</sup> Vanguard SEC Liquidity Risk Management Letter p. 18-19.

<sup>35</sup> Vanguard SEC Liquidity Risk Management Letter, Appendix A.

<sup>36</sup> See Consultation Recommendation 4, p. 16 and 37.

<sup>37</sup> Vanguard SEC Liquidity Risk Management Letter, Appendix A.

<sup>38</sup> As the FSB acknowledges, a range of extraordinary liquidity risk management tools are available around the globe. See Consultation p. 19. See also <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD517.pdf> (p. 10-11) ("IOSCO Liquidity Survey").

<sup>39</sup> See Consultation Recommendations 7 and 8, respectively.

<sup>40</sup> The one factor we do not consider in assessing a fund's liquidity risk is size. Footnote 34 in the Consultation hints that the size of a fund's position is a required factor in assessing liquidity. This blanket statement ignores empirical evidence in the study conducted by the SEC's Division of Economic and Risk Analysis (the "DERA Study"), which showed that larger funds with exposure to the small-capitalization equity market were relatively more liquid than smaller funds (See DERA Study p. 30).

numerous asset sale combinations that could be executed in response to shareholder redemptions while still maintaining a fund's liquidity risk profile. Additionally, we factor into our liquidity risk assessment the percentage of a fund's assets held in shares of exchange-traded funds ("ETFs"). Our U.S. fund ETF structure is unique in that Vanguard's U.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.<sup>41</sup> The result of this flexibility is that funds with a greater percentage of assets held in ETF shares have a lower liquidity risk assessment. We also monitor shareholder transaction activity on a real-time basis throughout the day with the goal of providing a fund's portfolio manager advance notice of the need to purchase or sell securities on the current trading day. For example, target date mutual funds create countercyclical investment flows that are beneficial to markets from a systemic risk perspective.<sup>42</sup> 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.<sup>43</sup> A bottom-up or asset-level fund analysis screens out these macro inputs and is ineffective at depicting liquidity.

We value the FSB's recognition that stress testing is an important tool as part of a dynamic fund liquidity risk assessment program. Our own liquidity risk management program includes the use of stress testing to monitor the resilience of our funds in various market conditions. We do not agree with Policy Recommendation 6, however, that authorities should require stress tests and provide guidance on how they should be conducted. Further, we strenuously question the value of broader "system-wide" testing as proposed in Policy Recommendation 9.<sup>44</sup> Given the multi-dimensional nature of liquidity risk assessment, the wide variety of funds and asset types, and the differences across liquidity risk management approaches, such guidance would suffer from "one size fits all" flaws that would make it difficult to interpret the results. In addition, the suggestion that results would be reported to regulators implies some sort of "pass/fail" assessment that would be similarly flawed. Unlike a leveraged bank, where capital will fall below acceptable levels given a certain loss, fund investors' returns fluctuate with market values. There is no failure point. Rather liquidity is obtained along a cost continuum. Furthermore, the concept of "system-wide" testing is fundamentally flawed, as asset management is only one segment of the buy side.<sup>45</sup> Attempts to create a broad test for funds, in practice, would introduce rigid assumptions that render

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<sup>41</sup> In a recent study, we found that the majority of ETF trading volume is conducted on the secondary market. We analyzed trading for the ten largest equity ETFs and bond ETFs by assets and found a median of 94% and 83% of the trading volume occurred in the secondary market for equity and bond ETFs, respectively. Vanguard calculations, based on daily data from Bloomberg Inc. from July 1, 2012, through June 30, 2015.

<sup>42</sup> 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.

<sup>43</sup> Vanguard 2015 FSOC Comment Letter p. 8-10; Vanguard 2015 FSB Comment Letter p. 11-12.

<sup>44</sup> Funds are ultimately owned by tens of millions of individual investors, each with their own time horizons, risk preferences, and investment goals. It is unclear what value system-wide stress tests could provide to model investor behavior or to project independent fund reactions to market events.

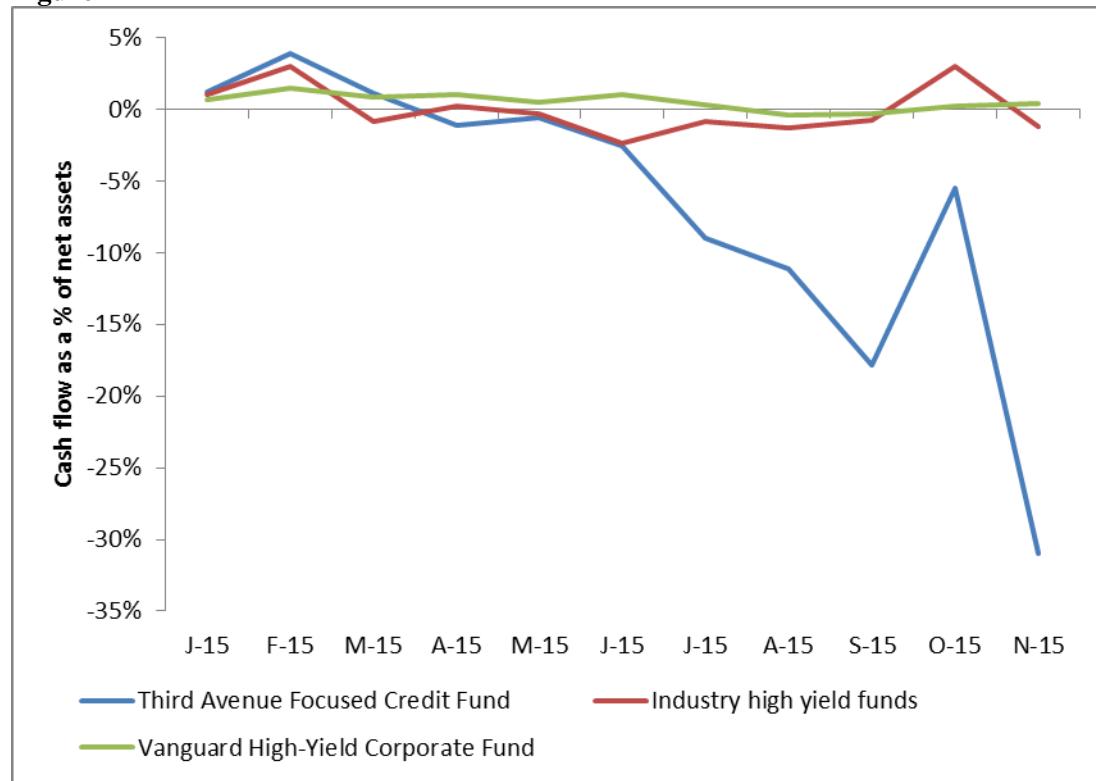
<sup>45</sup> Mutual funds own only a modest share of the assets in the global equity and fixed income markets. Vanguard 2015 FSOC Comment Letter p. 4. Additionally, prudential regulators have erred in their recent assessments the role of funds within the bond market. See, e.g., Revised Fed Data Show Mutual Funds' Share of Corporate Bond Market is Small and Stable (Aug. 26, 2016), available at [https://www.ici.org/viewpoints/view\\_16\\_corporate\\_bond\\_share](https://www.ici.org/viewpoints/view_16_corporate_bond_share) ("[t]he Fed's latest data revision shows both that bond mutual funds are a minor player in the corporate bond market—bond mutual funds' share of the market rose from 9 percent in 2009 to 15 percent in 2015—and that their share has been basically flat since 2012" and "[t]he Fed revised down mutual funds' holdings of corporate and foreign bonds in the Flow of Funds Accounts over the period of 1991 to 2015, with the largest revisions occurring in the past five years. For example, for year-end 2015, mutual fund holdings of corporate and foreign bonds were revised down by \$855 billion, from \$2.6 trillion (the figure published in March 2016) to \$1.7 trillion (the figure published in June 2016). The Fed's improved approach brings the Flow of Funds figures in line with the actual market value of the bonds that investment funds hold").

