

FINANCIAL STABILITY OVERSIGHT COUNCIL

**PROPOSED RECOMMENDATIONS REGARDING MONEY MARKET
MUTUAL FUND REFORM**

November 2012

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PUBLIC COMMENT INSTRUCTIONS

Interested persons are invited to submit comments on all aspects of *Proposed Recommendations Regarding Money Market Mutual Fund Reform* according to the instructions below. All submissions must refer to docket number FSOC-2012-0003.

Electronic Submission of Comments. Interested persons may submit comments electronically through the Federal eRulemaking Portal at <http://www.regulations.gov>. Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt, and enables the Council to make them available to the public. Comments submitted electronically through <http://www.regulations.gov> can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

Mail. Comments may be mailed to Financial Stability Oversight Council, Attn: Amias Gerety, 1500 Pennsylvania Avenue, NW, Washington, D.C. 20220.

Public Inspection of Comments. Properly submitted comments will be available for inspection and downloading at <http://www.regulations.gov>.

Additional Instructions. In general, comments received, including attachments and other supporting materials, are part of the public record and are immediately available to the public. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Comment due date: 60 days after publication in the Federal Register.

For further information, contact Amias Gerety, Deputy Assistant Secretary for the Financial Stability Oversight Council, Department of the Treasury, at (202) 622-8716; Sharon Haeger, Office of the General Counsel, Department of the Treasury, at (202) 622-4353; or Eric Froman, Office of the General Counsel, Department of the Treasury, at (202) 622-1942.

I. EXECUTIVE SUMMARY

Reforms to address the structural vulnerabilities of money market mutual funds (“MMFs” or “funds”) are essential to safeguard financial stability. MMFs are mutual funds that offer individuals, businesses, and governments a convenient and cost-effective means of pooled investing in money market instruments. MMFs are a significant source of short-term funding for businesses, financial institutions, and governments. However, the 2007–2008 financial crisis demonstrated that MMFs are susceptible to runs that can have destabilizing implications for financial markets and the economy. In the days after Lehman Brothers Holdings, Inc. failed and the Reserve Primary Fund, a \$62 billion prime MMF, “broke the buck,” investors redeemed more than \$300 billion from prime MMFs and commercial paper markets shut down for even the highest-quality issuers. The Treasury Department’s guarantee of more than \$3 trillion of MMF shares and a series of liquidity programs introduced by the Federal Reserve were needed to help stop the run on MMFs during the financial crisis and ultimately helped MMFs to continue to function as intermediaries in the financial markets.

The Securities and Exchange Commission (“SEC”) took important steps in 2010 by adopting regulations to improve the resiliency of MMFs (the “2010 reforms”). But the 2010 reforms did not address the structural vulnerabilities of MMFs that leave them susceptible to destabilizing runs. These vulnerabilities arise from MMFs’ maintenance of a stable value per share and other factors as discussed below. MMFs’ activities and practices give rise to a structural vulnerability to runs by creating a “first-mover advantage” that provides an incentive for investors to redeem their shares at the first indication of any perceived threat to an MMF’s value or liquidity. Because MMFs lack any explicit capacity to absorb losses in their portfolio holdings without depressing the market-based value of their shares, even a small threat to an MMF can start a run. In effect, first movers have a free option to put their investment back to the fund by redeeming shares at the customary stable share price of \$1.00, rather than at a price that reflects the reduced market value of the securities held by the MMF.

The broader financial regulatory community has focused substantial attention on MMFs and the risks they pose. Both the President’s Working Group on Financial Markets (“PWG”) and the Financial Stability Oversight Council (“Council”) called for additional reforms to address the structural vulnerabilities in MMFs, through the PWG’s 2010 report on *Money Market Fund Reform Options* and unanimous recommendations in the Council’s 2011 and 2012 annual reports, respectively.

In October 2010, the SEC issued a formal request for public comment on the reforms initially described in the PWG report, and in May 2011 the SEC hosted a roundtable on MMFs and systemic risk in which several Council members and their representatives participated. However, in August 2012, SEC Chairman Schapiro announced that the SEC would not proceed

with a vote to publish a notice of proposed rulemaking to solicit public comment on potential structural reforms of MMFs.

Under Section 120 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”),¹ if the Council determines that the conduct, scope, nature, size, scale, concentration, or interconnectedness of a financial activity or practice conducted by bank holding companies or nonbank financial companies could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies and nonbank financial companies, the financial markets of the United States, or low-income, minority, or under-served communities, the Council may provide for more stringent regulation of such financial activity or practice by issuing recommendations to a primary financial regulatory agency to apply new or heightened standards or safeguards. The recommended standards and safeguards are required by Section 120 to take costs to long-term economic growth into account, and may include prescribing the conduct of the activity or practice in specific ways, such as applying particular capital or risk-management requirements.

The Council is proposing to use this authority to recommend that the SEC proceed with much-needed structural reforms of MMFs. There will be a 60-day public comment period on the proposed recommendations. The Council will then consider the comments and may issue a final recommendation to the SEC, which, pursuant to the Dodd-Frank Act, would be required to impose the recommended standards, or similar standards that the Council deems acceptable, or explain in writing to the Council within 90 days why it has determined not to follow the recommendation.

Pursuant to Section 120, the Council proposes to determine that MMFs’ activities and practices could create or increase the risk of significant liquidity, credit, and other problems spreading among bank holding companies, nonbank financial companies, and U.S. financial markets. This is due to the conduct and nature of the activities and practices of MMFs that leave them susceptible to destabilizing runs; the size, scale, and concentration of MMFs and the important role they play in the financial markets; and the interconnectedness between MMFs, the financial system and the broader economy that can act as a channel for the transmission of risk and contagion and curtail the availability of liquidity and short-term credit.

Based on this proposed determination, the Council seeks comment on the proposed recommendations for structural reforms of MMFs that reduce the risk of runs and significant problems spreading through the financial system stemming from the practices and activities described above. The Council is proposing three alternatives for consideration:

¹ Public Law 111-203, 124 Stat. 1376 (2010).

- *Alternative One: Floating Net Asset Value.* Require MMFs to have a floating net asset value (“NAV”) per share by removing the special exemption that currently allows MMFs to utilize amortized cost accounting and/or penny rounding to maintain a stable NAV. The value of MMFs’ shares would not be fixed at \$1.00 and would reflect the actual market value of the underlying portfolio holdings, consistent with the requirements that apply to all other mutual funds.
- *Alternative Two: Stable NAV with NAV Buffer and “Minimum Balance at Risk.”* Require MMFs to have an NAV buffer with a tailored amount of assets of up to 1 percent to absorb day-to-day fluctuations in the value of the funds’ portfolio securities and allow the funds to maintain a stable NAV. The NAV buffer would have an appropriate transition period and could be raised through various methods. The NAV buffer would be paired with a requirement that 3 percent of a shareholder’s highest account value in excess of \$100,000 during the previous 30 days — a minimum balance at risk (MBR) — be made available for redemption on a delayed basis. Most redemptions would be unaffected by this requirement, but redemptions of an investor’s MBR itself would be delayed for 30 days. In the event that an MMF suffers losses that exceed its NAV buffer, the losses would be borne first by the MBRs of shareholders who have recently redeemed, creating a disincentive to redeem and providing protection for shareholders who remain in the fund. These requirements would not apply to Treasury MMFs, and the MBR requirement would not apply to investors with account balances below \$100,000.
- *Alternative Three: Stable NAV with NAV Buffer and Other Measures.* Require MMFs to have a risk-based NAV buffer of 3 percent to provide explicit loss-absorption capacity that could be combined with other measures to enhance the effectiveness of the buffer and potentially increase the resiliency of MMFs. Other measures could include more stringent investment diversification requirements, increased minimum liquidity levels, and more robust disclosure requirements. The NAV buffer would have an appropriate transition period and could be raised through various methods. To the extent that it can be adequately demonstrated that more stringent investment diversification requirements, alone or in combination with other measures, complement the NAV buffer and further reduce the vulnerabilities of MMFs, the Council could include these measures in its final recommendation and would reduce the size of the NAV buffer required under this alternative accordingly.

These proposed recommendations are not necessarily mutually exclusive but could be implemented in combination to address the structural vulnerabilities that result in MMFs’ susceptibility to runs. For example, MMFs could be permitted to use floating NAVs or, if they preferred to maintain a stable value, to implement the measures contemplated in Alternatives Two or Three.

Other reforms, not described above, may be able to achieve similar outcomes. Accordingly, the Council seeks public comment on the proposed recommendations and other potential reforms of

MMFs. Comments on other reforms should consider the objectives of addressing the structural vulnerabilities inherent in MMFs and mitigating the risk of runs. For example, some stakeholders have suggested features that only would be implemented during times of market stress to reduce MMFs' vulnerability to runs, such as standby liquidity fees or gates. Commenters on such proposals should address concerns that such features might increase the potential for industry-wide runs in times of stress.

The Council recognizes that regulated and unregulated or less-regulated cash management products (such as unregistered private liquidity funds) other than MMFs may pose risks that are similar to those posed by MMFs, and that further MMF reforms could increase demand for non-MMF cash management products. The Council seeks comment on other possible reforms that would address risks that might arise from a migration to non-MMF cash management products. Further, the Council is not considering MMF reform in isolation. The Council and its members intend to use their authorities, where appropriate and within their jurisdictions, to address any risks to financial stability that may arise from various products within the cash management industry in a consistent manner. Such consistency would be designed to reduce or eliminate any regulatory gaps that could result in risks to financial stability if cash management products with similar risks are subject to dissimilar standards.

In accordance with Section 120 of the Dodd-Frank Act, the Council has consulted with the SEC staff. In addition, the standards and safeguards proposed by the Council take costs to long-term economic growth into account.

II. OVERVIEW OF MONEY MARKET MUTUAL FUNDS

A. DESCRIPTION OF MONEY MARKET MUTUAL FUNDS

MMFs are a type of mutual fund registered under the Investment Company Act of 1940 (the “Investment Company Act”).² Investors in MMFs fall into two categories: (i) individual, or “retail” investors; and (ii) institutional investors, such as corporations, bank trust departments, pension funds, securities lending operations, and state and local governments, that use MMFs for a variety of cash management and investment purposes.³ MMFs are widely used by both retail and institutional investors for cash management purposes, although the industry has become increasingly dominated by institutional investors. MMFs marketed primarily to institutional investors account for almost two-thirds of assets today compared to about one-third of industry assets in 1996.⁴

MMFs are a convenient and cost-effective way for investors to achieve a diversified investment in various money market instruments, such as commercial paper (“CP”), short-term state and local government debt, Treasury bills, and repurchase agreements (“repos”). This diversification, in combination with principal stability, liquidity, and short-term market yields, has made MMFs an attractive investment vehicle. MMFs provide an economically significant service by acting as intermediaries between investors who desire low-risk, liquid investments and borrowers that issue short-term funding instruments. MMFs serve an important role in the asset management industry through their investors’ use of MMFs as a cash-like product in asset allocation and as a temporary investment when they choose to divest of riskier investments such as stock or long-term bond mutual funds.

The MMF industry had approximately \$2.9 trillion in assets under management (“AUM”) as of September 30, 2012, of which approximately \$2.6 trillion is in funds that are registered with the SEC for sale to the public. This represents a decline from \$3.8 trillion at the end of 2008.⁵ As of the end of 2011, there were 632 such funds, compared to 783 at the end of 2008.⁶

MMFs are categorized into four main types based on their investment strategies. Treasury MMFs, with about \$400 billion in AUM, invest primarily in U.S. Treasury obligations and repos

² 15 U.S.C. § 80a-1–80a-64.

³ At times, these two categories may overlap. For example, retail investors may invest in institutional MMF shares through employer-sponsored retirement plans, such as 401(k) plans and broker or bank sweep accounts. Investment Company Institute, “Report of the Money Market Working Group” (March 17, 2009), at 24-27, available at http://www.ici.org/pdf/ppr_09_mmmwg.pdf.

⁴ Investment Company Institute, “2012 Investment Company Fact Book” (“ICI Fact Book”), at Table 39; “Weekly Money Market Mutual Fund Assets” (Oct. 25, 2012), available at <http://www.ici.org/research/stats/mmf>.

⁵ Based on data filed on SEC Form N-MFP as of September 30, 2012; “Weekly Money Market Mutual Fund Assets” (Oct. 25, 2012), available at <http://www.ici.org/research/stats/mmf>; ICI Fact Book, at Table 39.

⁶ See ICI Fact Book, at Table 5.

collateralized with U.S. Treasury securities. Government MMFs, with about \$490 billion in AUM, invest primarily in U.S. Treasury obligations and securities issued by entities such as the Federal Home Loan Mortgage Corporation (Freddie Mac), the Federal National Mortgage Association (Fannie Mae), and the Federal Home Loan Banks (FHLBs), as well as in repo collateralized by such securities. In contrast, prime MMFs, with about \$1.7 trillion in AUM, invest more substantially in private debt instruments, such as CP and certificates of deposit (“CDs”). Commensurate with the greater risks in their portfolios, prime MMFs generally pay higher yields than Treasury or government MMFs. Finally, tax-exempt MMFs, with about \$280 billion in AUM, invest in short-term municipal securities and pay interest that is generally exempt from state and federal income taxes, as appropriate.

B. RULE 2A-7 AND THE 2010 REFORMS

Like other mutual funds, MMFs must register under the Investment Company Act and are subject to its provisions. An MMF must comply with all of the same legal and regulatory requirements that apply to mutual funds generally, except that rule 2a-7 under the Investment Company Act⁷ allows MMFs to use special methods to value their portfolio securities and price their shares, subject to the conditions in the rule. These methods permit MMFs to maintain a stable NAV per share, typically \$1.00. Pursuant to rule 2a-7, MMFs generally use the amortized cost method of valuation and the penny rounding method of pricing in order to effectively “round” their share prices. Under these methods, securities held by MMFs are valued at acquisition cost, with adjustments for amortization of premium or accretion of discount, instead of at fair market value, and the MMFs’ price per share is rounded to the nearest penny. This permits an MMF to price its shares for purposes of sales and redemptions at \$1.00 even though the fund’s NAV based on the fair market value of its portfolio securities — rather than amortized cost — may vary by as much as 0.50 percent per share above or below \$1.00. All other types of mutual funds, in contrast, must value their NAVs using the market value of the funds’ portfolio securities and sell and redeem their shares based on that NAV without using penny rounding.

In order to protect investors from being treated unfairly, an MMF may continue to use these valuation and pricing methods only when the fund’s stable \$1.00 per share value fairly represents the fund’s market-based share price. Rule 2a-7 requires an MMF to periodically calculate its market-based NAV, or “shadow price,” and compare this value to the fund’s stable \$1.00 share price. If there is a difference of more than 0.50 percent (or \$0.005 per share), the fund’s board of directors must consider promptly what action, if any, should be taken, including whether the fund should discontinue the use of these methods and re-price the securities of the fund at a value other than \$1.00 per share, an event known as “breaking the buck” (i.e., the fund would fail to maintain a stable NAV of \$1.00).

⁷ 17 C.F.R. § 270.2a-7.

In order to reduce the likelihood that an MMF would experience such a significant deviation, rule 2a-7 imposes upon MMFs certain “risk-limiting conditions” relating to portfolio maturity, credit quality, liquidity, and diversification. These risk-limiting conditions limit the funds’ exposures to certain risks, such as credit, currency, and interest rate risks.⁸

The risk-limiting conditions, in their current form, include numerous changes to rule 2a-7 that were adopted by the SEC in 2010 as an initial response to the financial crisis. These 2010 reforms strengthened maturity limitations, increased MMFs’ diversification and liquidity requirements, imposed stress-test requirements, improved the credit-quality standards for MMF portfolio securities, increased reporting and disclosure requirements on portfolio holdings, and provided new redemption and liquidation procedures to minimize contagion from a fund breaking the buck, as described below. The 2010 reforms were a necessary and important step in reducing MMF portfolio risk and increasing the resiliency of MMFs to redemptions.

Quality of portfolio securities. MMFs may purchase a security only if the security, at the time of acquisition, has received a specified credit rating from a nationally recognized statistical rating organization (“NRSRO”), generally the highest short-term rating (or is an unrated security of comparable quality as determined by the board of directors), and the fund’s board of directors determines that the security presents minimal credit risks based on factors pertaining to credit quality in addition to any credit rating assigned to the security by an NRSRO.⁹ The 2010 reforms sought to reduce MMFs’ exposure to risks from lower-rated securities — so-called “second-tier” securities — in several ways.¹⁰ First, the reforms reduced the limit on investments in these securities from 5 percent to 3 percent of the fund’s total assets. Second, MMFs’ allowable exposure to a single issuer of second-tier securities was reduced to 0.5 percent.¹¹ Third, MMFs are only permitted to purchase second-tier securities with maturities of 45 days or less. The previous limit was 397 days. The reforms also tightened requirements relating to MMF holdings of repo that are collateralized with private debt instruments rather than cash equivalents or government securities.

Maturity limitations. MMFs generally are prohibited from acquiring any security with a remaining maturity greater than 397 days (certain features, like an unconditional “put,” can

⁸ SEC, Money Market Fund Reform, 75 Fed. Reg. 32688, 10060 (Mar. 4, 2010).

⁹ An MMF’s board of directors may delegate to the fund’s investment adviser or officers the responsibility to make this determination pursuant to written guidelines that the board establishes and oversees. In addition, Section 939A of the Dodd-Frank Act requires the SEC (and other regulators) to review its regulations for any references to or requirements regarding credit ratings that require the use of an assessment of the creditworthiness of a security or money market instrument, remove these references or requirements, and substitute in those regulations other standards of creditworthiness in place of the credit ratings that the agency determines to be appropriate. The SEC has proposed to remove references to credit ratings from rule 2a-7. See SEC, References to Credit Ratings in Certain Investment Company Act Rules and Forms, Investment Company Act Release No. IC-28807, 76 Fed. Reg. 12896 (Mar. 9, 2011). It is the Council’s understanding that the SEC intends to act on removal of credit ratings from rule 2a-7 as required by the Dodd-Frank Act, and therefore the Council is not addressing this issue in these recommendations.

¹⁰ Second-tier securities are defined in rule 2a-7 generally as securities that have received the second-highest short-term debt rating from an NRSRO or are of comparable quality.

¹¹ The previous limit was the greater of one percent or \$1 million.

shorten a security's maturity for this and certain other purposes under rule 2a-7), and are subject to a maximum allowable dollar-weighted average portfolio maturity ("WAM") and weighted average life ("WAL"). The 2010 reforms strengthened the maturity limitations by reducing the maximum allowable WAM of an MMF's portfolio from 90 days to 60 days, which reduces an MMF's exposure to interest-rate risk. In addition, the 2010 reforms introduced a new 120-day WAL limit, which lowers MMFs' exposure to credit-spread risk from floating- or variable-rate portfolio holdings by taking into account the securities' ultimate maturity.¹²

Diversification requirement. Generally, MMFs must limit their investments in the securities of any one issuer (other than government securities) to no more than 5 percent of fund assets at the time of purchase. They must also generally limit their investments in securities subject to a demand feature or a guarantee from any particular provider to no more than 10 percent of fund assets.

Liquidity requirements. The 2010 reforms added a requirement that each MMF maintain a minimum liquidity buffer. Each MMF must have at least 10 percent of its assets invested in "daily liquid assets" and at least 30 percent of its assets invested in "weekly liquid assets."¹³ Daily liquid assets are cash, U.S. Treasury obligations, and securities that convert into cash (by maturing or through a put) within one business day. Weekly liquid assets are daily liquid assets, securities of an instrumentality of the U.S. government that have a remaining maturity of 60 days or less, and securities that convert into cash within five business days. The amendments also reduced the amount of illiquid securities — those that cannot be disposed of within seven days without taking a discounted price — that an MMF can hold from 10 percent to 5 percent. These liquidity requirements are designed to help MMFs meet shareholder redemptions without selling portfolio securities into potentially distressed markets at discounted prices.

Stress-testing requirement. The 2010 reforms introduced a stress-testing requirement for MMFs, requiring that a fund's board of directors adopt procedures for periodic stress tests of the fund's ability to maintain a stable share price. The stress tests are based on certain hypothetical stress events and the results of these tests must be provided to the MMF's board.

Disclosure and reporting. The 2010 reforms introduced enhanced reporting and disclosure obligations that require funds to post portfolio information on their websites within five business days after the end of each month. MMFs are also required to submit to the SEC each month more detailed portfolio holdings information, including the shadow price, which is made

¹² Widening credit spreads, reflecting additional yield demanded by investors over a comparable risk-free rate, can negatively affect the value of a fund's portfolio securities. The limit on an MMF's WAL is designed to protect the fund against spread risk because longer-term adjustable-rate securities are more sensitive to credit spreads than short-term securities with final maturities equal to the reset date of the longer-term security. Under rule 2a-7, therefore, MMFs are permitted to use interest-rate reset dates to shorten the maturity of an adjustable-rate security or a floating rate security in their WAM calculation, but not in their WAL calculation.

¹³ Tax-exempt MMFs are exempt from the requirement regarding daily liquid assets.

available to the public 60 days after the end of the month to which the information pertains. These requirements allow the SEC, investors, and others to better monitor fund risk taking.

Facilitation of orderly fund liquidation. The 2010 reforms introduced a new rule, rule 22e-3 under the Investment Company Act, that permits the board of directors of an MMF, upon notification to the SEC, to suspend redemptions and liquidate the fund if it has broken, or is in danger of breaking, the buck. The rule is designed to prevent shareholder harm from distressed sales of securities that can occur with rapid liquidations when a fund breaks the buck.

While the enhancements introduced in the 2010 reforms increase resiliency and limit MMFs' exposure to certain risks, they do not address MMFs' structural vulnerabilities. These vulnerabilities and the resulting risks to financial stability are described in more detail in the following sections.

III. HISTORY OF REFORM EFFORTS AND ROLE OF THE FINANCIAL STABILITY OVERSIGHT COUNCIL

A. REFORM EFFORTS TO DATE

Following the financial crisis, the Department of the Treasury (“Treasury”) released a roadmap for financial reform in June 2009¹⁴ calling for: (i) the SEC to complete its near-term MMF reform efforts; and (ii) the PWG to evaluate the need for structural reform of MMFs. The SEC addressed this first element when it adopted the 2010 reforms.

At the time of the adoption of the 2010 reforms, the SEC noted that these reforms served as a “first step” in addressing MMF reform.¹⁵ In October 2010, the PWG released a report outlining a set of additional policy options intended to address the risks to financial stability posed by MMFs’ susceptibility to runs.¹⁶ This report stated that the 2010 reforms “alone could not be expected to prevent a run of the type experienced in September 2008.” This report was released for public comment and generated a large number of thoughtful and detailed responses, including suggestions by both academics and industry participants that MMFs maintain a capital buffer or impose a liquidity fee to help absorb losses and mitigate liquidity pressures. To further engage the public on reform, the SEC hosted a roundtable to discuss potential reform options in May 2011 that included Council members and their representatives, other regulators, trade groups, issuers of securities in which MMFs invest, MMF sponsors, and MMF investors. Throughout this period, the SEC engaged with stakeholders and regulators in an intensive effort to consider and refine various potential reform options.

Concurrently, the broader financial regulatory community in both the United States and abroad has made repeated calls for MMF reform. The Council, in both its 2011 and 2012 annual reports, highlighted the need for additional MMF reform to address structural vulnerabilities in the U.S. financial system. In 2012, the Council specifically recommended that the SEC publish structural reform proposals for public comment and ultimately adopt reforms that address MMFs’ lack of loss-absorption capacity and susceptibility to runs. The Office of Financial Research, in its 2012 annual report, identified the run risk for MMFs as one of the “current threats to financial stability.”

¹⁴ Treasury, “Financial Regulatory Reform: A New Foundation” (2009), *available at* http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf

¹⁵ SEC, Money Market Fund Reform, Investment Company Act Release No. IC-29132, 75 Fed. Reg. 10600, 10062 (Mar. 4, 2010) (“Our June 2009 proposals were the product of [the SEC’s and staff’s review of MMFs] and were, we explained, a first step to addressing regulatory concerns we identified.”).

¹⁶ President’s Working Group on Financial Markets, “Money Market Fund Reform Options” (Oct. 2010), *available at* <http://www.treasury.gov/press-center/press-releases/Documents/10.21%20PWG%20Report%20Final.pdf>

Internationally, on October 9, 2012, the International Organization of Securities Commissions (“IOSCO”) issued policy recommendations for reforming MMFs. The IOSCO recommendations demonstrate the efforts by the G-20 and the Financial Stability Board to fulfill the mandate of strengthening the oversight and regulation of the “shadow banking system.”¹⁷ There are also other international efforts, along with IOSCO’s, to consider aspects of MMF regulation where greater harmonization between jurisdictions and regulatory improvements could occur in an effort to avoid jurisdictional arbitrage.¹⁸

On August 22, 2012, SEC Chairman Schapiro announced that the majority of the SEC’s Commissioners would not support seeking public comment on the SEC’s staff proposal to reform the structure of MMFs. As a result, on September 27, 2012, the Chairperson of the Council, Treasury Secretary Geithner, sent a letter to Council members urging the Council to take action in the absence of the SEC doing so.

B. ROLE OF THE COUNCIL AND DODD-FRANK ACT SECTION 120

The Dodd-Frank Act established the Council “(A) to identify risks to the financial stability of the United States that could arise from the material financial distress or failure, or ongoing activities, of large, interconnected bank holding companies or nonbank financial companies, or that could arise outside the financial services marketplace; (B) to promote market discipline, by eliminating expectations on the part of shareholders, creditors, and counterparties of such companies that the Government will shield them from losses in the event of failure; and (C) to respond to emerging threats to the stability of the United States financial system.”¹⁹

To carry out its financial stability mission, the Council has various authorities, including the authority under Section 120 of the Dodd-Frank Act to issue recommendations to primary financial regulatory agencies to apply “new or heightened standards and safeguards” for a financial activity or practice conducted by bank holding companies or nonbank financial companies under the regulatory agency’s jurisdiction. Prior to issuing such a recommendation, the Council must determine that “the conduct, scope, nature, size, scale, concentration, or

¹⁷ IOSCO, “Policy Recommendations for Money Market Funds” (Oct. 2012), *available at* <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD392.pdf>. Substantially all of IOSCO’s recommendations are included in the SEC’s current regulation of MMFs or are addressed in these proposed recommendations. IOSCO noted in a media release issued on October 9, 2012, that although a majority of the SEC’s commissioners did not support the publication of IOSCO’s recommendations, there were no other objections, and IOSCO’s board approved the report containing the recommendations during its meeting on October 3-4, 2012. In addition, in a statement issued on May 11, 2012, three of the SEC’s commissioners stated that IOSCO’s consultation report on MMFs, published on April 27, 2012, did not reflect the views and input of a majority of the SEC and, accordingly, cannot be considered to represent the views of the SEC.

¹⁸ The European Commission is also considering the need for further reforms to their regulation of money market funds. *See* European Commission Green Paper on Shadow Banking (Mar. 19, 2012), *available at* http://ec.europa.eu/internal_market/bank/docs/shadow/green-paper_en.pdf; European Commission Consultation Document, Undertakings for Collective Investment in Transferable Securities (UCITS) Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-term Investments (Jul. 26, 2012), *available at* http://ec.europa.eu/internal_market/consultations/docs/2012/ucits/ucits_consultation_en.pdf.

¹⁹ Dodd-Frank Act Section 112(a)(1).

interconnectedness” of the financial activity or practice “could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies and nonbank financial companies, financial markets of the United States, or low-income, minority or underserved communities.”²⁰ The Council believes that MMFs are “predominantly engaged in financial activities”²¹ as defined in section 4(k) of the Bank Holding Company Act of 1956²² and thus are “nonbank financial companies”²³ for purposes of Title I of the Dodd-Frank Act.

Pursuant to Section 120 of the Dodd-Frank Act, the Council proposes to determine that the activities and practices of MMFs, for which the SEC is the primary financial regulatory agency, could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies, nonbank financial companies, and the financial markets of the United States. This proposed determination is set forth below in Section IV. The Council seeks public comment on this proposed determination.

To address the concerns regarding MMFs, the Council also seeks public comment on the proposed recommendations described in Section V. Comments are due 60 days after publication in the Federal Register. The Council will then consider the comments and may issue a final recommendation to the SEC, which, pursuant to the Dodd-Frank Act, would be required to impose the recommended standards, or similar standards that the Council deems acceptable, or explain in writing to the Council, not later than 90 days after the date on which the Council issues the final recommendation, why the SEC has determined not to follow the Council’s recommendation. If the SEC accepts the Council’s recommendation, it is expected that the SEC would implement the recommendation through a rulemaking, subject to public comment, that would consider the economic consequences of the implementing rule as informed by the SEC staff’s own economic study and analysis.

The SEC, by virtue of its institutional expertise and statutory authority, is best positioned to implement reforms to address the risks that MMFs present to the economy. If the SEC moves forward with meaningful structural reforms of MMFs before the Council completes its Section 120 process, the Council expects that it would not issue a final Section 120 recommendation to the SEC.

In addition to the proposed recommendations to the SEC under its Section 120 authority, the Council and some of its members are actively evaluating alternative authorities in the event the SEC determines not to impose the standards recommended by the Council in any final recommendation.

²⁰ Dodd-Frank Act Section 120(a).

²¹ See 12 U.S.C. § 5311(b).

²² See sections 4(k)(1), 4(k)(4)(A), 4(k)(4)(D), and 4(k)(4)(H) of the Bank Holding Company Act (12 U.S.C. §§ 1843(k)(1), 1843(k)(4)(A), 1843(k)(4)(D), 1843(k)(4)(H)).

²³ See 12 U.S.C. § 5311(a)(4).

For instance, under Title I of the Dodd-Frank Act, the Council has the authority and the duty to designate any nonbank financial company that could pose a threat to U.S. financial stability. Designated companies are subject to supervision by the Federal Reserve and enhanced prudential standards. Alternatively, the Council's authority to designate systemically important payment, clearing, or settlement activities under Title VIII of the Dodd-Frank Act could enable the application of heightened risk-management standards on an industry-wide basis. Additionally, other Council member agencies have the authority to take action to address certain of the risks posed by MMFs and similar cash-management products, as appropriate.

IV. PROPOSED DETERMINATION THAT MMFS COULD CREATE OR INCREASE THE RISK OF SIGNIFICANT LIQUIDITY AND CREDIT PROBLEMS SPREADING AMONG FINANCIAL COMPANIES AND MARKETS

In order to issue a recommendation under Section 120 of the Dodd-Frank Act, the Council must determine that the conduct, scope, nature, size, scale, concentration, or interconnectedness of MMFs' activities or practices could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies and nonbank financial companies, or U.S. financial markets.

As further discussed below, the conduct and nature of MMFs' activities and practices make MMFs vulnerable to destabilizing runs, which may spread quickly among funds, impairing liquidity broadly and curtailing the availability of short-term credit.²⁴ Because of the size, scale, concentration, and interconnectedness of MMFs' activities, the liquidity pressures on the MMF industry resulting from a run can cause this stress to propagate rapidly throughout the financial system and to the broader economy.

As was evidenced in the financial crisis, even small portfolio losses may cause a fund to break the buck. If investors perceive a risk of such an event, MMFs' lack of explicit loss-absorption capacity, the first-mover advantage enjoyed by redeeming investors, investor uncertainty regarding sponsor support, and the similarity of MMFs' portfolios can incite widespread runs on MMFs. Heavy redemptions may magnify losses for other funds and potentially cause them to break the buck and suspend redemptions under rule 22e-3, harming investors by impairing their liquidity. Further, due to the significant role MMFs play in the short-term credit markets, an

²⁴ The inherent fragility and susceptibility of MMFs to destabilizing runs has been the subject of considerable academic research and commentary. See, e.g., Sean S. Collins and Phillip R. Mack, "Avoiding Runs in Money Market Mutual Funds: Have Regulatory Reforms Reduced the Potential for a Crash," Working Paper 94-14, Federal Reserve Board Finance and Economics Discussion Series (June 1994); Naohiko Baba, Robert N. McCauley, and Srichander Ramaswamy, "US dollar money market funds and non-US banks," *BIS Quarterly Review* (March 2009), at 65-81; Gary Gorton and Andrew Metrick, "Regulating the Shadow Banking System," *Brookings Papers on Economic Activity* (Fall 2010), at 261-297; Patrick E. McCabe, "The Cross Section of Money Market Fund Risks and Financial Crises," Working Paper 2010-51, Federal Reserve Board Finance and Economics Discussion Series (September 2010); Squam Lake Group, "Reforming Money Market Funds," Letter to the Securities and Exchange Commission re: File No. 4-619; Release No. IC-29497 President's Working Group Report on Money Market Fund Reform (Jan. 14, 2011), available at <http://www.sec.gov/comments/4-619/4619-57.pdf>; Eric S. Rosengren, "Money Market Mutual Funds and Financial Stability: Remarks at the Federal Reserve Bank of Atlanta's 2012 Financial Markets Conference," (April 11, 2012), available at <http://www.bos.frb.org/news/speeches/rosengren/2012/041112/041112.pdf>; Marcin Kacperczyk and Philipp Schnabl, "How Safe are Money Market Funds?" (April 2012); Burcu Duygan-Bump, Patrick Parkinson, Eric Rosengren, Gustavo A. Suarez, and Paul Willen, "How effective were the Federal Reserve emergency liquidity facilities? Evidence from the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility," *Journal of Finance*, forthcoming; Patrick E. McCabe, Marco Cipriani, Michael Holscher, and Antoine Martin, "The Minimum Balance at Risk: A Proposal to Mitigate the Systemic Risks Posed by Money Market Funds," Working Paper 2012-47, Federal Reserve Board Finance and Economics Discussion Series (July 2012); David S. Scharfstein, "Perspectives on Money Market Mutual Fund Reforms," Testimony before U.S. Senate Committee on Banking, Housing, & Urban Affairs (June 21, 2012); Jeffrey N. Gordon and Christopher M. Gandia, "Money Market Funds Run Risk: Will Floating Net Asset Value Fix the Problem?" Columbia Law and Economics Working Paper No. 426 (Sept. 23, 2012), available at http://papers.ssm.com/sol3/papers.cfm?abstract_id=2134995.

industry-wide run on MMFs can reduce the availability of credit to borrowers. Ultimately, a run on MMFs can create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies, nonbank financial companies, and U.S. financial markets.

- **Conduct and nature of activities and practices:** Several activities and practices of MMFs combine to create a vulnerability to runs, including: (i) relying on the amortized cost method of valuation and/or penny rounding to maintain a stable \$1.00 per share price; (ii) offering shares that may be redeemed on demand despite MMFs' limited same-day liquidity; (iii) investing in assets that are subject to interest-rate and credit risk without having explicit loss-absorption capacity; (iv) relying upon *ad hoc* discretionary support from sponsors, which has often shielded investors from losses and obscured portfolio risks; and (v) attracting a base of highly risk-averse investors that are prone to withdraw assets when even small losses appear possible. Together, these activities and practices foster MMFs' structural vulnerability to runs by creating a first-mover advantage that provides an incentive for investors to redeem their shares at the first indication of any perceived threat to an MMF's value or liquidity. Because MMFs lack any explicit capacity to absorb losses in their portfolio holdings without depressing the market-based value of their shares, even a small threat to an MMF can start a run.
- **Size, scale, and concentration of activities and practices:** The MMF industry is large, with \$2.9 trillion in assets, and provides a substantial portion of the short-term funding available to a range of borrowers in the capital markets. The industry is also highly concentrated, as the top 20 MMF sponsors operate funds with 90 percent of aggregate MMF assets under management.
- **Interconnectedness of activities and practices:** MMFs are highly interconnected with the rest of the financial system and can transmit stress throughout the system because of their role as intermediaries, as significant investors in the short-term funding markets, as potential recipients of economic support from the financial institutions that sponsor them, and as important providers of cash-management services.

Below is a further discussion of MMFs' activities and practices and how they contribute to the funds' vulnerability to runs, how those runs may transmit stresses throughout the financial system, evidence from the run on MMFs during the financial crisis, and an explanation of why action is needed beyond the 2010 reforms. The Council solicits public comment on this proposed determination.

MMFs' vulnerability to runs results in part from the conduct and nature of the activities and practices of MMFs, their sponsors, and their investors.