the results meaningless. We believe that stress testing should be left to individual firms to tailor to their needs.

Managing portfolios in order to preserve the ability to satisfy investor redemption requests is a fundamental fiduciary duty of fund managers.<sup>46</sup> Funds have varied sets of investment strategies, holdings compositions, and investor profiles that warrant flexibility in managing portfolio liquidity risk. As illustrated by Figure 1 below, during a given market event, similar types of funds may actually be experiencing very different types of cash flows. We caution that any guidance provided to the industry on the use of extraordinary liquidity risk management tools should acknowledge that: 1) funds with similar mandates will likely have different liquidity needs in normal and stressed markets; and 2) fund managers have the real-time information to evaluate what liquidity risk management tools are in the best interests of fund investors. That said, as stated above, we agree with setting metrics over which regulators and the fund's board are notified when a fund's illiquid holdings reach a certain material threshold.

**Figure 1** shows cash flow as a percentage of net assets in the Third Avenue Focused Credit Fund compared to flows of industry high-yield funds. The Third Avenue Focused Credit Fund lost over 30% of assets in November 2015, while industry high-yield funds only lost 1.2% of assets during the same time. The Vanguard High-Yield Corporate Fund actually saw net inflows during this period.

**Figure 1**



We caution the FSB that while Policy Recommendations 7-8 seek to provide guidance regarding liquidity risk management tools, they should stop short of requiring the use of specific tools. During a

<sup>46</sup> See <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD517.pdf> (p. 9).

period of market stress, a prescriptive requirement would prevent a fund from performing its fiduciary obligation of acting in the best interest of all investors. Additionally, mandating additional tools such as a cash buffer and/or gates will likely harm fund investors and markets by locking up capital in concentrated assets, while also unnecessarily impairing performance for fund investors through “cash-drag.”

We believe, if appropriately implemented, Policy Recommendations that encourage improved fund liquidity data and disclosure could enable regulators to identify liquidity risk management activities as well as specific funds within the asset management industry that deviate from regulatory safeguards and industry best practices. While fund liquidity risk management practices have not resulted in systemic risk, we believe that greater transparency and reinforcement of industry best practices on a global scale will only serve to further strengthen fund resiliency and prevent residual risk.

### **III. Operational Market Vulnerabilities are Only Effectively Regulated through Oversight of Core Utilities**

We appreciate that the FSB has recognized several of the existing mitigants to address operational risk, including those articulated in our prior comment letters.<sup>47</sup> However, we are troubled that the FSB has drawn inaccurate conclusions regarding the residual risks that the FSB claims warrant policy responses. In focusing on asset managers, Policy Recommendation 13 ignores that: 1) the true operational risk in the markets lies with core utilities; and 2) processes and extensive guidance already exist to ensure the orderly transfer of client accounts.

We have significant concern about the FSB’s assessment of operational risk, specifically that it suggests that the size of an asset manager is a determinative factor. This assertion restates the erroneous logic embedded in prior FSB Consultations. While a size-based materiality threshold may be appealing to facilitate or simplify risk reviews, using size as the primary factor provides a speculative and inaccurate assessment of risk.

- A. Regulating individual asset managers is a flawed focus and fails to recognize that systemic risk concerns arise from core utilities and not from individual investment advisory firms.

Although we support “robust risk management frameworks and practices, especially with regards to business continuity plans and transition plans,” we are concerned by Policy Recommendation 13 in the Consultation, which focuses on regulating “large, complex” asset managers rather than addressing systemic risks through an activities-based approach. Advising regulators to identify entities based on AUM as well as the “aggregate OTC derivative transactions relative to the global total” is not an effective means of isolating and identifying systemic risk.<sup>48</sup>

As illustrated in Figure 2, the closer to the markets that the activities occur, the greater the risk that an entity failure would result in contagion due in part to the limited number of alternatives and their interconnectedness to the functioning of the market. The risk of contagion decreases as activities are further removed from core market functions. Financial Market Utilities (“FMUs”) provide the infrastructure, clearing, settling payments, and other financial transactions. In cases where a failure or disruption to the functioning of a FMU could create, or increase, the risk of significant operational,