The stable, rounded NAV per share. Unlike other mutual funds, most MMFs rely on valuation and rounding methods to maintain a stable NAV per share, typically \$1.00. Rounding obscures the daily movements in the value of an MMF's portfolio and fosters an expectation that MMF share prices will not fluctuate. Importantly, rounding also exacerbates investors' incentives to run when there is risk that prices *will* fluctuate. When an MMF that has experienced a small loss satisfies redemption requests at the rounded \$1.00 share price, the fund effectively subsidizes these redemptions by concentrating the loss among the remaining shareholders. As a result, redemptions from such a fund can further depress its shadow NAV and increase the risk that the MMF will break the buck. This contributes to a first-mover advantage, in which those who redeem early are more likely to receive the full \$1.00 per share than those who wait. Thus, first movers have a free option to put their investment back to the fund by redeeming shares at the customary stable NAV of \$1.00 per share (rather than at a share price reflecting the market value of the underlying securities held by the MMF). In the absence of an explicit mechanism to take losses in the value of the securities held by an MMF without depressing the fund's shadow NAV, the "first movers" leave other fund investors sharing in such losses.

Shares that can be redeemed on demand despite limited portfolio liquidity. MMFs perform maturity transformation by offering shares that investors may redeem on demand — providing shareholders unlimited daily liquidity — while also investing in relatively longer-term securities. MMFs invest not only in highly liquid instruments, such as securities that mature overnight and Treasury securities, but also in short-term instruments that are less liquid, including term CP and term repo. In the event of shareholder redemptions in excess of an MMF's available liquidity, a fund may be forced to sell less-liquid assets to meet redemptions. In times of stress, such sales may cause funds to suffer losses that must be absorbed by the fund's remaining investors, further reinforcing the first-mover advantage. Importantly, while the minimum liquidity requirements implemented in the SEC's 2010 reforms should make MMFs more resilient to market disruptions by increasing the funds' supply of liquid assets that can quickly be converted to cash, as noted below, these requirements are not designed to mitigate the first-mover advantage when a fund is at risk of suffering losses.

Investments with interest-rate and credit risk without explicit loss-absorption capacity. MMFs invest in securities with credit and interest-rate risk to increase the yields they offer to investors, but the funds do so without any formal capacity to absorb losses.²⁵ The short

²⁵ See SEC, "Unofficial Transcript: Roundtable on Money Market Funds and Systemic Risk" (May 10, 2011), *available at* <http://www.sec.gov/spotlight/mmf-risk/mmf-risk-transcript-051011.htm> (quoting Seth P. Bernstein of J.P. Morgan Asset Management, "We find ourselves uncomfortable about the informal arrangements that have existed in the industry for some time because we believe it's both an issue of credit risk embedded in the portfolios, as well as the liquidity issues that arise in a run").

maturities of these securities and their high credit quality generally limit portfolio risks, but MMFs on occasion have been exposed to potentially significant losses. For example, 29 MMFs participating in the Treasury's Temporary Guarantee Program for Money Market Funds reported losses in September and October 2008 that, absent sponsor support, would have exceeded 0.50 percent of assets, and losses among those funds averaged 2.2 percent of assets.²⁶ As discussed in more detail below, the Reserve Primary Fund's experience demonstrates that the loss in value of a single security in an MMF's portfolio can cause the fund to break the buck. As a result of investors' expectations of a stable \$1.00 per share NAV, even a small capital loss at an MMF can give its investors a strong incentive to redeem their shares.

Reliance on discretionary sponsor support. In the absence of capital, insurance, or any other formal mechanism to absorb losses when they do occur, MMFs historically have relied upon *ad hoc* discretionary support from their sponsors to maintain \$1.00 per share prices.²⁷ Unlike other types of mutual funds, MMF sponsors have often supported their funds, with researchers documenting over 200 instances of such support since 1989.²⁸

While MMF prospectuses must warn investors that their shares may lose value,²⁹ the extensive record of sponsor intervention and its critical role historically in maintaining MMF price stability may have obscured some investors' appreciation of MMF risks and caused some investors to assume that MMF sponsors will absorb any losses, even though sponsors are under no obligation to do so. As such, it is not the sponsor support itself, but rather its discretionary nature that contributes to uncertainty among market participants about who will bear losses when they do occur. This uncertainty likely makes MMFs even more vulnerable to runs during periods of financial instability, when broader financial risks are most salient and when concerns arise about the health of the sponsors and their wherewithal to provide support to affiliated MMFs.

²⁶ These data exclude losses that were absorbed by some forms of sponsor support, such as direct cash infusions to a fund and outright purchases of securities from a fund at above-market prices, so the number of funds that would have broken the buck in the absence of *all forms* of support may have exceeded 29. See McCabe, Cipriani, Holscher, and Martin, 2012.

²⁷ See SEC, "Unofficial Transcript: Roundtable on Money Market Funds and Systemic Risk" (May 10, 2011), available at <http://www.sec.gov/spotlight/mmfrisk/mmfrisk-transcript-051011.htm>. At the roundtable, Bill Stouten of Thrivent Financial stated, "I think the primary factor that makes money funds vulnerable to runs is the marketing of the stable NAV. And I think the record of money market funds and maintaining the stable NAV has largely been the result of periodic voluntary sponsor support. I think sophisticated investors that understand this and doubt the willingness or ability of the sponsor to make that support know that they need to pull their money out before a declining asset is sold."

²⁸ Moody's found 144 cases in which U.S. MMFs "would have 'broken the buck' but for the intervention of their fund sponsor/investment management firm" from 1989 to 2003. Moody's identified a total of 146 funds that would have lost value before 2007 in the absence of support, but one of these losses occurred before the adoption of rule 2a-7 and another loss was in a European fund. The Moody's report covers "constant net asset value" funds other than MMFs, but we understand that the remaining 144 funds in question were all registered U.S. MMFs. Moody's Investors Service, "Sponsor Support Key to Money Market Funds" (Aug. 8, 2010). Separately, other researchers documented 123 instances of support for 78 different MMFs between 2007 and 2011. These totals include support in the form of cash contributions from sponsors and outright purchases of securities from MMFs at above-market prices. However, the totals cited here exclude some forms of sponsor intervention, including capital support agreements and letters of credit that were not drawn upon. See Steffanie A. Brady, Ken E. Anadu, and Nathaniel R. Cooper, "The Stability of Prime Money Market Mutual Funds: Sponsor Support from 2007 to 2011," Federal Reserve Bank of Boston Risk and Policy Analysis Unit, Working Paper RPA 12-3 (Aug. 13, 2012).

²⁹ An MMF's prospectus must state, "An investment in the Fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at \$1.00 per share, it is possible to lose money by investing in the Fund." SEC Form N-1A, Item 4(b)(1)(ii).

Highly risk-averse investors. Although MMFs invest in assets that may lose value and the funds are under no legal or regulatory requirement to redeem shares at \$1.00, the industry’s record of maintaining stable and rounded \$1.00 per share NAVs combined with the funds’ low-risk investment strategies has attracted highly risk-averse investors that are prone to withdraw assets rapidly when losses appear possible.³⁰ This has been exacerbated by the outsized growth of institutional MMFs in recent decades. MMFs marketed primarily to institutional investors made up only about one-third of industry assets in 1996 but account for almost two-thirds of assets today.³¹ Institutional investors are typically more sophisticated than retail investors in obtaining and analyzing information about MMF portfolios and risks, have larger amounts at stake, and hence are quicker to respond to events that may threaten the stable NAV.

Interaction of these activities and practices. In combination, the activities and practices of MMFs described above tend to exacerbate each other’s effects and increase MMFs’ vulnerability to runs. For example, by relying on the amortized cost method of valuation and/or penny rounding to maintain a stable \$1.00 per share NAV, offering shares that may be redeemed on demand despite limited same-day portfolio liquidity, and investing in assets with interest-rate and credit risk without explicit loss-absorption capacity, MMFs create a first-mover advantage for investors who redeem quickly during times of stress. If MMFs with rounded NAVs had lacked sponsor support over the past few decades, many might have broken the buck, causing investors to recalibrate their perception of MMF risks and resulting in a less risk-averse investor base. Or if funds maintained credible loss-absorption capacity, even a risk-averse investor base might be less likely to run because the funds would be better equipped to maintain a stable \$1.00 per share NAV. As a result, policy responses that diminish these destabilizing interactions hold promise for mitigating the risks that MMFs pose — even if not all five of these activities and practices are fully addressed through reform.

SIZE, SCALE, AND CONCENTRATION

MMFs’ size, scale, and concentration increase both their vulnerability to runs and the damaging impact of runs on short-term credit markets, borrowers, and investors.

³⁰ See SEC, “Unofficial Transcript: Roundtable on Money Market Funds and Systemic Risk” (May 10, 2011), *available at* <http://www.sec.gov/spotlight/mmf-risk/mmf-risk-transcript-051011.htm> (quoting Lance Pan of Capital Advisors Group, “[MMF investors] will take zero loss, and they’re loss averse as opposed to risk averse. So to the extent that they own that risk, at a certain point they started to own that risk, then the run would start to develop. It’s not that throughout the history of money market funds we did not have asset deterioration. We did. But I think over the last 30 or 40 years, people have relied on the perception that even though there is risk in money market funds, that risk is owned somehow implicitly by the fund sponsors. So once they perceive that they are not able to get that additional assurance, I believe that was one probable cause of the run.”

³¹ ICI Fact Book; Investment Company Institute, “Weekly Money Market Mutual Fund Assets,” *available at* <http://www.ici.org/research/stats/mmf> (Oct. 25, 2012).

As discussed in Section II, the MMF industry is large, with \$2.9 trillion in assets under management.³² MMFs are important providers of short-term funding to financial institutions, nonfinancial firms, and governments, and play a dominant role in some short-term funding markets. For example, as of September 30, 2012, MMFs owned 44 percent of U.S. dollar-denominated financial CP outstanding and about 30 percent of all uninsured dollar-denominated time deposits, including nearly two-thirds of the CDs that are tradable in financial markets.³³ These funds also provided approximately one-third of the lending in the tri-party repo market and held significant portions of the outstanding short-term securities issued by state and local governments, the Treasury, and federal agencies.³⁴ Given the dominant role of MMFs in short-term funding markets, runs on these funds can therefore have severe implications for the availability of credit and liquidity in those markets.

In addition, because of the concentration of the MMF industry, even heavy withdrawals from (or shifts in portfolio holdings of) MMFs offered by a handful of asset management firms may reverberate through financial markets. As of September 30, 2012, the top five MMF sponsors managed funds with \$1.3 trillion in assets (46 percent of industry assets), and the top 20 sponsors managed \$2.6 trillion (90 percent).³⁵

INTERCONNECTEDNESS

MMFs' extensive interconnectedness with financial firms, the financial system, and the U.S. economy can create a significant threat to broader financial stability because the shocks from a run on MMFs can rapidly propagate to other entities throughout the financial system.

Most of the short-term financing that MMFs provide to non-government entities is extended to financial firms. As of September 30, 2012, 86 percent of the funding that MMFs extended to private entities was in the form of financial sector obligations, including CDs, financial CP, asset-backed commercial paper ("ABCP"), repo, other MMF shares, and insurance company funding agreements.³⁶ Among the top 50 private sector firms that received funding from prime MMFs in September 2012, only four were nonfinancial firms.³⁷ Moreover, because 13 of the top 15 private-sector firms receiving funding were domiciled outside the United States, MMFs can

³² Aggregate assets under management in all MMFs that are registered under the Investment Company Act of 1940 and report on Form N-MFP to the SEC totaled \$2.9 trillion at September 30, 2012. However, shares for some of these MMFs are not registered for sale to the public under the Securities Act of 1933. The assets in funds that are sold to the public totaled \$2.6 trillion at September 30, 2012, according to data from the Investment Company Institute and iMoneyNet.

³³ Based on MMFs' filings of SEC Form N-MFP, CD data from the Depository Trust & Clearing Corporation ("DTCC"), large time deposits data from the Federal Reserve Board Flow of Funds Accounts, and CP data from DTCC and the Federal Reserve Board.

³⁴ For repo data, see Federal Reserve Bank of New York, http://www.newyorkfed.org/banking/tpr_infr_reform.html; for short-term municipal securities, see SIFMA, <http://www.sifma.org/research/item.aspx?id=8589940509> and Flow of Funds Accounts of the United States.

³⁵ Based on Form N-MFP filings with the SEC.

³⁶ Based on Form N-MFP filings with the SEC.

³⁷ Based on Form N-MFP filings with the SEC; see Scharfstein, 2012.

also represent a potential channel for rapid transmission of global stress to the U.S. financial markets.

MMFs are further interconnected with the U.S. financial system because bank and savings and loan holding companies sponsor MMFs. Sponsors face potential risks because, historically, sponsors have absorbed nearly all MMF losses that threatened the funds' \$1.00 per share NAVs, and sponsors would likely face pressure from investors and other market participants to continue to do so in the future. As of September 30, 2012, MMFs that are sponsored by subsidiaries of bank holding companies accounted for 41 percent of industry assets, and MMFs sponsored by subsidiaries of thrift holding companies accounted for another 11 percent of the industry's assets.³⁸

The interconnectedness of the financial system and MMFs is exacerbated by the role of banks in providing liquidity enhancements and guarantees for securities held by MMFs. As of September 30, 2012, for example, three large U.S. banks provided liquidity or credit support for approximately \$100 billion in securities held by MMFs, and European financial institutions provided liquidity or credit support for more than \$115 billion in such securities.³⁹ Tax-exempt MMFs hold many of these securities, which are largely obligations of state and local governments and other tax-exempt issuers.⁴⁰ Due to these interconnections with financial firms, stress at MMFs can spread rapidly into the banking system and then more broadly through the financial system.

MMFs may also transmit risk to the broader economy through the payments system because MMFs are used as cash management vehicles by individual investors, businesses and other institutional investors, and governments. MMFs offer services such as check writing and other bank-like functions, particularly for retail investors. In addition, MMF shares outstanding are sizable relative to money stock measures. As of September 30, 2012, assets in MMFs registered with the SEC for sale to the public were 25 percent of the size of the Federal Reserve's M2 money stock measure, and prime fund assets alone were 14 percent of M2.⁴¹ Hence, a widespread run on MMFs could quickly pose liquidity problems for the millions of investors — households, businesses, and governments — that use MMFs for cash management, and such an event would resonate rapidly throughout the payments system.

Finally, not only are MMFs interconnected with the financial sector and payments system, but the funds themselves are also highly interconnected due to their common exposures. The largest prime funds generally provide funding to a relatively small group of firms with high credit

³⁸ Based on Form N-MFP and form ADV filings with the SEC, company websites, and staff analysis from Federal Reserve Bank of Boston.

³⁹ Based on Form N-MFP filings with the SEC.

⁴⁰ Based on Form N-MFP filings with the SEC.

⁴¹ The M2 money-stock measure includes retail MMF assets (excluding IRA and Keogh balances at MMFs) but not institutional MMF assets. M2 totaled \$10.1 trillion in September 2012.

quality,⁴² consistent with the requirements of rule 2a-7, leading to the potential for highly correlated losses. As of September 30, 2012, for example, financing for the top 50 firms accounted for 91 percent of prime MMF investments in private entities,⁴³ while 10 firms accounted for 39 percent. In addition, 14 firms individually received funding from more than half of the 243 prime MMFs.⁴⁴ The similarity of MMF portfolio holdings increases the contagion risk to the entire MMF industry and to the broader financial system in the event that one MMF encounters stress.

EVIDENCE FROM THE 2007–2008 FINANCIAL CRISIS

The financial crisis demonstrated how the conduct, nature, size, scale, concentration, and interconnectedness of MMFs' activities and practices described above can interact and amplify the transmission of risk of significant liquidity and credit problems in the financial system.

Run on prime MMFs. MMFs came under intense stress after the Reserve Primary Fund announced on September 16, 2008, that it would break the buck due to losses on the Lehman Brothers Holdings, Inc. (“Lehman”) debt instruments that the fund owned. These holdings represented just 1.2 percent of that fund’s assets — well below the 5 percent limit applicable to such holdings — but, due to the lack of explicit loss-absorption capacity, that exposure was large enough to cause the fund to break the buck.⁴⁵

The Reserve Primary Fund’s loss immediately started a run on that fund, as investors sought to redeem approximately \$40 billion from the fund in just two days.⁴⁶ More importantly, the run quickly spread to other prime MMFs and illustrated several activities and practices that make MMFs vulnerable to runs as well as the contagion risk to the industry. The failure of Reserve Primary Fund’s sponsor to deliver support for its fund may have heightened investors’ uncertainty about the likelihood of discretionary sponsor support at other MMFs and, as a result,

⁴² This discussion focuses on prime MMFs, but holdings of other types of MMFs within the same category (such as different tax-exempt MMFs that specialize in the same state) also tend to be similar.

⁴³ Based on Form N-MFP filings with the SEC; *see* Scharfstein, 2012.

⁴⁴ Based on Form N-MFP filings with the SEC.

⁴⁵ The Reserve Primary Fund was only the second MMF to break the buck since rules for MMFs were first introduced in 1983. In 1994, the Community Bankers U.S. Government Money Market Fund, a small government MMF, broke the buck because of exposures to interest rate derivatives. The event passed without significant repercussions, in part because the Community Bankers U.S. Government Money Market Fund was very small (less than \$100 million in assets when it closed) and was sold to a narrow group of investors, “principally to small community banks seeking an alternative to lending money overnight on deposit at Federal Reserve banks at the federal funds rate” (*see* SEC, In the Matter of Craig S. Vanucci and Brian K. Andrew, Respondents: Order Instituting Public Administrative and Cease-and-Desist Proceedings (Jan. 11, 1998), Administrative Proceeding File No. 3-9804). In addition, the contagion risk stemming from this MMF’s problem may have been limited by its idiosyncratic portfolio. According to the SEC cease and desist order, the fund had an “unsuitable investment” (27.5 percent of its assets) in adjustable-rate derivative securities. *See also* Jeffrey N. Gordon and Christopher M. Gandia, “Money Market Fund Run Risk: Will Floating Net Asset Value Fix the Problem?” Columbia Law School (Sept. 4, 2012).

⁴⁶ However, the Reserve Primary Fund evidently did not honor all of these redemptions, because it announced on October 30, 2008, that “[t]he Fund’s total assets have been approximately \$51 billion since the close of business on September 15.” The Reserve, “Reserve Primary Fund Makes Initial Distribution of \$26 Billion to Primary Fund Shareholders” (Oct. 30, 2008). *See also* McCabe, 2010, at A-1; SEC, Securities and Exchange Commission v. Reserve Management Company, Inc. et al. Civil Action No. 09-CV-4346 (May 5, 2009).

accelerated the run on the entire prime MMF industry. At least a dozen MMFs held Lehman securities at the time of the Lehman bankruptcy, and the Reserve Primary Fund's Lehman holdings were below the average holdings among MMFs with exposure to Lehman.⁴⁷ However, the most serious phase of the run on MMFs occurred not in the two business days immediately after the Lehman bankruptcy, but in the two days following the Reserve Primary Fund's announcement that it had broken the buck.⁴⁸

In addition, outflows from institutional prime MMFs following the Lehman bankruptcy tended to be larger among MMFs with sponsors that were themselves under stress, indicating that MMF investors redeemed shares when concerned about sponsors' potential inability to bolster ailing funds.⁴⁹ These run dynamics were primarily prevalent among the more sophisticated, risk-averse institutional investors, as institutional funds accounted for 95 percent of the net redemptions from prime funds.⁵⁰

Aggregate daily outflows from *other* prime MMFs tripled the day after the Reserve Primary Fund announced its loss.⁵¹ During the week of September 15, 2008, investors withdrew approximately \$310 billion (15 percent of assets) from prime MMFs. The run slowed only after Treasury established the Temporary Guarantee Program for Money Market Funds and the Board of Governors of the Federal Reserve System established facilities aimed at stabilizing markets linked to MMFs.

Despite government intervention, the run in September 2008 led to rapid disinvestment by MMFs of short-term instruments which severely exacerbated stress in already strained financial markets. For example, in the three weeks following the Lehman bankruptcy, prime MMFs reduced their holdings of CP by \$202 billion (29 percent) and repo by \$75 billion (32 percent).⁵² The reduction in CP held by MMFs accounted for a substantial portion of the decline in outstanding CP during that period⁵³ and contributed to a sharp rise in borrowing costs for CP issuers.⁵⁴ MMFs managed by just a dozen firms accounted for almost three-quarters of the \$202

⁴⁷ Moody's Investors Service, "Lehman Support in Prime Money Market Funds," mimeo, April 30, 2012. The sponsors of the other MMFs with exposure to Lehman provided support to their funds, and as result did not break the buck as the Reserve Primary Fund did.

⁴⁸ According to data from iMoneyNet (with adjustments to correct misreported assets for the Reserve Primary Fund and for one closed MMF), prime MMF assets fell \$81 billion in the two business days after the Lehman bankruptcy. In the two days following the Reserve Primary Fund's late-afternoon announcement on September 16 that it had broken the buck, prime MMF assets dropped \$194 billion. *But see, e.g.*, Comment Letter of Treasury Strategies, Inc., SEC File No. 4-619 (Jun. 1, 2012) (stating that MMFs "have been misidentified as a proximate contributor to the financial crisis").

⁴⁹ As measured by credit default swap spreads for parent firms or affiliates. *See McCabe*, 2010.

⁵⁰ Based on data from iMoneyNet for the week following the Lehman bankruptcy.

⁵¹ Based on data from iMoneyNet.

⁵² Based on data from iMoneyNet on changes in prime MMFs' portfolio holdings from September 9 to September 30, 2008.

⁵³ Data from the Federal Reserve Board show that total CP outstanding declined \$206 billion in that three-week period.

⁵⁴ *See* Federal Open Market Committee, "Minutes of the Federal Open Market Committee, October 28-29, 2008," at 3, 5.

billion decline in the industry's holdings of CP, and five MMF sponsors accounted for almost half of the decline.⁵⁵

Impact on government MMFs. While the run in September 2008 centered on prime MMFs, government MMFs attracted *inflows* of \$192 billion during the week following the Lehman bankruptcy.⁵⁶ Some commenters have argued that these inflows provide evidence that MMFs are not structurally vulnerable to runs.⁵⁷ However, the activities and practices discussed above do not lead investors to redeem their shares in all types of funds simultaneously, but rather they increase the possibility that losses at one or more MMFs may lead to widespread redemptions at other funds that share similar characteristics. Such contagion was evident among prime MMFs in 2008 due to, among other factors, the similarity of their portfolios. Government MMFs did not face similar run vulnerabilities at the time because they had significantly different portfolio holdings than the distressed prime funds and many government MMF investments were appreciating in value. Government MMFs nonetheless may pose the same structural risks, in that the funds' investors would have an incentive to redeem if they feared even small losses.

Importantly, the inflows to government funds in 2008 did not mitigate the damage caused by the run on prime MMFs. Government MMFs only purchase limited amounts of private debt securities and hence could not alleviate the reduction in the availability of credit for businesses and financial institutions that relied on MMFs for short-term financing.⁵⁸

Furthermore, government MMFs also can be vulnerable to runs. In November 2008, Treasury agreed to assist with the liquidation of the Reserve Fund's U.S. Government Fund by serving as "a buyer of last resort" for securities held by the fund, which suspended redemptions in September 2008.⁵⁹ In addition, during the last three business days in July 2011, amid large net redemptions from institutional MMFs (discussed below), outflows from government MMFs totaled 7 percent of assets and exceeded (as a percentage of assets) outflows from prime funds.⁶⁰

⁵⁵ Based on data from iMoneyNet.

⁵⁶ Based on data from iMoneyNet.

⁵⁷ See, e.g., Comment Letter of the Investment Company Institute, SEC File No. 4-619 (Aug. 20, 2012) (stating, "Investors pulled about \$300 billion from prime money market funds, which held such securities. But those investors didn't run from money market funds. For every dollar that left prime funds, 61 cents went into Treasury and government and agency funds. It was a classic flight to quality—and money market funds were the vehicle of choice for fleeing investors.").

⁵⁸ MMF shareholders moving their investments from prime MMFs to government MMFs in September 2008 may have reduced the effect of this episode on the availability of repo financing (since some government funds invest in repo), on the aggregate assets of MMFs, and on the fees earned by MMF advisers.

⁵⁹ See Treasury, "Treasury Enters into Agreement to Assist the Reserve Fund's US Government Money Market Fund" (2008), available at <http://www.treasury.gov/press-center/press-releases/Pages/hp1286.aspx>.

⁶⁰ Based on daily data on MMF assets from iMoneyNet.

The SEC's 2010 reforms are important, but further reform is needed. The SEC's 2010 reforms helped to make MMFs more resilient to certain short-term market risks and more transparent. However, they did not address certain activities and practices of MMFs that continue to make the funds vulnerable to runs. Moreover, MMFs remain concentrated and highly interconnected with one another, the U.S. banking system, and the broader financial system.

Of the activities and practices listed above that make MMFs susceptible to runs, the two most directly addressed in the SEC's 2010 reforms are liquidity risks associated with maturity transformation and MMF portfolios' exposures to credit and interest-rate risks. While the reforms reduced these risks, many of the credit and liquidity risks at issue in 2008 persist today. Importantly, if the rules adopted in 2010 had been in place in 2008, they would not have prevented the Reserve Primary Fund from breaking the buck due to its holdings of Lehman securities.

Moreover, the redemptions from many MMFs during the run in 2008 exceeded the liquidity buffers now mandated by the daily and weekly liquidity requirements that were adopted as part of the 2010 reforms. At the height of the run in 2008, 40 institutional prime MMFs (excluding the Reserve Primary Fund) had one-day outflows in excess of the new 10 percent daily liquidity requirement, and 13 of those funds' one-day outflows exceeded 20 percent of assets. In addition, 10 institutional prime funds had five-day outflows exceeding the new 30 percent weekly liquidity requirement, including eight funds with five-day outflows greater than 40 percent of assets.⁶¹ Notably, outflows in 2008 probably would have been considerably larger in the absence of the unprecedented government interventions to support MMFs and short-term funding markets.

Evidence from 2011. Heavy outflows from institutional prime MMFs in the summer of 2011 further highlighted MMFs' continued vulnerability to runs, even after the 2010 reforms. In the eight weeks ending on August 3, 2011, institutional prime funds experienced net outflows of \$179 billion (16 percent of assets).⁶² Because the pace of outflows in 2011 was well below that experienced during the run in September 2008 (total net redemptions from prime institutional funds in *two days* in 2008 exceeded the eight-week outflow in 2011),⁶³ MMFs were able to withstand redemption pressures without further repercussions.

⁶¹ Based on daily data on MMF assets from iMoneyNet.

⁶² Based on weekly data on MMF assets from the Investment Company Institute.

⁶³ Based on daily data on MMF assets from iMoneyNet, prime MMF assets fell a total of \$194 billion on September 17 and 18, 2008.

The institutional investor redemptions were apparently in response to concerns about the funds' European holdings and the U.S. debt-ceiling impasse.⁶⁴ Importantly, these outflows occurred despite the fact that the MMFs suffered no material losses during this episode.⁶⁵ This is in stark contrast to August 2007, when many MMFs held distressed ABCP that ultimately lost significant value, yet institutional investors generally did not respond by redeeming MMF shares, likely because investors expected sponsors to absorb the losses.⁶⁶ Redemptions in the summer of 2011 may indicate that institutional investors have become more reactive and run-prone since 2008, when the Reserve Primary Fund's sponsor was unable to provide support to prevent that fund from breaking the buck. Furthermore, the increase in certain MMFs' exposure to European securities in 2011 appears to have been motivated by increased risk-taking in an attempt to boost investment yields and revenues.⁶⁷ This motive was also reportedly a significant factor in the investment policies that ultimately led the Reserve Primary Fund to break the buck.⁶⁸

COUNCIL PROPOSED DETERMINATION REGARDING MMFS

As described above, the conduct and nature of MMFs' activities and practices make MMFs vulnerable to runs that can spread quickly across the industry. As evidenced in the financial crisis, runs on MMFs can result in significant liquidity, credit and other problems in the short-term credit markets, particularly given the size and scale of the MMF industry's participation in those markets; cause or exacerbate substantial stresses in the financial system; and threaten financial stability. The interconnections among MMFs and the concentration of the MMF industry increase the likelihood that stresses at one MMF will spread to other MMFs, and MMFs' interconnectedness with other financial firms means that stresses in MMFs can spread rapidly to the larger financial system, further limiting system-wide liquidity and credit. Therefore, the Council proposes to determine that the conduct, nature, size, scale, concentration, and interconnectedness of MMFs' activities and practices could create or increase the risk of significant liquidity and credit problems spreading among bank holding companies, nonbank financial companies, and the financial markets of the United States.

⁶⁴ Outflows from institutional prime MMFs were highly correlated with the funds' European exposures, particularly in June 2011. See Sergey Chernenko and Adi Sunderam, "The Quiet Run of 2011: Money Market Funds and the European Debt Crisis," (May 12, 2012). During this eight-week period, retail prime MMFs had small net *inflows*.

⁶⁵ During this episode of heavy redemptions (from May to August 2011), the largest monthly decline in any prime MMF's reported shadow NAV was 12 basis points, and only five funds experienced shadow NAV declines of more than 4 basis points. Such small changes in shadow NAVs are not unusual: In the first seven months of 2012, three prime MMFs reported shadow NAV declines of 10 basis points or more. Presumably, if MMFs *had* suffered material losses in the summer of 2011, redemptions would have been larger.

⁶⁶ See SEC, Money Market Fund Reform, Investment Company Act Release No. IC-28807, 74 Fed. Reg. 32688, 32691 (July 8, 2009); McCabe, 2010; Brady, Anadu, and Cooper, 2012.

⁶⁷ See Chernenko and Sunderam, 2012 and Rosengren, 2012.

⁶⁸ See Investment Company Institute, "Report of the Money Market Working Group" (March 17, 2009); McCabe, 2010; Kacperczyk and Schnabl, 2012.

V. PROPOSED RECOMMENDATIONS

The Council seeks comment on proposed recommendations to the SEC to address the structural vulnerabilities of MMFs discussed in Section IV. In particular, the Council aims to address the activities and practices of MMFs that make them vulnerable to destabilizing runs: (i) the lack of explicit loss-absorption capacity in the event of a drop in the value of a security held by an MMF, and (ii) the first-mover advantage that provides an incentive for investors to redeem their shares at the first indication of any perceived threat to an MMF's value or liquidity.

In considering options for further reform, the Council notes three key features of MMFs that make them appealing to investors: the stability of principal associated with the funds' stable \$1.00 per share NAV; liquidity through shares that can be redeemed on demand; and market-based yields that often exceed those of short-term Treasury securities and rates on FDIC-insured bank deposits.

The activities and practices of MMFs that have made them appealing to investors also contribute to their vulnerability to runs. For example, both MMFs' reliance on rounding to maintain stable NAVs and the liquidity of MMF shares contribute to a first-mover advantage for redeeming investors. MMFs' practice of investing in short-term securities with interest-rate and credit risk to boost yields, without explicit loss-absorption capacity, makes them more vulnerable when losses do occur.

Therefore, reforms that would provide meaningful mitigation of the risks posed by MMFs would likely reduce their appeal to investors by altering one or more of their attractive features. The first proposed alternative would require funds to have a floating NAV by removing the valuation and pricing provisions in rule 2a-7 that currently allow funds to maintain a stable, rounded \$1.00 NAV. Alternatives Two and Three would preserve, and potentially bolster, the principal stability that investors currently enjoy by preserving the stable NAV, but would likely reduce the higher yields and/or the liquidity that MMFs offer to investors. These reform alternatives, therefore, present trade-offs between stability, yield, and liquidity.

Different MMF investors may have different preferences. Accordingly, it may be optimal to offer both floating NAV funds and stable NAV funds with enhanced protections and to allow investors to determine which they prefer. The Council seeks comment on the merits of adopting such a flexible approach as well as the merits of recommending a single structural reform alternative.

A. ALTERNATIVE ONE: FLOATING NET ASSET VALUE

Require MMFs to have a floating net asset value per share (“NAV”) by removing the special exemption that currently allows MMFs to utilize amortized cost accounting and / or penny rounding to maintain a stable NAV. The value of MMFs’ shares would not be fixed at \$1.00 and would reflect the actual market value of the underlying portfolio holdings, consistent with the requirements that apply to all other mutual funds.

(i) DESCRIPTION OF THE ALTERNATIVE

Overview. This reform alternative would require MMFs to have a floating NAV instead of a stable NAV. The price per share would fluctuate based on small changes in the value of the MMF’s portfolio, rather than remaining at \$1.00 absent a break the buck event. As such, the value of MMFs’ shares would reflect the market value of the underlying portfolio holdings, consistent with the valuation requirements that apply to all other mutual funds under the Investment Company Act. As discussed in more detail below, a requirement that MMFs use floating NAVs could make investors less likely to redeem *en masse* when faced with the prospect of even modest losses by eliminating the “cliff effect” associated with breaking the buck. Regular fluctuations in MMF NAVs likely would cause investors to become accustomed to, and more tolerant of, fluctuations in NAVs. A floating NAV would also reduce the first-mover advantage that exists in MMFs today because investors would no longer be able to redeem their shares for \$1.00 when the shares’ market-based value is less than \$1.00. This alternative does not contemplate requiring funds to have an NAV buffer.

Rule 2a-7 protections remain. Consistent with investors’ expectations about the nature of their MMF investments, the risk limiting provisions of rule 2a-7 that govern the credit quality, maturity, liquidity, and diversification of MMFs’ portfolios would continue to apply to any fund that called itself a “money market fund” or used a similar name.

Portfolio valuation. This alternative would require removing the provisions of rule 2a-7 that allow MMFs to use the penny rounding method of pricing and the amortized cost method of valuation for their portfolios, except to the extent other mutual funds may do so. Rather, MMFs would value their portfolios like all other mutual funds, including using amortized cost valuation only under certain limited circumstances.⁶⁹

⁶⁹ All mutual funds, when fair valuing a portfolio debt security, may value the security at its amortized cost only if the security has a remaining maturity of 60 days or less and the fund’s board of directors determines, in good faith, that the security’s fair value is its amortized cost value and the circumstances do not suggest otherwise (*e.g.*, an impairment of the creditworthiness of an issuer). See SEC, Valuation of Debt Instruments by Money Market Funds and Certain Other Open-End Investment Companies, Investment Company Act Release No. 9786, 42 Fed. Reg. 28999 (June 7, 1977).

Share pricing. Under this alternative, each floating-NAV MMF would re-price its shares to \$100.00 per share (or initially sell them at that price) to be more sensitive to fluctuations in the value of the portfolio's underlying securities than under a \$1.00 share price. For example, a 5 basis point loss would not move the share price of a floating-NAV MMF with a share price of \$1.00.⁷⁰ If the fund's shares were priced at \$100.00, in contrast, the fund's share price would decrease by 5 cents to \$99.95. Hence, a \$100.00 share price is more likely than a \$1.00 share price to result in regular fluctuations in NAVs and therefore changes in investor expectations and behavior. Just like in any other mutual fund, shareholders would be able to purchase and redeem fractional shares, and as a result the re-pricing would not impact shareholder purchases and redemptions. For example, a shareholder could still purchase or redeem \$50 of MMF shares regardless of the fund's price per share.

Removing exemptions under the Investment Company Act. Because MMFs would no longer seek to maintain a stable NAV, the SEC also would need to rescind two rules under the Investment Company Act that provide exemptions to MMFs to prevent a fund from breaking the buck:

- *Orderly Liquidation.* Rule 22e-3 currently allows an MMF to suspend redemptions and begin an orderly liquidation if the fund has broken or is about to break the buck. With a floating NAV, the need for MMF sponsors or boards of directors to suspend redemptions or otherwise intervene upon share price declines should be significantly reduced except under the most extreme market circumstances.⁷¹
- *Sponsor Support.* Rule 17a-9 allows affiliates of an MMF to purchase portfolio securities from an MMF and typically is used to support an MMF's stable price per share. Because a floating-NAV MMF is designed to fluctuate in value, allowing the type of affiliate support currently permitted under rule 17a-9 would appear to be unnecessary. This type of affiliate support is not permitted for any other type of mutual fund.