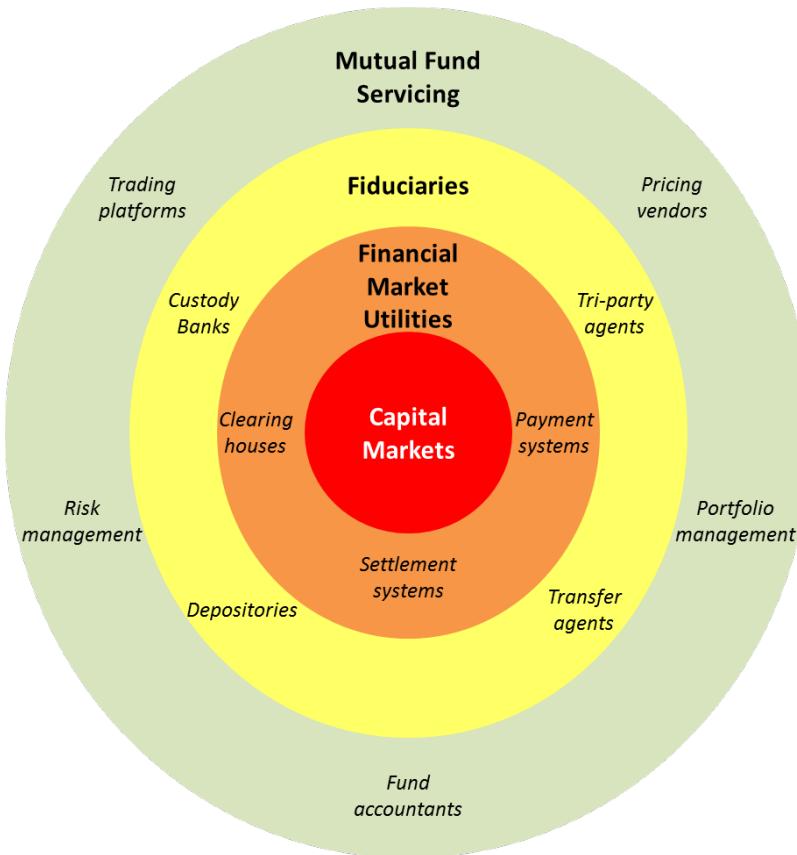
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<sup>47</sup> Vanguard 2014 FSB Comment Letter and Vanguard 2015 FSB Comment Letter. *See also* Vanguard SEC Business Continuity Letter.

<sup>48</sup> Comment Letter of ICI on the FSOC Notice Seeking Comment on Asset Management Products and Activities (Mar. 25, 2015) (“ICI FSOC Comment Letter”), p.77  
available at [https://www.ici.org/pdf/15\\_ici\\_fsoc\\_ltr.pdf](https://www.ici.org/pdf/15_ici_fsoc_ltr.pdf).

market or credit problems spreading among financial institutions or markets, the FMU should be designated as systemically important.

**Figure 2** shows that mutual fund servicing presents little operational risk to the broader financial system.<sup>49</sup>



- B. The resolution of an investment adviser and the transfer of client assets are relatively straightforward processes that do not raise operational risks of a systemic nature and therefore do not require the prudential oversight of a special resolution regime.<sup>50</sup>

Funds effectively manage operational risks today. In order to be effective, this risk framework must be suited to each firm's operations. Policy Recommendation 13 only addresses the idiosyncratic risk posed by asset management activities and ignores the substitutability of critical service providers. As discussed in prior comment letters, substitutability of asset managers, client money/asset protections, and existing business contingency plans provide strong safeguards in ensuring that asset management does not contribute to systemic risk.<sup>51</sup>

<sup>49</sup> Events tied to services on the outer edges have limited impact. In August 2015, when a software upgrade at a fund custodian, Bank of New York Mellon, delayed fund pricing, the issue was contained to funds using that particular service provider. The incident impacted approximately 1,300 mutual funds and ETFs, representing 14% of all U.S. funds. Those funds impacted held just 2.4% of industry AUM (\$419 billion) across 29 firms. Sources: ICI, Morningstar.

<sup>50</sup> See Vanguard 2015 FSB Comment Letter p.18.

<sup>51</sup> Vanguard 2014 FSB Comment Letter and Vanguard 2015 FSB Comment Letter.

In the years following the 2008 financial crisis, much focus has been placed on the need for highly complex, leveraged financial institutions to be subject to orderly liquidation regimes. The purpose of these regimes is to ensure that the unwinding of an insolvent financial institution is performed in a controlled, measured manner in order to reduce the systemic impact that the insolvency might otherwise have on other financial institutions or the markets in general. Unlike the resolution of institutions with high leverage ratios and commitments to repay billions of dollars in fixed obligations (i.e., loans, notes, bonds, and other borrowings), the resolution of investment advisers and/or the funds they manage does not present risks to global financial stability. When investment advisers exit the business, they do so in an orderly fashion because they lack these hallmarks of complexity. Even in periods of severe market stress, investment adviser dissolutions do not create disruptive conditions impacting the investing public, market participants, or financial markets—and there remains a healthy market of interested acquirers for funds and fund management firms.

If a mutual fund's investment adviser were to go bankrupt, the investment adviser would have no access to the fund's assets or the assets of other funds managed by the same adviser. The investment adviser's own assets would typically be limited to, for example, real estate, computers, and telecommunication and other office equipment. Liabilities would typically be limited to, for example, leases and contracts for services used in the investment advisory business (e.g., investment research), and routine liabilities tied to personnel.<sup>52</sup>

If a fund's investment adviser were to go bankrupt or experience significant reputational harm, the board of trustees of a fund managed by that investment adviser would simply hire another investment adviser to manage the fund. In 2004, when Strong Financial, a mutual fund investment advisory firm, withered in a trading scandal, the funds' board of trustees hired another investment adviser to manage the Strong Funds. As with any change in adviser, the transition of assets required no government or regulatory intervention.<sup>53</sup>

We also note that for subsidiaries of two U.S. non-bank financial companies that have been designated “systemically important” by FSOC their investment adviser subsidiaries are included in the resolution plans of these entities. The plans indicate that the routine U.S. Chapter 11 bankruptcy proceedings are capable of resolving these investment advisers.<sup>54</sup> It appears, therefore, that some systemic risk regulators have already conceded that investment advisers require no special resolution regime.

The FSB also cites concerns with the operational risks that may arise when transferring client accounts from one investment adviser to another.<sup>55</sup> History has shown, however, that clients routinely move their accounts between investment advisers without significant impact, both in times of stressed and non-stressed market conditions, without evidence of the concerns cited by systemic risk regulators. For example, global merger and acquisition volume across the asset management industry totaled \$4 trillion

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<sup>52</sup> See Orderly Resolution’ of Mutual Funds and Their Managers” (July 15, 2014), (“Orderly Resolution”), p. 9, available at [http://www.ici.org/pdf/14\\_ici\\_orderly\\_resolution.pdf](http://www.ici.org/pdf/14_ici_orderly_resolution.pdf). See also “Living Wills and an Orderly Resolution Mechanism? A Poor Fit for Mutual Funds and Their Managers” (Aug. 12, 2014), available at [http://www.ici.org/viewpoints/view\\_14\\_orderly\\_resolution](http://www.ici.org/viewpoints/view_14_orderly_resolution), (summarizing Orderly Resolution).

<sup>53</sup> Diamond, Randy, “One-time powerhouse Strong Financial down to a staff of 1” (Aug. 6, 2012), available at <http://www.pionline.com/article/20120806/PRINT/308069980/one-time-powerhouse-strong-financial-down-to-a-staff-of-1#>.

<sup>54</sup> See Prudential Financial Inc., 2014 Resolution Plan, Public Section (June 30, 2014), available at <http://www.federalreserve.gov/bankinforeg/resolution-plans/prudential-fin-1g-20140701.pdf>; American International Group, Inc. Resolution Plan, Section I; Public Section (July 1, 2014), available at <http://www.federalreserve.gov/bankinforeg/resolution-plans/aig-1g-20140701.pdf>. Similarly, it is worth noting that Neuberger Berman, an investment advisory subsidiary of Lehman Brothers, required no special resolution process, and, in fact, successfully navigated Lehman’s bankruptcy.

<sup>55</sup> See Consultation p. 28-29.

in 2009, double the \$2 trillion total in 2008.<sup>56</sup> Despite that merger volume and the environment in which it occurred, we are not aware of any client/asset transfers during this period that presented systemic risk.

C. Market stability and systemic risk concerns are better addressed through market regulation and controls rather than a piecemeal entity-based approach.

As the FSB observes, there are a number of regulatory tools and market practices currently in place to directly or indirectly address operational difficulties in transferring investment mandates.<sup>57</sup> The purpose of business continuity plans is to develop alternative ways to carry out normal business functions without access to facilities, systems, and/or key third-party providers of goods or services to the funds or its adviser. Business continuity planning is an ongoing process—compliance, audit, and enterprise risk professionals are dedicated to regularly troubleshooting possible contingency scenarios and engaging with business leaders to prioritize business continuity initiatives, update business continuity plans, and engage in business continuity drills. The FSB places extraordinary emphasis on the industry’s alleged “reliance” on key service providers, but it fails to adequately acknowledge the risk-mitigating effects that business continuity planning has on such partnerships. Advisers, funds, and key service providers to the industry have robust plans and strategies in place to facilitate the continuation or resumption of business operations in the event of an emergency, regardless of the cause.<sup>58</sup> Finally, we believe it is important to note that the SEC has recently announced its proposed rule and rule amendments to focus on business continuity transition planning requirements for asset managers.<sup>59</sup> We believe that an activities-based regulatory approach is the most appropriate and effective way to address any lingering concerns about operational risks at investment advisers.

We also support the FSB focus on strengthening FMUs, including actions already undertaken by FSOC, aimed at mitigating risks to overall market structure.<sup>60</sup> Technological failures or cyber-attacks on FMUs and infrastructure present a greater risk to financial markets and investors than the perceived operational risk of an investment adviser.<sup>61</sup> As the international policy forum for securities regulators, IOSCO is the appropriate authority to set standards that minimize operational vulnerabilities in core FMUs and identify possible weaknesses.

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<sup>56</sup> See Orderly Resolution p. 5, footnote 3.

<sup>57</sup> Consultation p. 29. The SEC effectively regulates investment adviser, service provider, and mutual fund operations through the Investment Advisers Act of 1940 (“IAA”) and the ICA, which require, among other things, that registered investment advisers adopt and implement a written compliance program that must include a business continuity plan. *See* Vanguard 2015 FSB Comment Letter citing Rule 206(4)-7 under the IAA. *See also* Final Rule: “Compliance Programs of Investment Companies and Investment Advisers,” IA Release No. 2204 (Dec. 17, 2003) (discussing the need for advisers to establish a reasonable process for responding to emergencies, contingencies, and disasters, and that an adviser’s contingency planning process should be appropriately scaled, and reasonable in light of the facts and circumstances surrounding the adviser’s business operations and the commitments it has made to its clients); SEC Proposed Rule and Rule Amendments: “Adviser Business Continuity and Transition Plans,” IA Release No. IA-4439 (June 28, 2016) (“2016 SEC Adviser BCP Proposal”).

<sup>58</sup> See ICI FSOC Comment Letter, p. 68 (“Over the past several decades, the fund industry has confronted and worked through a variety of emergencies .... In addition, since September 11, 2001, the nature and scope of business continuance has changed significantly, making fund complexes and their critical service providers more resilient to unexpected business interruptions”).

<sup>59</sup> See 2016 SEC Adviser BCP Proposal.

<sup>60</sup> See Final Rule: “Authority To Designate Financial Market Utilities as Systemically Important,” 12 CFR Chapter XIII and Part 1320 (July 27, 2011) (discussing the authority of FSOC to designate a FMU that the Council determines is or is likely to become systemically important because the failure of or a disruption to the functioning of the FMU could create, or increase, the risk of significant liquidity or credit problems spreading among financial institutions or markets and thereby threaten the stability of the United States financial system) available at <https://www.gpo.gov/fdsys/pkg/FR-2011-07-27/pdf/2011-18948.pdf>.

<sup>61</sup> IOSCO, Cyber Security in Securities Markets – An International Perspective- Report on IOSCO’s cyber risk coordination efforts (April 2016), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD528.pdf>.

#### **IV. Asset Managers' Indemnification of their Affiliated Securities Lending Programs do not Pose a Systemic Risk to the Financial System.**

In proposing Policy Recommendation 14, the FSB voices concern that “the difference in regulatory requirements relating to indemnification risk for bank and non-bank agent lenders may create an incentive for agent lending activity to migrate away from prudentially regulated entities and could potentially result in a concentration of systemic risks outside the banking sector.”<sup>62</sup>

In focusing on this concern, the FSB fails to realize that most asset managers only provide such services to their investment management clients and funds. Asset managers do not provide securities lending services on a stand-alone basis to outside clients or other financial institutions. Therefore, the concern that agent-lending activity will migrate away from banks is unfounded; thus the FSB is perceiving a risk to the financial system where none exists.

While Vanguard does not provide an indemnification for the securities lending program that it administers, we would also point out that due to the structure of asset managers, it is virtually impossible for any failure of an asset manager to transmit contagion to the financial system. Asset managers act as agents for their funds and clients; they do not engage in trading or financial transactions on a principal basis and thus do not incur liabilities which would transmit risk. In addition, if an asset manager failed to fulfill any indemnity obligation, the effects would be limited to its own balance sheet. Imposing capital reserve requirements on asset managers therefore does not address a systemic risk, and will only result in increased expenses for investors to pay for a protection against a nonexistent threat.

- A. The probability that an asset manager would be required, under an indemnity, to cover a collateral short fall to purchase replacement securities due to a borrower insolvency is extremely low.

The FSB claims that a residual risk exists due to an indemnity, however, we note that these indemnities would come into effect in an extremely narrow set of circumstances. Asset manager indemnities of securities lending programs are triggered only in the event of the borrower’s insolvency and insufficiency of collateral, and not by any other default event or failure of the borrower.