Transition. To reduce potential disruptions and facilitate the transition to a floating NAV for investors and issuers, existing MMFs could be grandfathered and allowed to maintain a stable NAV for a phase-out period, potentially lasting five years. Instead of requiring these grandfathered funds to transition to a floating NAV immediately, the SEC would prohibit any new share purchases in the grandfathered stable-NAV MMFs after a predetermined date, and any new investments would have to be made in floating-NAV MMFs. This would discourage significant and sudden investor redemptions that could occur out of fear that a fund would force existing shareholders to incur a loss immediately upon the fund's transition to a floating NAV.

⁷⁰ The fund would have a share price of \$0.9995 after the loss which, even without penny rounding, would be rounded up to \$1.00.

⁷¹ Any mutual fund, including a floating-NAV MMF, may seek an order from the SEC permitting the fund to suspend redemptions and liquidate.

An SEC requirement that all MMFs operate with a floating NAV could reduce financial instability and the risk of runs among MMFs in several ways.

Modified investor expectations. A floating NAV would make gains and losses on MMF investments a regular occurrence. It would accustom investors to changes in the value of their MMF shares and reduce the perception that shareholders do not bear any risk of loss when they invest in an MMF. Such beliefs can make MMFs prone to runs if shareholders suddenly become concerned that they may bear losses. Breaking the buck should no longer be a significant event because MMFs would simply fluctuate in value in the same manner as other mutual funds. Losses — which are inevitable in an investment product — would no longer be obscured by valuation and rounding conventions, but would be borne by shareholders and reflected in a fund's share price just like all other mutual funds.

Similar to other mutual funds. A floating NAV would allow MMFs to operate with the same price transparency as all other mutual funds. Currently, shadow prices for stable NAV funds are disclosed on a monthly basis with a 60-day delay. Under a floating NAV model, shareholders would not be required to obtain and analyze an MMF's portfolio to surmise the fund's mark-to-market value. Rather, investors would see day-to-day fluctuations in value in different market conditions and interest-rate environments, just as they do today with all other mutual funds. This information should help all types of investors in MMFs make investment decisions that better match their risk-return preferences.

Investors bear risk. A floating NAV would remove uncertainty or confusion regarding who bears the risk of loss in an MMF. A floating NAV would reinforce the principle that investors, not fund sponsors or taxpayers, are expected to bear the pro rata risk of loss in MMFs, as they do with other investment vehicles.

Reduced first-mover advantage. Such a change would reduce, though not eliminate, the first-mover advantage currently present in MMFs because all redemptions would be priced at a fund's per share mark-to-market value. MMF shareholders would no longer have the opportunity to redeem shares at \$1.00 when their market-based value falls below \$1.00; so redemptions would no longer threaten to concentrate an MMF's loss over a shrinking shareholder base. In addition, even if some shareholders redeem due to a sudden change in perceived risk, a floating NAV results in a fairer allocation of losses among redeeming and remaining investors.

Though this first-mover advantage would be reduced, the incentive to redeem before others may remain, in part, because each MMF has a limited supply of liquid assets with which to meet redemptions. Shareholders still may have an incentive to redeem quickly from an MMF, just as they do from any mutual fund that is at risk of depleting its most liquid assets, because subsequent redemptions may force the fund to dispose of less liquid assets and potentially incur losses. In addition, while a floating NAV would remove the ability of a shareholder to redeem

shares at \$1.00 when the market value is less than \$1.00, it would not remove a shareholder's incentive to redeem whenever the shareholder believes that the NAV will decline significantly in the future, consistent with the incentive that exists today for other types of mutual funds.

Evidence from other jurisdictions and U.S. ultra-short bond funds suggests that floating-NAV MMFs could experience redemption pressures under stressed market conditions.⁷² Such behavior could be more likely if a floating-NAV MMF continues to be used as a cash management product and investors do not fully adjust their expectations of the risks inherent in MMFs. This adjustment could fail to take place because, under normal market conditions, the value of a floating-NAV MMF, even re-priced to \$100.00 per share, would likely not fluctuate to the same degree as other mutual funds because of the risk-limiting conditions applicable to MMFs.⁷³ Investors may come to accept small, temporary variations in the value of their MMF shares, but still redeem at the prospect of larger declines.

Tax considerations. A floating NAV for MMFs also would present certain federal income tax issues for MMFs and their investors. The stable NAV of MMF shares under present law results in simpler tax-reporting rules for transactions in MMF shares than the rules for transactions in shares of all other types of mutual funds. Because all purchases and sales of MMF shares are at the same \$1.00 price, these transactions generate no taxable gains or losses, obviating the need for shareholders to track the basis and holding period of particular shares. If the NAV of MMF shares were instead to fluctuate, there would be gains and losses to report. More specifically, because each redemption of MMF shares could produce a gain or loss for the shareholder, it would be necessary to determine for every redemption—(i) which share was redeemed, (ii) the tax basis (generally, the acquisition cost) of that share, and (iii) whether the holding period of that share was long term or short term. In addition, if a shareholder purchases shares in an MMF within thirty days before or after a redemption, the Tax Code's "wash sale" rules would limit the extent to which the shareholder could deduct any loss realized on the redemption.⁷⁴

Because of the high volume of redemptions of shares of MMFs, however, and because of the minimal per share losses that may result from each redemption, the Council understands that the Treasury Department and the IRS will consider administrative relief for both shareholders and

⁷² Floating NAV cash funds in other jurisdictions and U.S. ultra-short bond funds also suffered heavy redemptions during the financial crisis. See, e.g., Gordon and Gandia, 2012 and Comment Letter of the Investment Company Institute, SEC File No. 4-619 (Jan. 10, 2011), at 33-34 ("ICI January PWG Letter") (noting that "by the end of 2008, assets of [ultra-short bond] funds were down more than 60 percent from their peak in mid-2007" and "French floating NAV dynamic money funds (or *trésorerie dynamique* funds), lost about 40 percent of their assets over a three-month time span from July 2007 to September 2007"); Comment Letter of the European Fund and Asset Management Association, SEC File No. 4-619 (Jan. 10, 2011) ("In a matter of weeks, EUR 70 billion were redeemed from these [enhanced money market] funds, predominantly by institutional investors; around 15-20 suspended redemptions for a short period, and 4 of them were definitely closed"). In each case, these funds were not subject to the same investment restrictions as U.S. MMFs and as a result the experience of these funds is not necessarily indicative of the way floating-NAV MMFs and their investors would respond under this alternative in times of stress. In addition, many European MMFs accumulate dividends, rather than distributing any net income the fund earns to shareholders. Accordingly, losses in these funds are generally reflected as a negative yield rather than a loss in the value of a share.

⁷³ See, e.g., Comment Letter of HSBC Global Asset Management on the European Commission's Green Paper on Shadow Banking (May 28, 2012), available at http://ec.europa.eu/internal_market/consultations/2012/shadow/individual-others/hsbc_en.pdf.

⁷⁴ See 26 USC 1091.

fund sponsors. Among the questions that the Council understands they plan to address are whether changes to tax rules and forms (including new assumptions and default methods) could simplify the measurement and reporting of gains and losses from floating-NAV MMFs. Today, the sponsors of non-MMF⁷⁵ mutual funds must report the basis and holding period of redeemed shares both to the IRS and to redeeming shareholders (referred to as “basis reporting”). The Treasury Department and the IRS have indicated to the Council that they will consider the extent to which expansion or modification of basis reporting could help shareholders deal with floating-NAV MMFs. Finally, they will evaluate the possibility of some administrative relief from the wash sale rules for *de minimis* losses on floating-NAV MMF shares.

Accounting impacts. There also are accounting considerations relating to floating-NAV MMFs. U.S. generally accepted accounting principles (“GAAP”) currently include investments in MMFs as an example of a cash equivalent.⁷⁶ Shareholders and their accountants would need to evaluate whether a floating-NAV MMF meets the characteristics of a cash equivalent under relevant accounting guidance.

Operational costs. MMFs also would have to change their operations to accommodate a floating NAV. MMFs and their transfer agents are currently required to have the capacity to transact at the fund’s floating NAV,⁷⁷ but a permanent change to a floating NAV may require additional operational changes.⁷⁸ These costs may be mitigated, however, because MMFs are required periodically to determine their market-based NAV and currently have systems in place to do so. In addition, MMF sponsors may be able to adapt the systems used by their other mutual funds, which price at market value each day, to their floating-NAV MMFs. For example, funds may need to modify policies and procedures in order to calculate a daily floating NAV per share and to communicate that value to their distribution partners and shareholders on an ongoing basis. Both fund complexes and other intermediaries in the distribution chain may need to reprogram systems to accommodate a permanent floating NAV.

MMFs’ current ability to transact at a stable NAV also generates other operational efficiencies that may be lost with a floating NAV. Some of these conveniences have evolved due to expectations that MMF share prices would never fluctuate and are not consistent with the actual risks in MMF portfolios. For example, a stable NAV facilitates same-day settlement of purchase

⁷⁵ 26 C.F.R. § 1.6045-1(c)(3)(vi) exempts MMFs from this requirement.

⁷⁶ Financial Accounting Standards Board, Accounting Standards Codification paragraph 305-10-20.

⁷⁷ 17 C.F.R. § 270.2a-7(c)(13).

⁷⁸ For a discussion of potential operational costs, *see e.g.*, Comment Letter of John D. Hawke, Jr. on behalf of Federated Investors, Inc., SEC File No. 4-619 (Dec. 15, 2011).

and redemption transactions. MMFs would need to modify systems to allow same-day settlement to continue with a floating-NAV MMF or shift to next day settlement.⁷⁹

Impact on industry size. Moving to a floating NAV may cause the MMF industry's AUM to contract. Some MMF investors may be unwilling or unable to conduct their cash management through an investment vehicle that does not offer a stable value.⁸⁰ Some institutional investors may be prohibited by board-approved guidelines or firm policies from conducting cash management using MMFs that do not have a stable NAV and may be unwilling to change these policies. Other investors, such as some state and local governments, may be subject to statutory or regulatory requirements that permit them to invest certain assets only in funds that seek to maintain a stable net asset value.

These factors may reduce overall investor demand for MMFs, which would diminish the funds' capacity to invest in the short-term securities of financial institutions, businesses, and governments, possibly impacting their costs of funding.⁸¹ Elimination of the stable NAV would be a significant change for a multi-trillion dollar industry in which the stable \$1.00 share price has been a core feature. It may take time for investors and short-term funding markets to adjust to such a change, and the ultimate long-term reaction to such a change is difficult to predict with any precision. In addition, if the transition to the new regulatory regime prompted investors to redeem suddenly and substantially, the transition itself could create financial instability. A longer transition period and the grandfathering of existing fund shareholdings are designed to lessen this risk.

(iii) QUESTIONS

The Council requests comment on this alternative as well as on all aspects of the discussion presented above. The Council also requests any quantitative analysis or data from commenters relating to this alternative.

⁷⁹ To see one example of a floating-NAV MMF that conducts same-day settlement, *see* DWS Variable NAV Money Fund Prospectus (Dec. 1, 2011) ("If the fund receives a sell request prior to the 4:00 p.m. Eastern time cut-off, the proceeds will normally be wired on the same day. However, the shares sold will not earn that day's dividend.").

⁸⁰ *See generally* ICI January PWG Letter; Comment Letter of the American Bankers Association, SEC File No. S7-11-09 (Sept. 8, 2009); Comment Letter of Fidelity Investments, SEC File No. 4-619 (Feb. 3, 2012); Comment Letter of Treasury Strategies, Inc., SEC File No. S7-11-09 (Sept. 8, 2009).

⁸¹ *See, e.g.*, Comment Letter of the Investment Company Institute, SEC File No. 4-619 (Apr. 19, 2012) (enclosing survey data reflecting, among other things, that 79 percent of the 203 respondents (corporate, government, and institutional investors) would decrease or stop using MMFs if the funds had floating NAVs); Comment Letter of Fidelity Investments, SEC File No. 4-619 (Feb. 3, 2012) (enclosing survey data reflecting, among other things, that 57 percent of surveyed institutional investors and 47 percent of surveyed retail investors would reduce or eliminate their investments in MMFs if the funds used floating NAVs). Some institutional investors could be required to seek changes to investment policies or statutory or regulatory restrictions that otherwise could preclude them from investing certain assets in funds with floating NAVs. *See, e.g.*, Comment Letter of the American Bankers Association, SEC File No. S7-11-09 (Sept. 8, 2009).

Would requiring that all MMFs operate with a floating NAV make them less susceptible to runs? Would it reduce or increase the potential financial instability associated with MMFs? Would it enhance their resiliency?

Would floating the NAV alter investor expectations and make them substantially more willing to bear losses from their MMF investments? Alternatively, would shareholders become accustomed only to relatively small fluctuations in value but redeem heavily in the face of more significant losses?

Would some MMF sponsors support their MMFs despite the elimination of rule 17a-9 (for instance, by contributing capital) under this option and thereby prevent their share prices from deviating materially on a day-to-day basis? If so, would this mitigate the achievement of reform objectives? Should sponsor support of MMFs be prohibited?⁸²

Would initially re-pricing MMF shares to \$100.00 per share help sensitize investors to fluctuations in fund value and better change investor expectations? Should they be initially re-priced to a different value than \$100.00 to best achieve this goal, for instance, \$10.00?

Should existing MMFs be grandfathered for a limited phase-in period, as discussed above, or should they be grandfathered indefinitely? What length of time should be the optimal phase-in period? What length of time would be appropriate after which the SEC would prohibit any new share purchases in stable-NAV MMFs, and any new investments would have to be made in floating-NAV MMFs?

Should the current basis reporting rules applicable to other mutual funds be extended to MMFs in their present form, or can those rules be simplified in a manner that better reflects the comparatively larger volume of transactions in MMF shares and the greater likelihood that gains or losses arising from those transactions will be relatively small on a per-share basis? Are there changes to the basis-reporting rules, such as the use of rounding conventions, that would reduce compliance costs for MMFs while providing shareholders with the information they would need?

Are there classes of MMF shareholders to which current law does not require basis reporting but which may be unable to obtain this information from an MMF fund in the absence of an explicit regulatory requirement?

If the Treasury Department and the IRS were to provide administrative relief for *de minimis* losses on wash sales of shares in MMFs, what should be the terms of that relief?

⁸² See, e.g., Comment Letter of HSBC Global Asset Management on the European Commission's Green Paper on Shadow Banking (May 28, 2012), available at http://ec.europa.eu/internal_market/consultations/2012/shadow/individual-others/hsbc_en.pdf. "We believe any ambiguity of risk ownership must be removed so risk is correctly priced. We therefore propose a prohibition on MMF sponsors providing support to their MMFs. This will make clear to all investors that they are buying an investment product and own the risks and rewards of that investment."

How significant are the accounting and operational considerations relating to floating-NAV MMFs? To lessen possible issues arising from these considerations, what recommendations would commenters have for possible changes to accounting treatment for floating-NAV MMFs? What amount of operational costs would fund groups incur to implement a floating NAV for MMFs? To what extent are funds and their intermediaries currently prepared to operate floating-NAV MMFs on an ongoing basis due to the current requirement that MMFs be able to transact at a price other than the fund's stable price per share and as a result of the group's existing systems for their other mutual funds?

Would investors and their accountants consider floating-NAV MMFs to be cash equivalents under relevant accounting guidance without clarification by accounting standard setters? If not, what are the implications for a shareholder that treats MMF shares as an investment for accounting purposes? If not, and if there were relief on the potential accounting considerations, would these funds be an attractive investment to investors?

Should any types of MMFs be exempt from a requirement that they operate with a floating NAV, such as retail MMFs, Treasury MMFs, or government MMFs? If so, why? If there were an exemption for retail funds, how should the SEC define a retail MMF?

Should MMFs be required to mark-to-market all assets in their portfolios under this option and be limited in using the amortized cost method of valuation to the same extent as other mutual funds? Why or why not? If the SEC required MMFs to use floating NAVs like other mutual funds, should it nonetheless continue to permit different valuation practices regarding portfolio securities for MMFs versus other mutual funds? How effective would this be during times of stress, when markets for such securities may be less liquid or transparent?

Should a floating NAV requirement be combined with any other regulatory reform options, such as redemption restrictions, to further lessen funds' susceptibility to runs? If so, which restrictions and why?

How would floating the NAV affect investor demand for MMFs? To what extent and why would investors discontinue investing in MMFs if they operated with a floating NAV? Where would investors shift their investments and how would this mitigate or increase risks to financial stability?

B. ALTERNATIVE TWO: NAV BUFFER AND MINIMUM BALANCE AT RISK

Require MMFs to have an NAV buffer with a tailored amount of assets of up to 1 percent to absorb day-to-day fluctuations in the value of the funds' portfolio securities and allow the funds to maintain a stable NAV. The NAV buffer would have an appropriate transition period and could be raised through various methods. The NAV buffer would be paired with a requirement that 3 percent of a shareholder's highest account value in excess of \$100,000 during the previous 30 days — a minimum balance at risk (MBR) — be made available for redemption on a delayed basis. Most redemptions would be unaffected by this requirement, but redemptions of an investor's MBR itself would be delayed for 30 days. In the event that an MMF suffers losses that exceed its NAV buffer, the losses would be borne first by the MBRs of shareholders who have recently redeemed, creating a disincentive to redeem and providing protection for shareholders who remain in the fund. These requirements would not apply to Treasury MMFs, and the MBR requirement would not apply to investors with account balances below \$100,000.

(i) DESCRIPTION OF THE ALTERNATIVE

A second regulatory reform alternative would mandate that most MMFs: (i) maintain an NAV buffer, which would be a tailored amount of assets of up to 1 percent in excess of those needed for a fund to maintain its \$1.00 share price and which would absorb day-to-day fluctuations in the value of the fund's portfolio securities; and (ii) require that 3 percent of any shareholder's highest account value in excess of \$100,000 during the previous 30 days (the MBR) be available for redemption with a 30-day delay. The MBR requirement would have no effect on any redemptions that leave an investor's remaining balance at least as large as the MBR; only redemptions of the MBR itself would be delayed. In the event that an MMF suffers losses that exceed its NAV buffer, those losses would be borne first by the MBRs of shareholders who have recently redeemed. These requirements would not apply to Treasury MMFs, and investors with balances of less than \$100,000 would not be subject to the MBR requirement.

The NAV buffer and the MBR would be designed to reduce MMFs' susceptibility to runs by allowing a fund to absorb day-to-day fluctuations in the value of its portfolio securities, providing a disincentive for shareholders to redeem in times of stress, and allocating more fairly the costs to the fund that can result when shareholders do redeem. This alternative would be designed to address the structural vulnerabilities of MMFs while also allowing them to continue to maintain a stable NAV under most conditions.