Most agent lending programs have historically transacted with the major global broker-dealers and insolvencies of these types of entities have been extremely rare. Lehman Brothers was the last major broker-dealer insolvency in 2008, and Drexel Burnham was the last one before that in 1990. Today, the entities that do the most borrowing from agent-lending programs are the global systemically important banks. Given the current prudential regulatory framework, it is highly unlikely that any of these entities would become insolvent.

- B. Securities lending guidelines in many jurisdictions require loans to be over-collateralized with highly liquid collateral, which greatly reduces the potential that an asset manager would be required to indemnify for any collateral short fall in purchasing replacement securities.

We note that an indemnity does not require the asset manager to cover the entire cost of purchasing replacement securities, but only the amount that the market value of the replacement securities exceeds the absolute value of the collateral posted by the insolvent borrower.

Securities lending guidelines require that each loan is over-collateralized and that all loans are mark-to-market on a daily basis to ensure ongoing overcollateralization of all outstanding loans. These

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<sup>62</sup> Consultation, p. 35.

guidelines also require the loans to be collateralized with highly liquid instruments that will retain their value in times of stress. Acceptable non-cash collateral consists of government securities and sovereign debt, and such collateral cannot be re-hypothecated. Additionally, cash collateral can only be invested in high-quality short-term instruments to maintain liquidity and protect principal. These guidelines ensure that the collateral does not decline in value and is available to purchase replacement securities.

During the Lehman Bankruptcy, many asset managers were fully protected with sufficient collateral. For example, Vanguard funds held excess collateral amounting to 7.5% of the purchase value of securities on loan and accrued (but unpaid) distributions. If any asset manager experienced difficulty in maintaining sufficient collateral to purchase replacement securities, it was due to market value declines in the cash collateral reinvestment. It is important to note that this decline in the posted collateral is not covered by any agent lender indemnification.

In 2015, Vanguard conducted a “stress test” to understand the value of a borrower insolvency default indemnification, using data from the week of the Lehman Bankruptcy in 2008. The results showed that 99.73% of our portfolios would have collateral in excess of the amount required to cover accrued distribution payments and purchase replacement securities.

It is common for agent lenders that provide indemnities to have a compensation arrangement based on a percentage share of the revenue generated by the lending program to pay the agent for the lending service and the indemnity. Since the potential for the collateral to be insufficient to cover the replacement security costs is very low, we believe that the indemnity is of extremely limited utility, and that the result of having the revenue reduced over years where the indemnity is not used is not in the best interest of investors. We believe that the full revenue generated by the securities lending program, less expenses, should be returned back to the shareholders; therefore, we do not provide an indemnification for the securities lending program that is administered by Vanguard.

Given the lack of true residual risk associated with securities lending indemnities, we encourage the FSB to defer further consideration of securities lending indemnities to IOSCO.

**V. The Use of Derivatives by Regulated Funds (such as Funds Managed by Vanguard) is a Fundamental Component of Prudent Portfolio Management that Provides Significant Benefits to Investors in terms of Risk Mitigation, Lower Costs and Greater Liquidity. Ongoing Global Regulatory Reforms have Contributed to a More Stable, Transparent, and Open Market to Mitigate Against Potential Systemic Risk**

Given the many benefits of derivatives usage in terms of risk mitigation, lower investment costs and greater investment liquidity, regulators must insure that any action targeting perceived leverage-related risks are well-informed, appropriate and proportional and do not inadvertently sacrifice such benefits to the harm of investors. Any such action must also take into account market and regulatory differences on a jurisdiction-by-jurisdiction basis to avoid harm to beneficial local practices that investors enjoy.

It is important to clarify from the outset that the mere use of derivatives is no direct indicator of either the existence or the magnitude of any leveraging effect.<sup>63</sup> To the contrary, the primary purpose for the use of derivatives is hedging or mitigating asset or portfolio risk and effectively managing cash flows.

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<sup>63</sup> As the Consultation acknowledged, “[T]he majority of investment funds are subject to regulatory limitations on traditional balance sheet leverage.” Consultation p. 22. Vanguard funds rarely, if at all, engage in traditional lending transactions. Therefore, our response focuses on the soundness of Policy Recommendations 10-12 as they relate to derivatives used by funds.

Large funds with a large usage of derivatives in terms of aggregate notional amount may actually incur little-to-no leverage while small funds with a relatively small notional amount usage may present considerable leverage. Leverage that could raise the potential for systematic risk is not related to the volume of derivatives usage, but rather by the purpose for which a particular derivatives product is used and how that purpose relates to specific assets and the overall portfolio. If the FSB is to recommend that IOSCO investigates this area, it must first understand the range of nuanced purposes for which derivatives are used, as well as which combinations of purpose and portfolio could be used to create leveraged returns.

To the extent that the Policy Recommendations suggest that IOSCO develop a “simple” approach to define and assess derivatives-related leverage, we are seriously concerned that such simplicity could render the FSB’s effort useless at best and have significant negative consequences at worst. For example, in the SEC’s recent proposed rule to address derivatives use by funds, it proposed assessing derivatives-related leverage based on the aggregate notional amount of a fund’s derivatives portfolio.<sup>64</sup> Such an approach treated as equivalent the potential leveraging effect of foreign exchange hedging and that of commodity derivatives and thereby penalized funds that engaged in prudent risk management involving FX hedging which has little to no leveraging effect.

While not “simple,” if IOSCO is to embark on defining and assessing derivatives-related leverage, such effort must be risk-based, and should reflect the relative-risk nuances presented by netting agreements, hedging effects, collateralization, the relationship between a derivative or derivatives and the underlying assets or portfolio of assets, as well as existing and developing risk-mitigants found in local regulatory mandates. Only after such a nuanced assessment is conceived and deployed could the FSB begin to assess the existence of derivatives-related systemic risk and whether or not further rulemaking should be considered.

As a part of the prudent management of our funds, Vanguard funds enter into derivatives contracts, including swaps and futures, to achieve a number of benefits for our investors. These benefits include hedging portfolio risk, lowering transaction costs, managing cash, and achieving more favorable execution compared with traditional investments. Vanguard has been fully supportive of the mandate of the derivatives title of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “**Dodd-Frank Act**”) to bring much-needed transparency and regulation to the derivatives markets, including subjecting derivatives to regulatory oversight and requiring the reporting, margining, and central clearing of standardized swaps (“**Swaps**”) and securities-based swaps (“**SB Swaps**”) (collectively, “**swaps**”), and exchange-trading of the most liquid swaps (collectively, “**Derivatives Reforms**”). The Derivatives Reforms, together with similar initiatives across the globe, have created a fundamentally safer, more transparent, and more stable regime for the benefit of the markets and investors.

With respect to the FSB’s Policy Recommendations 10-12, we are pleased the FSB has acknowledged the complexities in assessing leverage raised through derivatives, the value of existing regulatory regimes which assess, and in some cases limit, the leverage used by funds, and the risk-mitigating benefits of global derivatives reforms. We are also heartened that rather than attempt to craft a solution to a theoretical problem, the FSB has demonstrated its commitment to fully understand the nature of the issue before even considering the appropriateness of rulemaking. Such a commitment to act on an

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<sup>64</sup> Proposed Rule, “Use of Derivatives by Registered Investment Companies and Business Development Companies,” Release No. IC-31933, December 28, 2015, available at <https://www.federalregister.gov/documents/2015/12/28/2015-31704/use-of-derivatives-by-registered-investment-companies-and-business-development-companies>.

informed basis is the only means to avoid the potential negative consequences of well-intended, but ill-conceived, rulemaking.

In order to assist the FSB to better finalize the Policy Recommendations, we provide our insights on the following three topics based on our deep understanding of the markets, of the benefits of the Derivatives Reforms, of the benefits of derivatives usage to investors, of the appropriate risks to target, and of the best means to target those risks while avoiding harmful impacts.

- **Any assessment of the potential risk of leverage must acknowledge that derivatives usage is fundamental to prudent portfolio management.** Derivatives are essential tools that enable portfolio managers to effectively and efficiently mitigate risk and achieve investment objectives. In addition to working toward a better understanding of the actual risks, the FSB should aim to develop a full and nuanced understanding of the benefits of derivatives, which in many cases are an efficient and cost-effective means to mitigate portfolio risk.
- **Assessing the potential risks presented by derivatives leverage requires an understanding of the relationship between a derivative (or derivatives) and an asset (or assets) within the managed portfolio.** While we are pleased the FSB has observed that different derivative products may have different leveraging impacts, the reality is much more complex, especially given the relationship between a derivative and other assets in the managed portfolio. In addition, while the use of derivatives to invest synthetically could be viewed solely through the lens of leverage, such investing can enable a fund to achieve objectives in a much less volatile and much more liquid manner than could be achieved in the securities markets.
- **If FSB finds merit in recommending that IOSCO develop a globally-applicable measurement of derivatives-related leverage, we recommend consistency with existing regional regulatory concepts and approaches.** In attempting to craft a risk-based leverage assessment, IOSCO should be encouraged to evaluate market and regulatory drivers on a jurisdiction by jurisdiction basis and assess if globally consistent rulemaking would be possible, let alone beneficial, with preservation of the benefits of derivatives usage being paramount. Existing jurisdictional standards to value-at-risk assessments as well as the application of appropriate risk-weighting to derivatives' notional amounts should be preserved.

A more detailed discussion of each of these points follows.

- A. **Any assessment of the potential risk of leverage must acknowledge that derivatives usage is fundamental to prudent portfolio management.**

Funds have long used derivatives in prudent portfolio management. The reason for such usage is abundantly clear: derivatives have served as a fundamental tool used by market participants to mitigate perceived risks presented by other assets and to invest in assets synthetically in a cost-effective, risk-mitigating manner. Derivatives have long been used to hedge against commodity price movements, interest rate fluctuations, foreign currency shifts, and other market risks, and have thereby provided significant benefits to investors. Regulators, such as the SEC, have long required that such usage, including any attendant risks and mitigants, be disclosed to investors to provide the opportunity for investment decisions to be made on a fully-informed basis.

- a. Derivatives Regulatory Reform Provides Significant Risk Mitigation to Create a More Stable and Resilient Global Derivatives Market.

While, historically, the global and heavily-regulated futures and options markets have offered a relatively narrow range of standardized contracts with significant liquidity for both investing and hedging, the early 1980s saw the rise of over-the-counter derivatives that effectively created a synthetic means in which to invest and hedge risks across a significantly broader scope of assets. In the absence of active regulatory involvement, market participants and trade associations created both the market architecture and legal and contractual infrastructure that shepherded the growth of highly-liquid derivatives products, which could be sourced on a consistent basis from banks and dealers around the globe. As much as favorable pricing and enhanced liquidity contributed to the growth of derivatives, the market standard contracts provided a common set of protections for derivatives, including exposure netting and collateralization.

To be clear, we recognize the role of derivatives in the context of the global financial crisis. Particularly through the use of then-opaque credit default swaps, securitized sub-prime mortgage risk was transferred to a risk aggregator without the benefit of regulatory oversight and guardrails, including proper risk management, position reporting, central clearing, and collateral management. However, it must be understood that the factors that contributed to the crisis did not arise in the context of funds' use of derivatives. In the context of funds regulated by the SEC, the well-established ICA protections, including Section 18 asset segregation and offset requirements and the mandate to hold fund assets serving as collateral for over-the-counter derivatives at the fund's custodian, coupled with the consistent application of netting and collateralization, mitigated the possibility of the crisis seriously impacting such funds' derivatives positions.

Before the crisis, regulators had little insight into derivatives' risk concentrations, collateral was inconsistently applied, and few standardized trades were either traded on an exchange or centrally cleared and risk-managed. ***Since the crisis, however, regulators have systematically addressed sources of risk and have achieved a holistic, transparent, and stable framework within which derivatives are used.*** In the U.S., significant volumes of formerly opaque over-the-counter derivatives are now transparently traded on an exchange, are centrally cleared and risk managed, and, following a relatively short phase-in period, will be margined consistently to mitigate both current market risk and potential market volatility.

The FSB can take considerable comfort that the critical mass of global Derivatives Reforms has established a much more transparent, stable and resilient derivatives market. Indeed, the collective impact of the Derivatives Reforms must serve as an effective foundation for derivatives risk management for any FSB recommendation that IOSCO craft a globally consistent measurement of derivatives-related leverage.

- b. Derivatives are a critical portfolio management tool for hedging risk, managing cash, and synthetically investing in a risk-mitigating manner.

Vanguard funds use derivatives, including swaps and futures, to achieve a number of benefits for our investors, including hedging portfolio risk, lowering transaction costs, and achieving more favorable execution compared with traditional investments. Indeed, the lion's share of derivatives usage across the industry falls into two main buckets: risk mitigation and cash management.