Overview. MMFs would be required to maintain an NAV buffer, which would provide a fund with additional assets that would be available to absorb daily fluctuations in the value of the fund's portfolio securities. The NAV buffer would allow funds generally to maintain a \$1.00 stable value per share and replace the provisions of rule 2a-7 that allow MMFs to use the penny-rounding method of pricing and the amortized cost method of valuation.

Size of the NAV buffer. The required minimum size of a fund's NAV buffer would be tailored based on the riskiness of the fund's assets, using the following formula:

- (i) no buffer requirement for cash, Treasury securities, and Treasury repos (repos collateralized solely by cash and Treasury securities);
- (ii) a 0.75 percent buffer requirement for other daily liquid assets (or for weekly liquid assets, in the case of tax-exempt funds);⁸³ and
- (iii) a 1.00 percent buffer requirement for all other assets.⁸⁴

Treasury MMFs — MMFs that invest at least 80 percent of their assets in cash, Treasury securities, and Treasury repos — would not be required to maintain an NAV buffer.⁸⁵ A fund whose NAV buffer fell below the required minimum amount would be required to limit its new investments to cash, Treasury securities, and Treasury repos until its NAV buffer was restored, using the methods discussed below. A fund that completely exhausted its NAV buffer would be required to suspend redemptions and liquidate under rule 22e-3, which the SEC would have to amend for this purpose, or could continue to operate as a floating-NAV MMF indefinitely or until it restored its NAV buffer.⁸⁶

Funding the NAV buffer. An MMF would be permitted to use any funding method or combination of methods it found optimal to build the NAV buffer, and could vary these methods over time in response to market conditions and other considerations. An NAV buffer that may be raised from the capital markets, fund sponsors, and income from the fund itself would be designed to provide flexibility for funds to raise the buffer at the lowest possible cost. We have identified three funding methods that would be possible with SEC relief from certain provisions of the Investment Company Act:

⁸³ Daily and weekly liquid assets are defined in rule 2a-7, as described in Section II.

⁸⁴ Based on data reported to the SEC on Form N-MFP as of September 30, 2012, the average NAV buffer would be approximately 0.84 percent for prime funds; 0.80 percent for tax-exempt funds; and 0.70 percent for government funds.

⁸⁵ Treasury MMFs, despite not having an NAV buffer, generally would be able to maintain a stable value because they would be permitted to continue to use penny rounding. Treasury MMFs also would not be required to have minimum balances at risk, as discussed below.

⁸⁶ In the event that a fund is converted to a floating-NAV MMF, any subordinated portion of investors' MBRs (as discussed below) would be depleted before repricing the shares.

- *Escrow account.* An MMF’s sponsor could establish and contribute assets to an escrow account pledged to support the fund’s NAV. The escrow account would be limited to holding weekly liquid assets (i.e., cash, Treasury securities, certain short-term government securities, and securities payable within five business days). These accounts would be similar to the segregated accounts established by some MMF sponsors during the financial crisis to support their funds’ stable values,⁸⁷ and therefore are a tested and, for some, familiar method of funding.
- *Subordinated buffer shares.* MMFs could issue a class of subordinated, non-redeemable equity securities (“buffer shares”) that would absorb first losses in the funds’ portfolios and that could be sold to third parties or purchased by a fund’s sponsor or affiliates. The buffer shares would be permitted to pay higher dividends than those paid to redeemable shares but would have a subordinated claim on the fund’s assets. The fund’s redeemable shares would offer a preferred claim on the fund’s assets up to \$1.00 per share (i.e., the buffer shares would absorb losses before they affect the redeemable shareholder’s \$1.00 share value).⁸⁸
- *Retained earnings.* An MMF could retain some earnings it otherwise would distribute to shareholders. The usefulness of this method of funding, however, would be greatly limited by the tax law requirements for maintaining the ability to avoid any fund-level tax. In addition to incurring tax on any amount retained, an MMF would be required to pay tax on the amounts that it does distribute if it fails to distribute substantially all of its earnings each year.

In order to permit an MMF to build its NAV buffer through the issuance of buffer shares or the retention of earnings, the SEC would need to amend rule 2a-7 to allow the fund to redeem and sell its redeemable shares for \$1.00 per share, even when the value of the fund’s assets, including the NAV buffer, is above \$1.00.⁸⁹ In addition, a fund could be permitted to reduce an NAV buffer that becomes too large relative to the size of the fund’s portfolio. A fund’s board of directors could allow the fund to repurchase buffer shares, and a sponsor could recover assets it had contributed to an escrow account, in both cases only if the fund would exceed the minimum required NAV buffer immediately thereafter.

Transition period. In order to allow sufficient time for funds to raise the NAV buffer, an MMF would be required to put in place a buffer equal to one-half of the buffer described above one

⁸⁷ See, e.g., SEC Staff No-Action Letter to Legg Mason Partners Institutional Trust—Western Asset Institutional Money Market Fund (Oct. 22, 2008).

⁸⁸ To prevent overreaching on the part of a sponsor or affiliate, the MMF would not be permitted to pay buffer shares held by a sponsor or affiliate dividends at a higher rate than that paid to the redeemable shares unless at least 75 percent of the fund’s buffer shares were owned by unaffiliated persons. This limitation would be designed to ensure that sponsors and other affiliates would receive dividends on their buffer shares at rates established in an arms’-length process.

⁸⁹ Today, in contrast, if a fund’s market-based NAV exceeds \$1.00 by more than 50 basis points, the fund would have to re-price its shares to \$1.01 (or higher).

year after the effective date of any rule. The full required buffer would have to be in place two years after the effective date.

MINIMUM BALANCE AT RISK

Overview. The NAV buffer would be coupled with a requirement that 3 percent of any shareholder's highest account value in excess of \$100,000 during the previous 30 days (the shareholder's MBR) be available for redemption only with a 30-day delay. The MBR requirement would have no effect on any redemptions that leave an investor's remaining balance at least as large as the MBR. Shares other than those in the investor's MBR would be redeemable on demand, just as MMF shares are today; only redemptions of the MBR itself would be delayed. The MBR requirement, like the NAV buffer, would not apply to Treasury MMFs. In addition, the MBR requirement would not apply to investors with account balances of less than \$100,000.

The MBR requirement would ensure that an investor who redeems from an MMF remains partially invested in the fund for 30 days and would share in any losses that the fund incurs during that time. This is designed to dampen investors' incentive to redeem quickly in a crisis, because they cannot entirely avoid imminent losses simply by redeeming. Furthermore, as discussed in more detail below, if the MMF suffers losses that exceed its NAV buffer, those losses would be borne first by the MBRs of shareholders who have recently redeemed. This allocation of losses would be designed to create a disincentive to redeem when an MMF is under stress and would provide some protection for shareholders who do not redeem.

Size of the MBR. An investor's MBR would be equal to 3 percent of the investor's "High Water Mark," which would be the amount, if any, by which the highest balance in that investor's account over the previous 30 days exceeded \$100,000. At any point in time, an investor's account balance available for immediate redemptions would be equal to the account balance less the MBR (the investor's "Available Balance").⁹⁰

MBR delay period. If an investor chooses to redeem more than the Available Balance (e.g., all of the shares in the account), the fund would be required to delay redemption of the MBR for 30 days. The investor would receive the MBR redemption proceeds, priced at \$1.00 per share, after the 30-day delay period, unless the MMF suffered a loss in excess of its NAV buffer during that period. The MBR requirement would have no effect on an investor's transactions in the fund as long as the remaining shares exceeded the MBR.

⁹⁰ The MBR calculation would exclude any MBR shares that the shareholder has tendered for redemption but that have not yet been redeemed due to the required delay period.

Subordination of the MBR. For those investors subject to an MBR requirement, a portion of the investor's MBR could be subject to first loss (subordinated) if the investor had made net redemptions in excess of \$100,000 during the prior 30 days, with the extent of subordination approximately proportionate to the shareholder's cumulative net redemptions during the prior 30 days.⁹¹ In the event that an MMF suffered losses in excess of its NAV buffer, and only in such an event, the subordinated portions of shareholders' MBRs would absorb losses before other shares do.⁹²

Illustrative examples.⁹³ The following examples illustrate how an MBR requirement would operate:

(a) An investor with a \$200,000 MMF account and a \$100,000 High Water Mark redeems \$120,000. The transaction is unaffected by the MBR requirement because the remaining balance of \$80,000 exceeds the MBR of \$3,000 (equal to 3 percent of the High Water Mark). The transaction does, however, cause a portion of the investor's MBR to be placed in a subordinated, or first-loss, position. The portion of the MBR that would be subordinated is \$619.⁹⁴

(b) The investor closes the account the next day. The investor receives \$77,000, all of the Available Balance, immediately. This represents the entire remaining account value of \$80,000 less the \$3,000 MBR. The MBR shares will be redeemed after a 30-day delay. By closing the account, the investor causes its entire MBR to be subordinated for that 30-day period.⁹⁵ However, the investor will receive the full \$3,000 after the 30-day delay, unless the fund suffers losses in excess of its NAV buffer.

Design considerations. The 30-day delay period is designed to provide protection against preemptive runs while not unnecessarily inconveniencing redeeming shareholders or blunting the role of redemptions in imposing market discipline on MMFs. The delay should be sufficient to ensure that redeeming shareholders remain invested in the fund long enough to share in any losses due to stress on the fund at the time of redemption or liquidity costs that might be

⁹¹ Specifically, the number of subordinated shares would be zero for an investor whose account value exceeds the High Water Mark, as would be the case for any investor with an account balance that has not recently (or ever) exceeded \$100,000. Otherwise, the fund would determine the number of subordinated MBR shares as follows: $MBR \times ((High\ Water\ Mark - current\ balance) \div (High\ Water\ Mark - MBR))$.

⁹² Losses that exceed the total of the fund's NAV buffer and the subordinated portions of shareholders' MBRs would be absorbed by the remaining portions of investors' MBRs. Any losses that exceed the total of the fund's NAV buffer and all of its shareholders' MBRs (subordinated and unsubordinated) would be allocated proportionally among the remaining shares in the fund. MMFs would be required to file as exhibits to their registration statements plans of liquidation providing for the liquidation of their assets in accordance with these priorities.

⁹³ For additional analysis on the operation of a minimum balance at risk requirement, see Patrick E. McCabe, Marco Cipriani, Michael Holscher, and Antoine Martin, *The Minimum Balance at Risk: A Proposal to Mitigate the Systemic Risks Posed by Money Market Funds*, Federal Reserve Bank of New York Staff Report No. 564 (July 2012).

⁹⁴ The subordinated portion of the MBR would be: $MBR \times ((High\ Water\ Mark - current\ balance) \div (High\ Water\ Mark - MBR))$. Here, this amount is $\$3,000 \times ((\$100,000 - \$80,000) \div (\$100,000 - \$3,000)) = \619 .

⁹⁵ That is, the subordinated portion of the MBR would be: $MBR \times ((High\ Water\ Mark - current\ balance) \div (High\ Water\ Mark - MBR))$. Here, this amount is $\$3,000 \times ((\$100,000 - \$3,000) \div (\$100,000 - \$3,000)) = \$3,000$.

generated by their redemptions. On average, about half of MMF portfolio assets mature in 30 days or less,⁹⁶ and a 30-day period likely would be long enough to prevent a shareholder from avoiding a specific anticipated loss by preemptively redeeming. As a result, the 30-day delay period would provide more protection against preemptive runs than might occur with shorter delay periods. The MBR may also enhance market discipline by causing MMF investors to monitor more carefully MMF operations and risk-taking and redeem shares from a poorly run MMF *well in advance* of any specific problems developing in the fund's portfolio because investors would be unable to redeem quickly *during* a crisis to avoid losses.

The size of the MBR (3 percent) is designed to be large enough to mitigate the risk of destabilizing runs while, at the same time, not so large as to unnecessarily inconvenience shareholders. In order to reduce the incentives for investors to redeem from an MMF under stress, the combined size of the MBR and the NAV buffer must be greater than the expected portfolio losses in such an MMF as well as the liquidity losses that investors may suffer as a consequence of the MMF's closure.

The 3 percent MBR, combined with the NAV buffer, is designed to mitigate this risk in most potential loss scenarios. For example, although the record of MMF losses has been obscured by sponsor support actions, two MMFs have broken the buck since the adoption of rule 2a-7 in 1983. The Community Bankers U.S. Government Money Market Fund lost 3.9 percent of its value in 1994, and the Reserve Primary Fund announced a 3 percent loss on September 16, 2008. In addition, as previously discussed, data collected from MMFs participating in the Treasury's Temporary Guarantee Program for Money Market Funds show that losses among MMFs that would have broken the buck in the absence of sponsor support averaged 2.2 percent, including five funds that had losses exceeding 3 percent.⁹⁷ A default of MMFs' largest single-name exposures could also produce similarly sized losses. As of September 30, 2012, the average prime MMF had investments in approximately 20 firms that each exceeded 1 percent of the fund's assets and had investments in securities issued by seven firms, predominately financial institutions, that each exceeded 3 percent of the fund's assets.⁹⁸

Importantly, because the MBR creates a disincentive for large redemptions when a fund is under stress and expected losses are less than the size of the MBR, the MBR's size need not exceed every conceivable loss to be effective in preventing runs from spreading among funds. While the combination of the NAV buffer and the 3 percent MBR likely would not be sufficient to stop a

⁹⁶ Data reported to the SEC on Form N-MFP show that as of September 30, 2012, 52 percent of all MMF assets and 47 percent of prime MMF assets matured in 30 days or less.

⁹⁷ These data exclude losses that were absorbed by some forms of sponsor support, such as direct cash infusions to a fund and outright purchases of securities from a fund at above-market prices, so the number of funds that would have broken the buck in the absence of all forms of support may have exceeded 29. See McCabe, Cipriani, Holscher, and Martin, 2012.

⁹⁸ Based on data reported to the SEC on Form N-MFP as of September 30, 2012. Excludes exposures through repo backed by U.S. government securities and sponsored ABCP conduits. The definition of firm in this analysis differs from the definition of issuer in rule 2a-7, as it combines all affiliates within a single consolidated group as one firm.

run on an MMF if investors anticipate very large losses in that fund, such a combination may be large enough to stem runs on most other funds unless investors expect that very large losses would be incurred across MMFs.

Application to recordholders. MMFs would be required to apply the MBR requirement to each of their recordholders. This would include recordholders that are financial intermediaries, such as banks or broker-dealers that hold shares on behalf of their customers, unless the intermediaries provide the MMF sufficient information to apply the MBR requirement to the intermediaries' individual customers directly. Absent such information, an MMF and its financial intermediary recordholders would allocate between themselves the responsibility (and associated costs) of applying the MBR requirement equitably.⁹⁹

Treasury MMFs and retail investors. Treasury MMFs would not be required to maintain NAV buffers, and their shareholders would not have MBRs. Treasury MMFs are unlikely to suffer credit events; tend to experience net inflows, rather than net redemptions, in times of stress; and may be more likely to maintain a stable value during times of market stress, when Treasury securities generally maintain their values. Treasury MMFs would continue to be able to use penny rounding to maintain a stable value.

Because the MBR only applies to investors with account balances greater than \$100,000, many retail investors would not be subject to the MBR requirement. The experience of MMFs during the financial crisis and the redemption pressures that some MMFs experienced in the summer of 2011 suggest that retail investors are far less likely to redeem in times of stress. In both episodes, institutional MMFs experienced substantially more redemptions than retail MMFs.¹⁰⁰

(ii) BENEFITS AND CONSIDERATIONS

A requirement for most MMFs to maintain NAV buffers and MBRs could mitigate funds' susceptibility to runs and reduce the likelihood of resulting financial instability in several ways.

Reduced first-mover advantage. A buffer-supported NAV would reduce the first-mover advantage that exists under rule 2a-7's current rounding conventions.¹⁰¹ Specifically, by removing shareholders' ability to redeem at \$1.00 per share when the fund's market-based NAV

⁹⁹ Although financial intermediaries would not be required by rule 2a-7 to apply the minimum balance at risk to their customers, they may need to do so (or take other measures) to ensure their customers are treated fairly in times of stress (i.e., to ensure that delays in redemptions for various customers are managed equitably).

¹⁰⁰ See Section IV.

¹⁰¹ Commenters have suggested that an NAV buffer could make MMFs less susceptible to runs. See, e.g., Comment Letter of Fidelity Investments, Charles Schwab, and Wells Fargo, SEC File No. 4-619 (May 3, 2011). Some commenters, however, have argued for substantially larger buffers to accomplish this objective. See, e.g., Comment Letter of the Squam Lake Group, SEC File No. 4-619 (Jan. 14, 2011).

is below \$1.00, the NAV buffer would be designed to prevent redeeming shareholders from extracting more than their *pro rata* share of fund assets.¹⁰²

Explicit support. A fully funded NAV buffer would give the fund an explicit form of support that would be designed to enable the fund to absorb day-to-day fluctuations in the value of its portfolio, such as declines in the value of assets following increases in interest rates and minor credit losses. Unlike the discretionary sponsor support discussed in Section IV, the availability of the prefunded NAV buffer to support the fund during times of stress would not be in question.

Additional discipline on fund managers. The NAV buffer could impose additional discipline on fund managers by ensuring that small losses, which today are not reflected in funds' share prices, force changes in portfolio management. If an MMF's NAV buffer fell below the required amount, until the buffer is repaired, the fund would be required to limit its new investments to cash, Treasury securities, and Treasury repos. Repairing the buffer could be costly, and foregoing potentially higher-yielding investments to repair the buffer could reduce the fund's yield and its appeal to investors. As such, the buffer requirement may diminish the attractiveness of risky portfolio strategies that might lead to losses that erode a fund's NAV buffer.

Increased flexibility to sell securities. The NAV buffer also could increase the resilience of MMFs by providing them with additional flexibility to sell securities that have suffered small losses because such losses could be absorbed by the buffer. Today, in contrast, such losses may reduce the fund's market-based NAV below \$1.00 per share and potentially heighten the risks of a run. Recognizing this, MMFs tend to avoid selling securities that have suffered small losses and instead dispose of securities that have not suffered losses first. Hence, the reluctance to sell securities that have suffered small losses can contribute to the first-mover advantage for redeeming investors.