- i. *Derivatives Provide Important Hedging Benefits.*

Risk mitigation takes a variety of forms. At the most basic and, indeed, the most extensive level, foreign exchange spot and forward trades are executed to hedge foreign currency risk both with respect to settling buys and sells of foreign securities, and in converting foreign currency proceeds into U.S. dollars

to meet shareholder needs. To the extent that a fund invests in foreign securities, hedging may require foreign exchange spot and forward trade notional amounts equal in size to the fund's entire net assets.

Foreign exchange risk management in particular may benefit from dynamic hedging approaches where an ongoing series of spots and forwards are executed over time to fine-tune the overall position. Sometimes overall positions need to be reversed, and sometimes a portion of the position may need to be upsized or downsized. The dynamic hedging decision-making is performed by the portfolio manager based on an overall assessment of the underlying exposure, the effect of the outstanding positions, and the impact of potential new positions on both the underlying portfolio and the outstanding positions. Other issues may also factor into the decision making, such as the preference to spread out the maturities of large notional amount positions or the desire to address projected future cash flows.

In short, the complexities of dynamic portfolio management necessitate highly-tailored choices involving a multitude of variables, including the choice of hedging products to deploy, as well as their size, timing, direction, and other variables with the overall result often reflecting a combination of these multi-dimensional objectives. At any given time, there may be a relatively large aggregate notional amount position if one were to add up the multi-layering of open buys and sells and upsize and downsize position adjustments. Of course, the overall risk associated with such trades may be relatively small, especially given their risk-reducing effect, and funds have historically addressed this risk through exposure netting and collateralization.

Another example of hedging includes using interest rate swaps to adjust the duration risk in fixed income portfolios. The overall interest rate exposure of a portfolio is determined and then an interest rate swap is executed to mitigate some portion of the duration risk. The swap's notional amount may be quite large, and for the swap to have the intended risk-reducing effect, it may require a notional amount equal to a significant portion, if not all, of the size of the overall portfolio.

Dynamic risk management also may be appropriate with respect to managing duration risk. A series of swaps may be executed to fine-tune the overall exposure over time and may result in a relatively large aggregate notional amount position if one were to add up the multi-layered swaps. As with foreign exchange hedging, dynamic duration hedging may also involve a variety of factors that produce sizeable aggregate notional amounts with an overall risk-reducing effect. Such risk is mitigated through the application of asset segregation, offset, netting, and collateralization.

These two products dominate the derivatives usage by fixed income funds and also mean that while the overall effect is risk reducing, the notional amounts of the trading can be large, including, in some cases, notional amounts equal to or in excess of the fund's net assets. Absent the use of such tools, a fund's performance could be more volatile and investor returns less stable. In assessing the leveraging effect of derivatives, the FSB must be sensitive to the beneficial use of these tools by portfolio managers, especially as investors have long selected funds for investment with full disclosure that these products could be used for such purposes.

*ii. Derivatives provide effective cash management tools to efficiently invest subscriptions and to synthetically invest to maintain cash for redemptions.*

Portfolio managers need a flexible set of efficient tools for cash management, and derivatives often provide a cost-effective solution. A fund's cash management needs arise in the case of both cash inflows and outflows. When a fund receives new subscriptions, it is preferable to immediately invest the cash to best ensure that the expected return is available for shareholders. That being said, portfolio

managers may need time to identify appropriate investments and to achieve preferred pricing. In the period during which securities investments are being made, portfolio managers may invest synthetically using either the futures or the swaps market. Futures, options, and some credit default swaps are executed on an exchange, and total return swaps may be executed over-the-counter, in each case to obtain immediate cost-effective exposure to the underlying assets. Liquidity in the synthetic derivatives markets can be greater than in the securities markets, and synthetic investing through derivatives provides the portfolio manager with the time needed to source and obtain the desired assets at the preferred price.

Prudent portfolio management likewise requires that managers make provisions to address potential redemptions to achieve the anticipated liquidity needs of fund investors. To maintain a reserve of cash to fund potential redemptions, while at the same time ensuring that the fund is fully invested to provide investors with expected returns, is a critical objective for which derivatives often provide the most efficient, cost-effective solution. Futures, options, credit default swaps, and total return swaps are often used for this exact purpose. Funds can stay fully invested on a synthetic basis, while simultaneously reserving a pool of cash to meet redemptions. Rather than maintain direct investments in specific assets, funds with fixed income portfolios execute credit default swaps on an index of diversified issuers. Credit default swaps on such indexes often have greater liquidity than do the bonds of the underlying issuers. In selling credit protection, funds gain synthetic exposure to the bond market, and thereby preserve cash reserves to meet redemption needs. Likewise, in equity portfolios, funds can execute highly liquid equity index futures contracts in which the fund receives any appreciation in the value of an asset or assets and pays any depreciation—without the need to purchase the underlying asset. In gaining exposure to the asset in such a manner, funds can stay fully invested in the intended assets while also maintaining a cash reserve to provide liquidity in the event of investor redemptions.

B. Assessing the potential risks presented by derivatives leverage requires an understanding of the relationship between a derivative or derivatives and an asset or assets within the managed portfolio.

Synthetic investing through the use of derivatives also enables portfolio managers to meet investor objectives using approaches that mitigate volatility as well as other risks that might arise through more traditional securities investments. It is important to note that while investing directly in securities always presents risks, the investment return presented by certain securities-only investment portfolios can also be targeted using synthetic investment tools. Such synthetic derivatives products often offer greater liquidity and can be managed in a more efficient and cost-effective manner than could be achieved using traditional securities markets.

Examples of such synthetic investment strategies include using commodity futures when it is impractical to take delivery of physical commodities. In addition, total return swaps are used to gain synthetic exposure to assets in emerging markets where there are barriers to enter the local securities markets. With respect to futures generally, a long/short strategy used by an alternative strategies fund could result in notional amounts of 200% of net assets, notwithstanding that the purpose of the positions is to reduce overall beta volatility and focus instead on a form of risk premium or alpha spread. A relatively low risk, long/short total return swap strategy including a \$100 long position on one asset and a \$100 short position on a related asset could suggest a significant use of leverage, when the actual risk incurred by the fund may be less than that experienced through a similar securities-only position. The FSB should be sensitive that it is only the risk to fund investors that is relevant, and that risk bears no direct relationship with the derivative's notional amount.

Particularly in the managed-futures and alternative strategies space, the incentive to use derivatives products is not always to obtain leveraged returns (*e.g.*, enhanced returns through the use of derivatives to gain exposure to assets in excess of the fund's net assets), but instead to achieve investor goals while at the same time mitigating position volatility, liquidity, and other risks. Derivatives enable portfolio managers to execute investor-driven strategies in the most cost-effective manner, while also mitigating a variety of risks to a degree often not possible through investing in securities alone. While in such portfolios there may be a significant usage of derivatives, it may be the case that such synthetic investing methods are intended to produce similar returns offered by more traditional securities' investments with much more flexibility in managing a series of risks.

While viewing the notional amounts of derivatives usage in isolation could suggest a significant level of leverage, the FSB must be mindful of the relationship between specific derivatives and derivatives strategies, and the relative risk/return produced by comparable securities-only strategies. In doing so, the FSB will better appreciate that derivatives' notional amounts are not necessarily indicative of risk-increasing leverage, but instead may do no more than replicate the returns of securities-only strategies in a risk-mitigating manner.

C. **If the FSB finds merit in recommending that IOSCO develop a globally-applicable measurement of derivatives-related leverage, we recommend consistency with existing regional regulatory concepts and approaches**

Vanguard believes that if the FSB elects to recommend that IOSCO assess the leverage-related risks associated with derivatives usage by funds, a risk-based approach is preferred as the notional amount of a derivative has little, if any, correlation with either its risk profile or with its leveraging effect. With that in mind, Vanguard has specific recommendations to help the FSB achieve its goals.

In focusing on leverage, Vanguard believes that the appropriate concern should involve the extent to which a particular investment strategy (and its related products and practices) serves to increase overall risk levels beyond the tolerance level established and communicated to investors.

Fund complexes have for years managed portfolio risk against internal risk tolerance limits based on, among other things, limits related to value-at-risk ("VaR") demonstrated by the overall portfolio by evaluating the potential loss to the fund in the event of stressful market circumstances lasting over some time horizon. VaR assessments are routinely performed on portfolios comprised of cash and securities, as well as on portfolios also including derivatives. Not only is a fund's absolute VaR closely monitored by both portfolio and risk managers; it is also typically compared with the VaR of the fund's target benchmark. For example, a fund targeting performance with that of the S&P 500 Index would compare its VaR with that of the Index itself, with the expectation that the fund's absolute VaR would be close to, if not less than, the VaR of the benchmark index.

A VaR-like approach to risk measurement has been recognized by a range of U.S. regulators, including the SEC, the Commodity Futures Trading Commission (the "CFTC"), and the U.S. bank prudential regulators (including the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Federal Housing Finance Agency, the Farm Credit Administration, and the Office of the Comptroller of the Currency [(the "U.S. Bank Regulators")]) with respect to a number of critical derivatives risk measurements (including both the major Swap and SB Swap

participant definitions,<sup>65</sup> as well as the framework for initial margin requirements for specific swaps).<sup>66</sup> Central clearing houses have long used VaR-modeling frameworks to risk manage futures and centrally-cleared Swaps with such risk-modelling being overseen by the CFTC as a fundamental component of clearing house risk management.

By establishing a standardized approach to VaR calculations and using it as the basis for assessing leverage-related risk exhibited by a fund, IOSCO would be targeting a true risk parameter instead of using an ineffective proxy for risk such as aggregate derivatives notional amounts. Use of such a weak proxy provides no true risk indications and would provide no consistent assessment of the leverage-related risk across funds.

As the FSB contemplates its recommendations to IOSCO regarding derivatives-related leverage, Vanguard has provided detailed analysis and recommendations in our comment letter to the SEC's proposal to limit derivatives usage by U.S. mutual funds registered under the ICA.<sup>67</sup> We commend the points in that letter to the FSB for further review.<sup>68</sup>

## VI. Conclusion

Vanguard's core purpose is to take a stand for all investors, to treat them fairly, and to give them the best chance for investment success. We believe a critical condition for investment success is appropriate well-tailored regulation to ensure global financial markets are resilient and efficient.

For this reason, we commend the FSB for shifting its focus to activities based on empirical assessments of risk within the asset management industry. An activities-based approach to identifying systemic risk will ensure that all participants in such activities will be subject to the same rules, regardless of an easily manipulated metric, like size. We encourage the FSB to continue to delegate guidance and oversight of the areas discussed in the Consultation to IOSCO. We believe that IOSCO is best positioned to facilitate analysis of data across multiple jurisdictions to further strengthen the resiliency of funds across the globe.

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We appreciate the opportunity to provide the FSB with our thoughts and perspectives on these important issues. If you have any questions about Vanguard's comments or would like any additional

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<sup>65</sup> Final Rule, "Further Definition of "Swap Dealer," "Security-Based Swap Dealer," "Major Swap Participant," "Major Security-Based Swap Participant," and Eligible Contract Participant," Release No. 34-66868, May 23, 2012, available at <https://www.gpo.gov/fdsys/pkg/FR-2012-05-23/pdf/2012-10562.pdf> (the "MSP Risk Assessments").

<sup>66</sup> Prudential Regulators' Final Margin Rule; CFTC Final Margin Rule.

<sup>67</sup> See Vanguard Comment Letter to SEC re: Use of Derivatives by Registered Investment Companies and Business Development Companies – File No. S7-24-15, March 28, 2016 ("Vanguard 2016 SEC Derivatives Use Comment Letter").

<sup>68</sup> For example, if the FSB rejects a focus on VaR and prefers to assess a fund's aggregate derivatives notional amount usage, Vanguard has recommendations to reflect the relative leveraging effect of certain derivatives through the application of standard risk conversion factors. Through the application of such factors, relative, objective risk assessments can be made based on product, underlier, and residual maturity to achieve a more nuanced understanding. The notional amounts of low-risk products used to manage portfolio risk will not be assessed to the same degree as will higher risk products that may have more of a leveraging effect and thereby introduce a greater risk of loss to the funds. For example, parties to an interest rate swap merely exchange the net difference between their applicable payment obligations and are not required to pay each other the notional amount of the swap. Likewise, the risk associated with a futures contract on a U.S. Treasury security is significantly less than that associated with a similarly-sized futures contract on the more volatile S&P 500 Index. The seller of a credit default swap may be obligated to pay an amount equal to a smaller or larger portion of the derivative's notional amount based on the value of the reference asset in default compared with its par value. Derivatives involving more volatile underliers, such as certain commodities, present a greater likelihood of payment obligations approaching the trade's notional amount.

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Sincerely,

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cc: **U.S. Securities and Exchange Commission**

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

**Australian Securities and Investment Commission**

Greg Medcraft, Chair

**Financial Conduct Authority**

Nick Miller, Head of EU & Global Department, Financial Conduct Authority

**Hong Kong Securities and Futures Commission**

Ms. Christina Choi, Executive Director, Investment Products

**Ontario Securities Commission**

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