Redeeming shareholders share in losses caused by redemptions. The MBR requirement could make MMFs more resilient by diminishing or reversing the first-mover advantage for investors who might otherwise redeem MMF shares when their fund is under stress. Investors who make sufficiently large redemptions from an MMF subject to an MBR requirement would remain partially invested in the fund for 30 days and would share in any losses that the fund might experience during that time, including losses that may be caused directly or indirectly by their own redemptions.

Disincentive for investors to redeem during times of stress. The MBR requirement would be designed to create a disincentive for redemptions from a fund that is at risk of suffering losses that an investor expects will be less than the NAV buffer plus the MBR. An investor with an

¹⁰² As one commenter explained, the NAV buffer, in contrast to the buffering effect of the rounded NAV, generally would *increase* in size as investors redeem, assuming there are no portfolio losses. See Comment Letter of Fidelity Investments, Charles Schwab, and Wells Fargo, SEC File No. 4-619 (May 3, 2011) (“[A] key feature of the NAV buffer is that a fund's market value per share would typically *increase* as shareholders redeem. This greatly reduces any incentive for shareholders to run on the fund.”)

account balance greater than \$100,000 in such a fund could minimize or potentially avoid entirely any expected losses by not redeeming and not subordinating a portion of its MBR.

Protection for shareholders who do not redeem. The MBR requirement would provide some protection for investors who do not redeem from an MMF under stress. Because redeeming investors would share in losses that immediately follow their redemptions, investors who have not redeemed would not be forced to bear all of the fund's losses in excess of its NAV buffer. In addition, the portions of redeeming investors' MBRs that are subordinated would, by absorbing first losses, provide additional protection for the shareholders who do not redeem from a fund that suffers losses that exceed its NAV buffer.

Reduced investor yields. The NAV buffer likely would either directly or indirectly reduce the yield funds offer investors. For example, an NAV buffer funded through the issuance of buffer shares or a combination of the issuance of buffer shares and the retention of earnings would diminish the net yields paid to investors who hold the fund's redeemable shares. Although a sponsor-provided buffer would not directly reduce the fund's yield,¹⁰³ sponsors likely would pass on to investors some or all of the costs of providing the buffer. In addition, this may raise fairness concerns if MMF investors receive reduced yields in order to build a buffer that benefits subsequent investors.

Impact on sponsors. Sponsors that chose to provide NAV buffers for their MMFs also could be required to consolidate their MMFs on their balance sheets for accounting purposes. If the MMFs were consolidated on sponsor balance sheets or the sponsor provided explicit guarantees or liquidity facilities to their MMFs, this could have bank regulatory capital implications if the sponsor was affiliated with a bank or bank holding company.

Operational and technology costs. All three of the methods for funding the NAV buffer that are discussed above likely would involve operational and technology costs. These include the costs of raising capital for MMFs that issue buffer shares and for sponsors that obtain funding for their funds' NAV buffers in the capital markets. Capital-raising costs also would include legal, accounting, and issuance expenses (e.g., road show costs). Funds also could incur one-time costs in seeking any shareholder approvals that may be necessary, such as authorization to issue buffer shares. MMFs that enhance buffers by retaining earnings would face additional tax costs. It is important to note, however, that some of these costs associated with capital raising may be reallocations of existing costs that have been borne indirectly by fund sponsors that have provided, or were prepared to provide, discretionary support.

Costs also would include one-time set-up costs (e.g., reprogramming systems to fair value certain portfolio securities, rather than valuing them at their amortized cost, and reprogramming

¹⁰³ The escrow account, although it would not itself directly decrease a fund's yield, also would not increase it, because any yield earned on the instruments held in the account would be for the benefit of the fund's sponsor as the owner of the account.

compliance systems to track NAV buffer levels). There also may be ongoing operational costs associated with the requirement to fair value a larger number of the securities in funds' portfolios.

The MBR also would involve operational and technology costs, which could be substantial, including to implement and maintain systems to track investors' High Water Marks, MBR shares that are subject to redemption delays, and any subordinated MBR shares. Institutional shareholders also could incur one-time operational costs to reprogram their cash management systems to take account of the MBR requirement.

Impact on derivatives clearing organizations and futures commission merchants. An MBR requirement could lead the Commodity Futures Trading Commission (CFTC) to reassess customer funds investment regulations as they pertain to MMFs other than Treasury MMFs. Investments in MMFs subject to an MBR would not satisfy the CFTC's requirements for investment of customer funds supporting futures and swaps positions. The CFTC's next-day redemption requirement provides that for such investments in MMFs, the MMF must be "legally obligated to redeem an interest and to make payment in satisfaction thereof by the business day following a redemption request."¹⁰⁴ The next-day redemption requirement is intended to ensure that an investment of customer funds is sufficiently liquid, thereby permitting the reliable and timely flow of daily customer variation margin payments.

Impact on demand for MMFs. While this alternative likely would make MMFs more resilient, it also could make the funds less appealing in other respects by diminishing the net yields that the funds pay to investors and by placing constraints on the liquidity currently available to MMF shareholders. The MBR may be confusing to some investors, particularly initially, and may be unattractive to those who have come to expect full and immediate liquidity from their MMFs (potentially to the detriment of the investors who remain in the fund). Some investors may find the MBR inconvenient and may require significant operational changes. Institutional investors may not be willing to incur the operational costs necessary to accommodate an MBR.¹⁰⁵ The application of the MBR could be particularly complex as applied to fund shares sold through series of intermediaries in the MMFs' distribution chains.¹⁰⁶ Some investors therefore could reduce or eliminate their investments in MMFs subject to the NAV buffer and MBR

¹⁰⁴ Investment of Customer Funds, 17 C.F.R. § 1.25(c)(5)(i) (2012). For such investments, the MMF may postpone the redemption only in certain enumerated, extraordinary circumstances such as the non-routine closure of the Fedwire or the existence of an emergency situation (as determined under SEC rules).

¹⁰⁵ See, e.g., Comment Letter of the Investment Company Institute, SEC File No. 4-619 (June 20, 2012) (providing an analysis of operational impacts of proposed redemption restrictions); Comment Letter of Treasury Strategies, SEC File No. 4-619 (Apr. 27, 2012) (providing an analysis on holdback requirements); Comment Letter of DST Systems, Inc., SEC File No. 4-619 (Mar. 2, 2012) (describing "systems and operational impacts" associated with a holdback requirement based on a stated percentage of an investor's average account balance over a 30-day period).

¹⁰⁶ See, e.g., Comment Letter of DST Systems, Inc., SEC File No. 4-619 (Mar. 2, 2012) ("The omnibus accounting layers that exists in the mutual fund shareholder recordkeeping environment would provide further complexity with a minimum balance requirement.").

requirements.¹⁰⁷ Some MMF sponsors may be less willing to offer MMFs subject to the NAV buffer and MBR requirements because they expect that demand for such funds might be limited and because of additional costs required to operate them.¹⁰⁸

All of these considerations could reduce the size and assets of the MMF industry as funds exit the market to avoid the NAV buffer and MBR requirements or as investors choose other investment vehicles. This could lead to an increase in demand for other investment vehicles not subject to these requirements.

(iii) QUESTIONS

The Council requests comment on this alternative as well as on all aspects of the discussion presented above. The Council also requests any quantitative analysis or data from commenters relating to this alternative.

Would requiring most MMFs to maintain NAV buffers and MBRs make the funds less susceptible to runs? Would this alternative reduce the potential financial instability associated with MMFs?

Would this alternative make MMFs more resilient by replacing the rounding conventions currently provided by rule 2a-7 with a transparent and prefunded NAV buffer? Would the buffer requirement help foster discipline for fund managers? Would it reduce the uncertainty for investors caused by the current reliance on sponsor support to absorb minor losses in MMF portfolios? Would such uncertainty be maintained if sponsors, on a discretionary basis, provided financial support to prevent material decline of the required NAV buffer?

Should MMFs be required to maintain an NAV buffer of a different size? When combined with an MBR requirement, should the NAV buffer be larger or smaller? Should the NAV buffer requirements applicable to various types of MMF portfolio assets be different? Should funds have the flexibility to raise the NAV buffer through a variety of funding methods? If not, which methods should funds be required to use and why? What governance, incentive, and other concerns are raised by each method of funding a buffer? Are there additional funding methods that would require relief from the SEC, or particular methods that the SEC should preclude? Could additional types of buffer shares, other than equity securities, be used to create an NAV buffer? Would some sponsors' cost advantage in providing their funds' NAV buffers give

¹⁰⁷ See, e.g., Comment Letter of the Investment Company Institute, SEC File No. 4-619 (Apr. 19, 2012) (enclosing survey data reflecting that some investors would reduce their investments in MMFs, or stop using the funds, if MMFs had a holdback requirement); Comment Letter of Sungard Global Network, SEC File No. 4-619 (Mar. 16, 2012) (stating that “88 percent of corporate treasurers and cash managers surveyed in the 2011 SunGard investment study cited *immediate* access to cash as a major requirement of their cash investment policies”) (emphasis in original).

¹⁰⁸ Comment Letter of the Investment Company Institute, SEC File No. 4-619 (June 20, 2012) (“[The costs of these changes [operational changes required to implement an MBR] could be prohibitive and ... the industry would be unlikely to undertake them, particularly if the SEC’s changes result in shrinking the asset base of money market funds.”).

competitive advantages to their MMFs? If so, how would this affect the financial instability associated with MMFs? How could the SEC design an NAV buffer requirement to mitigate any such competitive advantages? Should the SEC, for example, mandate that the NAV buffer could be raised only through a combination of the issuance of buffer shares and a fund's retention of earnings, because these methods of funding potentially would be available to all MMFs? Is the contemplated NAV buffer phase-in appropriate? If not, should it be shorter or longer?

Would the MBR requirement make MMFs more resilient by requiring some redeeming investors to remain partially invested in an MMF for 30 days? Would a 3 percent MBR be sufficiently large to mitigate the risk of runs on MMFs? Should it be larger or smaller? Should the length of the redemption delay be longer or shorter than 30 days? Does a 3 percent MBR with a 30-day redemption delay appropriately balance the objectives of reducing the vulnerability of MMFs to runs without burdening unnecessarily the funds and their shareholders? Does it preserve the role of redemptions in providing market discipline for MMFs? Should each investor's MBR be a portion of its High Water Mark, a portion of the average of the investor's balance over the previous 30 days or some other period, or some other measure? Would an alternative approach toward subordination be more effective?¹⁰⁹

Are the exemptions from the NAV buffer and MBR requirements for Treasury MMFs appropriate? Should the SEC provide exemptions for other types of funds?

Some retail investors — those with balances of less than \$100,000 — would not be subject to the MBR requirement because retail investors may be less likely to participate in a run. Are retail investors less likely to participate in a run? Would MMFs consisting primarily of retail investors not subject to an MBR requirement be at increased risk? Is it appropriate to define a retail investor for this purpose by reference to the size of the investor's account? If so, should the threshold be \$100,000, or should it be higher or lower, and why? If not, what other characteristics would be more appropriate? How would MMFs apply this exemption to omnibus accounts? Should MMFs be required to have transparency through these accounts to apply the exemption?

Should the SEC provide an exemption from the MBR for redemptions made in accordance with a plan that a shareholder has provided to the fund in advance? If so, how far in advance should a shareholder be required to notify the MMF of the shareholder's redemption plans in order to prevent the shareholder from using the exemption to avoid redemption delays when MMFs are under stress?

Are there ways to reduce the operational and other costs associated with implementing the NAV buffer and the MBR? What is a realistic timeframe for implementation of these changes from an

¹⁰⁹ See McCabe, Cipriani, Holscher, and Martin, 2012 for a discussion of a number of alternative methods of allocating first losses.

operational perspective? Who would bear these one-time and recurring costs? Would these costs end up being absorbed by fund sponsors, financial intermediaries, or investors in these funds? To what extent would these costs affect MMF sponsors' willingness to offer non-Treasury MMFs under this alternative? To what extent are the costs associated with the NAV buffer new costs, as opposed to costs that have been borne by some fund sponsors?

How would the combined effects of any reduction in yield from the NAV buffer and inconvenience caused by restrictions on redemptions from the MBR affect investor demand for MMFs? To what extent and why would investors discontinue investing in MMFs subject to these requirements? If a reduction in demand is anticipated, to which other investment vehicles would investors most likely shift money? What would be the net effect on financial stability?

C. ALTERNATIVE THREE: NAV BUFFER AND OTHER MEASURES

Require MMFs to have a risk-based NAV buffer of 3 percent to provide explicit loss-absorption capacity that could be combined with other measures to enhance the effectiveness of the buffer and potentially increase the resiliency of MMFs. Other measures could include more stringent investment diversification requirements, increased minimum liquidity levels, and more robust disclosure requirements. The NAV buffer would have an appropriate transition period and could be raised through various methods. To the extent that it can be adequately demonstrated that more stringent investment diversification requirements, alone or in combination with other measures, complement the NAV buffer and further reduce the vulnerabilities of MMFs, the Council could include these measures in its final recommendation and would reduce the size of the NAV buffer required under this alternative accordingly.

DESCRIPTION OF THE ALTERNATIVE

This alternative would incorporate a larger risk-based NAV buffer than Alternative Two, of 3 percent, that could be combined with other measures to enhance MMFs' loss-absorption capacity and mitigate the run vulnerabilities that would be addressed by the MBR in Alternative Two. To the extent that more stringent investment diversification requirements, alone or in combination with other measures, complement the NAV buffer and reduce MMFs' vulnerabilities, the Council could include them in its final recommendation. These measures could serve to reduce the size of the NAV buffer required under this alternative accordingly. The Council requests comment on how the other measures might be structured; how, if at all, they could complement the NAV buffer and reduce the vulnerabilities described in Section IV; and whether more stringent investment diversification requirements, alone or in combination with other measures, would increase MMFs' resiliency sufficiently to warrant a smaller NAV buffer requirement.

NAV BUFFER

(i) DESCRIPTION

The NAV buffer would function as outlined in Alternative Two in most respects, including the various funding methods for the NAV buffer (such as an escrow account, subordinated buffer shares, and retained earnings), the exclusion for Treasury MMFs from the requirement, and the implications of depleting the buffer. However, in contrast to Alternative Two, the NAV buffer of 3 percent would be designed to provide greater loss-absorption capacity.

Buffer size. In Alternative Two, the NAV buffer is primarily designed to absorb day-to-day variations in the mark-to-market value of MMFs' portfolio holdings, and the MBR serves as the

primary tool to reduce investors' incentive to redeem their shares when a fund encounters stress. In Alternative Three, the NAV buffer would serve as the primary tool to increase the resiliency of MMFs and reduce their vulnerability to runs. While the other measures described below would be designed to complement the NAV buffer, they would be unlikely to provide the same structural protections as the MBR described in Alternative Two. Given these considerations, the NAV buffer in this alternative must be significantly larger to provide greater capacity to absorb losses, lower the probability that a fund would fully deplete its buffer, and, accordingly, reduce the incentive of investors to run during times of stress.

As in Alternative Two, the required minimum size of a fund's NAV buffer would be tailored based on the riskiness of the fund's assets, using the following formula:

- (i) no buffer requirement for cash, Treasury securities, and Treasury repos (i.e., repos collateralized solely by cash or Treasury securities);
- (ii) a 2.25 percent buffer requirement for other daily liquid assets (or for weekly liquid assets, in the case of tax-exempt funds);¹¹⁰ and
- (iii) a 3.00 percent buffer requirement for all other assets.¹¹¹

If more stringent investment diversification requirements, possibly in combination with other measures outlined below, are determined to work in tandem with the NAV buffer and reduce MMFs' vulnerabilities, they could be included in this alternative in the Council's final recommendation and the level of this buffer requirement would be lowered accordingly. Similar to Alternative Two, Treasury MMFs would not be required to maintain an NAV buffer.

Transition period. In order to allow sufficient time for funds to raise the larger NAV buffer, under this alternative a phase-in period would be provided for funds to reach the full buffer levels. An NAV buffer of one-sixth of the total amount would become effective after one year and an NAV buffer of one-third of the total amount would become effective after two years. A multi-year transition period would follow to allow the full implementation of the required NAV buffer levels contemplated in this alternative.

(ii) BENEFITS AND CONSIDERATIONS

The main benefits and considerations associated with the NAV buffer were discussed in Alternative Two. However, given the absence of an MBR in this alternative, a brief discussion of the calibration of the buffer amount and transition period is warranted.

¹¹⁰ The definitions of daily and weekly liquid assets are those provided by rule 2a-7. See Section II.

¹¹¹ Based on data reported to the SEC on Form N-MFP as of September 30, 2012, the average NAV buffer would be approximately 2.51 percent for prime funds; 2.39 percent for tax-exempt funds; and 2.10 percent for government funds.

Additional loss-absorption capacity. A larger NAV buffer would provide funds with additional capacity to absorb fluctuations in the market value of portfolio securities and credit losses. While MMFs generally provide stable value and invest in lower-risk securities, experience has shown (as discussed in Section IV) that funds can experience losses exceeding the NAV buffer level of 1 percent contemplated in Alternative Two. In addition, based on the size of MMFs' largest single-name exposures (as discussed in Section V.B), the failure of any of these firms could result in losses potentially exceeding a buffer of such size. The additional loss-absorption capacity provided by the larger NAV buffer in this alternative could reduce the number of firms whose failure could fully deplete the fund's NAV buffer and decrease the likelihood that an MMF experiences losses that threaten the stable value per share. This may reduce the first-mover advantage and decrease the motivation for investors to redeem during periods of stress as long as they expect any losses to be less than the size of the buffer (discussed further below).

Reduced incentive for excessive risk-taking. Additionally, capital buffers can increase the cost of risk-taking *ex ante*, further reducing the probability of distress of an MMF or the MMF industry. For buffers raised through the sale of subordinated buffer shares, third parties purchasing shares may require higher dividends based on the perceived risks of the fund's portfolio securities, therefore limiting the yield benefit any increased risk-taking provides to the redeemable shares. For buffers provided by fund sponsors or retained earnings, the threat of losing this contributed capital may lead fund managers to internalize the cost of any increased risk-taking. This may reduce MMFs' incentive or ability to shift towards riskier assets in order to attract additional investments. The reduction in MMFs' incentive or ability to shift towards riskier assets could be more significant than under Alternative Two because of the increased size of the NAV buffer under this alternative.

Additional costs to MMFs, sponsors, or borrowers. The increased size of the buffer would likely impose additional costs on MMFs or the sponsors who would need to raise the capital.¹¹² Increasing the size of the NAV buffer may increase the costs of short-term funding, particularly for financial institutions, if MMFs demand higher yields. These costs could also be passed on to MMF investors, in whole or in part, in the form of reduced yield. They also could alter the financial returns for sponsors such that they contemplate exiting or reducing their MMF businesses.

Depending on the funding method chosen (such as an escrow account, subordinated buffer shares, or retained earnings), building higher levels of capital in periods of low interest rates, as exist today, may prove difficult or costly. Although a transition period may reduce the costs of

¹¹² See, e.g., Comment Letter of the Investment Company Institute, SEC File No. 4-619 (May 16, 2012) (enclosing an analysis of certain implications of capital buffers for MMFs); Christopher Payne, Capital Buffer for Money Market Funds Not as Costly as Predicted, Bloomberg Government Study (Sept. 20, 2012).

implementing the buffer, it will also result in MMFs having NAV buffers that are smaller than deemed adequate during the transition period.

Reduced, but not eliminated, vulnerability to run. In addition, while the NAV buffer may reduce the probability that an MMF investor suffers losses, it is unlikely to be large enough to absorb all possible losses and may not be sufficient to prevent investors from redeeming when they expect possible losses in excess of the NAV buffer. For instance, the largest average exposure in prime MMFs to a single firm, when aggregating all affiliates and weighting by fund assets, was 4.5 percent.¹¹³ Additionally, as noted in Section IV, prime MMF exposures may be heavily correlated. Therefore, if one firm were to fail, there is a higher probability that additional firms would also fail concurrently, potentially resulting in multiple MMF portfolio losses.

(iii) QUESTIONS FOR COMMENT

The Council requests comment on this alternative as well as on all aspects of the discussion presented above. The Council also requests any quantitative analysis or data from commenters relating to this alternative.

The Council seeks comment on the size of the NAV buffer. Should the NAV buffer be larger or smaller? Does a larger NAV buffer address the structural vulnerabilities described in Section IV? What type of analysis of MMF portfolio exposures should be undertaken when considering an appropriate size for the NAV buffer?

How would this higher NAV buffer impact investors, short-term financing markets, and long-term economic growth? How would the NAV buffer requirement, and particular MMF's choices of buffer funding methods, affect MMFs' yields? To what extent would an NAV buffer funded solely through buffer shares and the retention of earnings affect a MMF's yield? Could it cause a prime MMF's yield to decrease below those offered by government or Treasury MMFs? In what circumstances could this occur and how likely is it to occur?

The Council also requests comment on the design and duration of the transition period to implement the NAV buffer. How long should the transition period be? Should the transition period be based on economic or market conditions rather than a pre-determined phase-in deadline?

How would the larger NAV buffer in Alternative Three, alone or combined with investment diversification requirements and other measures as discussed below, affect investor demand for MMFs? To what extent and why would investors discontinue investing in MMFs subject to

¹¹³ Based on data reported to the SEC on Form N-MFP as of September 30, 2012 among 243 prime MMFs that filed form N-MFP with the SEC. Analysis excludes exposures through repo backed by U.S. government securities and sponsored ABCP conduits.

these requirements? Where would investors shift their investments and how would this mitigate or increase risks to financial stability?

When considering the larger NAV buffer in Alternative Three, what mix of other measures described below can most effectively complement the NAV buffer? To the extent that more stringent investment diversification requirements reduce MMFs' vulnerabilities, as discussed below, could such requirements be combined with a lower minimum NAV buffer and, if so, what would be the appropriate minimum? Could other measures be combined with more stringent investment diversification requirements to provide additional protections? Should the Council consider additional risk-based tailoring of the NAV buffer, for instance, based on specific types of MMF assets? Should the required NAV buffer be larger for MMFs with more concentrated exposures, particularly those to financial institutions?

OTHER MEASURES

Description. Alternative Three contemplates possible additional measures that may complement the NAV buffer in mitigating run vulnerabilities. These include more stringent investment diversification requirements, increased minimum liquidity levels, and more robust disclosure requirements. These measures individually would likely not significantly alter the activities and practices that make MMFs vulnerable to runs. To the extent that it can be adequately demonstrated that more stringent investment diversification requirements, alone or in combination with other measures, complement the NAV buffer and further reduce MMFs' risks and increase their resiliency, the Council's final recommendation could include these additional measures with the NAV buffer requirement, and the size of the NAV buffer would be reduced accordingly.

MORE STRINGENT INVESTMENT DIVERSIFICATION REQUIREMENTS

(i) *Description*

As noted above, prime MMFs generally have numerous large exposures to individual firms' securities. Rule 2a-7 currently provides that an MMF, other than a single-state fund, "shall not have [immediately after the acquisition of any security] invested more than 5 percent of its Total Assets in securities issued by the issuer of the security." The Council requests comment on two proposed modifications to this provision: (i) reducing the 5 percent limitation; and (ii) revising the definition of "issuer" in this context to include all affiliates of a consolidated group.

More stringent investment diversification requirements, particularly when paired with a material NAV buffer, could allow MMFs to potentially weather the default of securities issued by large firms.

Lower maximum loss from default of one firm. A lower limit on exposure to a single firm, when combined with an NAV buffer of 3 percent, would reduce the likelihood that losses from the failure of a single firm would threaten a fund’s stable NAV. Similar requirements are utilized in other contexts, including risk management for financial institutions and central clearing parties.

Modifying the calculation to aggregate all related affiliates would align more closely the rule 2a-7 limits with traditional credit analysis concepts. For instance, it is highly likely that material distress at a financial holding company would occur at the same time that its bank or broker-dealer subsidiary was experiencing similar distress, and these interrelationships would have implications for the obligations of both entities.

Reduced funding and less creditworthy investments. However, tightening the investment diversification requirements could materially reduce the amount of funding that MMFs can provide to larger issuers. It also could result in MMFs investing in less creditworthy issuers if MMFs are required to reduce their largest exposures and invest in other firms, or it could cause MMFs to withdraw funding from the financial system and instead invest in less-risky securities (such as Treasury securities) that are not subject to issuer diversification requirements.

What impact would these changes have on large issuers and on the short-term funding markets? To the extent that MMF investments are constrained or reduced in response to these restrictions, in what types of securities would MMFs invest?

At what level should the issuer diversification requirements be set? Does adopting a “cover one” methodology — whereby each MMF would have sufficient loss absorption capacity to mitigate the failure of its largest investment — provide adequate protection to MMFs? How should these standards be compared to those used in other regulatory contexts?

Should these standards be applied differently to different types of funds (for instance, prime MMFs, government MMFs, and tax-exempt MMFs)? What changes, if any, should be made with respect to the diversification requirements for demand features and guarantees? Should diversification limits apply to credit enhancements other than guarantees and demand features?

What changes should be made, if any, to the definition of “issuer” in the context of issuer diversification requirements? Are there other changes to the issuer diversification calculations

that would further strengthen these reforms? For example, should diversification requirements for asset-backed securities generally treat as the issuer of the securities the special purpose entity that issued them, the sponsor of the asset-backed securities, or the issuers of the securities underlying the asset-backed securities?

Are there other credit exposure limits that should be tightened to reduce MMFs' risks? For example, should certain types of exposures, such as financial-sector exposures, be subject to limitations? If so, what should the limits be? How should such exposures be defined? Should limits on second-tier securities be tightened? If so, how? Should collateral requirements be more stringent? How should that be accomplished?

Should diversification requirements for providers of demand features and guarantees be tightened? How and to what extent? How might more stringent diversification requirements for providers of demand features and guarantees affect securities markets (particularly markets for tax-exempt securities) in which demand features and guarantees are important? Should limitations on other credit or liquidity enhancements be tightened?

INCREASED MINIMUM LIQUIDITY LEVELS

(i) *Description*

As discussed in Section II, MMFs are required to maintain liquidity buffers in the form of minimum levels of daily and weekly liquid assets. These liquidity buffers could be increased, for instance, by raising the required level of daily liquidity from the current level of 10 percent to 20 percent, and the minimum weekly liquidity requirement from the current level of 30 percent to 40 percent. While these liquidity requirements would be a significant increase over the current requirements, which were adopted in 2010, they are below the liquidity levels many funds have maintained since Form N-MFP reporting began in late 2010.

As under existing rule 2a-7, if a fund falls below the minimum liquidity requirement, it would be prohibited from acquiring any securities other than daily liquid assets until it is in compliance with the requirement. Tax-exempt funds would remain exempt from the daily liquidity requirement.

Investor transparency. Additional “know-your-investor” requirements could be implemented to provide MMFs with increased visibility into omnibus accounts to improve their ability to understand their shareholder base and to predict investors’ redemption activity. Today, many MMF shares are held by financial intermediaries on behalf of their customers — the MMF’s beneficial owners — making it difficult for MMFs to obtain information about their beneficial owners and predict their redemption activity. Requiring MMFs to obtain more information about their beneficial owners could help MMFs better understand and predict those investors’

behavior, and allow the funds to better manage their liquidity to meet anticipated redemption requests.

(ii) *Benefits and Considerations*

Increased minimum liquidity levels may limit MMFs' investment risks and increase an MMF's ability to meet heightened redemption requests without selling portfolio securities.

Improved ability to meet redemption requests. Increased minimum liquidity levels may improve a fund's ability to convert portfolio holdings into cash to pay redeeming shareholders. Absent a sufficient supply of liquid assets, heavy redemptions could force a fund to sell less-liquid assets at a discount or at fire-sale prices, not only imposing losses on the fund's remaining shareholders but also potentially causing losses for other funds that hold similar securities. Increased minimum liquidity levels may increase the effectiveness of the NAV buffer and reduce the likelihood that periods of stress force fire sales that deplete MMFs' buffers.

Enhanced liquidity management. Know-your-investor requirements may improve the ability of MMFs to predict and manage investor liquidity needs. This could reduce the likelihood that unexpected redemptions would force MMFs to sell assets, which may cause losses, particularly during times of stress.

Reduced investment risk. Shifting the composition of MMFs' investment portfolios may decrease the risk of losses. The shorter-duration investments would reduce MMFs' exposure to interest rate risk and, to the extent these requirements cause MMFs to increase their investments in U.S. Treasury obligations, this may also reduce their overall credit risk.

Decreased investor yields. If funds shift their investments into shorter-duration, lower-yielding assets, this may decrease the return they provide to investors. In addition, the current level and slope of the yield curve may have led funds to hold higher levels of short-duration assets than they might otherwise. In future periods in which interest rates are higher and there is a greater interest-rate premium paid for longer-duration assets, funds may be less likely to maintain this level of daily and weekly liquid assets if increased liquidity requirements are not implemented.

Reduced term funding. While the increased liquidity requirements may improve funds' ability to meet redemption requests, they may also reduce the supply of term funding in certain markets in which MMFs invest. Borrowers, particularly financial institutions, may need to shift to funding at shorter durations, making their exposure to short-term markets more pronounced and potentially increasing the fragility of the financial system.

Modified nature of MMFs. Enhanced liquidity requirements would reduce MMFs' ability to invest in longer-dated or higher-risk instruments, which would impact the ability of MMFs, particularly prime MMFs, to serve their traditional role as a financial intermediary and potentially change the nature of the product.

Would enhanced liquidity requirements mitigate the impact of increased redemptions on a fund? Are the proposed minimum liquidity requirements sufficient for funds to meet redemption requests during times of stress? Would higher or lower requirements be more appropriate? Rather than increasing both the daily and weekly liquid asset requirements, are there greater benefits or costs associated with increasing one or the other? Should tax-exempt funds continue to be exempt from any daily liquidity requirement?

What harmful impacts would higher liquidity requirements have? How might they impact the funding markets in which MMFs participate? Would these requirements result in the institutions that borrow from MMFs shifting to shorter-term borrowing, increasing the risk that they may be unable to refinance their outstanding debt when necessary? If so, how might this impact financial stability? How would this impact the ability of borrowers to address new liquidity and stable funding requirements contemplated in Basel III?

The current definitions of MMFs' "weekly" and "daily" liquid assets used in the minimum liquidity requirements include all assets that can be converted into cash within pre-defined timeframes, including unsecured and secured exposures to financial institutions. An alternative would be to exclude all non-government securities (and repo backed by non-government securities) from these definitions. This would potentially reduce the risk of credit or liquidity strains in the securities counted towards these buffers. This may also alleviate the concern, discussed above of, of potential unintended consequences such as pushing financial institutions into shorter duration borrowing. Should such a change to the definitions of daily and weekly assets be made? If so, should this be in place of, or in addition to, higher minimum liquidity requirements?

Should MMFs be required to gather more information about their beneficial owners? MMFs also could be required to perform certain risk management procedures and consider information about beneficial owners' historical redemption behavior when stress testing their funds. To what extent can MMFs currently increase investor transparency? If regulatory changes would be necessary to facilitate this level of transparency, how could this be done most effectively by the SEC under its current statutory authority?

Should MMFs be prohibited from having too concentrated an investor base, or should additional limitations apply if a fund has a concentrated investor base? For example, should an MMF investor be limited to owning no more than a specified percentage of any particular MMF? What limit would be appropriate?

How might higher minimum liquidity levels complement the NAV buffer? Would they reduce the risks present in MMFs' investment portfolios? Would they reduce the probability that an MMF investor would redeem its shares based upon concerns about the MMF's portfolio liquidity?

(i) *Description*

An NAV buffer could also be accompanied by enhanced disclosure requirements that would increase investors' ability to monitor MMFs' investment risks. Rule 2a-7 requires MMFs to disclose information about their portfolio holdings each month on their websites within five business days. MMFs are also required to provide to the SEC monthly filings, on Form N-MFP, containing more detailed information regarding their portfolio holdings, including their mark-to-market NAV per share. This information is then publicly released 60 days after the end of the month for which the information was reported.

The transparency of MMF portfolio holdings could be increased by enhancing the level or frequency of required disclosures. This could include more frequent (e.g., daily or weekly) public reporting of portfolio information such as daily and weekly liquidity levels and mark-to-market per share valuations. These adjustments also could include reducing or eliminating the current delay before public disclosure. This could be supplemented with additional disclosure of MMFs' valuation methodologies and the factors that their boards of directors (or the boards' delegates) take into account, or the processes they follow, when assessing whether a portfolio security poses minimal credit risk. MMFs could also be required to disclose any instances of sponsor support, including purchases of distressed portfolio securities.

(ii) *Benefits and Considerations*

More robust disclosure requirements may improve investors' ability to monitor the portfolio holdings and the risk of an MMF.

Improved investor monitoring of MMFs' risks. More robust disclosure requirements would provide investors greater transparency into the risks of the investments held by the MMFs in which they invest and important indicators of its health, including the fund's liquidity and NAV buffer levels. This may allow investors, particularly in times of stress, to differentiate MMFs based on the quality and stability of their investments, potentially preventing uninformed, across-the-board runs. This also may impose additional investor discipline on MMFs and reduce their ability to take increased risks, potentially enhancing the effectiveness of the NAV buffer.

Increased volatility of MMFs' flows. There is a risk that more frequent reporting of portfolio information may make investors quicker to redeem when these indicators show signs of deterioration. In addition, more frequent reporting of portfolio information such as daily mark-to-market per share values or liquidity levels could increase the volatility of MMFs' flows, even when the funds are not under stress, if investors are highly sensitive to changes in those levels.

More frequent disclosure of portfolio holdings may also limit funds' ability to utilize differentiated investment strategies.

(iii) *Questions*

Would more frequent reporting of the portfolio holdings, mark-to-market NAVs, and liquidity levels help investors and others differentiate among MMFs? If so, what would be the appropriate frequency (e.g., daily or weekly)? How might investors respond to daily changes in an MMF's mark-to-market NAV or liquidity levels? Should MMFs be required to disclose the mark-to-market value of their investments? Would enhanced disclosure decrease or increase the probability of indiscriminate runs across MMFs? Would MMFs be adversely affected by the need to provide enhanced disclosure of their portfolio holdings? Would enhanced transparency have unintended consequences?

Should MMFs be required to notify their investors and the public each time they receive support from their sponsors? This would include, for example, purchases of distressed securities under rule 17a-9 under the Investment Company Act, if that rule is not rescinded in connection with any structural reforms. What other kinds of support warrant disclosure? Would this kind of disclosure help investors and others better understand and appreciate the risks in particular MMFs? How should this disclosure be made (e.g., on an MMF's website or in its prospectus)? Should MMFs be required to disclose their performance absent sponsor support? Where SEC relief is required for sponsor support, should the SEC no longer entertain requests for the relief? Should the SEC otherwise prohibit sponsor support?

Should MMFs be required to provide increased disclosure on their valuation methodologies? Should MMFs be required to provide greater information about the factors that their boards of directors (or the boards' delegates) take into account, or the processes they follow, when assessing whether a security poses minimal credit risk? How might more robust disclosure requirements complement the NAV buffer? Would they reduce the risks present in MMFs' investment portfolios or improve investors' ability to differentiate between funds?

D. REQUEST FOR COMMENT ON OTHER REFORMS

The policy alternatives discussed in the proposed recommendations described above aim to address the structural vulnerabilities inherent in MMFs and reduce their susceptibility to runs. The alternatives are not mutually exclusive but could potentially be implemented in combination. For example, sponsors could manage funds that have floating NAVs as well as stable NAV funds with the appropriate enhanced structural protections.

The Council recognizes that there may be other reforms it could consider that are not mentioned above that may mitigate risks to financial stability by providing a substantial reduction in the susceptibility of MMFs to runs. Accordingly, in addition to the request for feedback on the proposed recommendations above, the Council also solicits comment on other possible reforms of MMFs that the Council should consider for its final recommendation.

Analysis of other reforms. Any comments submitted under this section should discuss how such reforms would address the structural vulnerabilities inherent in MMFs and mitigate the risk of runs and the threat they pose to financial stability. The comments also should address the potential impacts to the MMF industry, shareholders, and long-run economic growth.

Liquidity fees and/or gates. For example, some market participants and other stakeholders have suggested alternative features that only would be implemented during times of market stress to reduce MMFs' vulnerability to runs. Specifically:

- (i) *standby liquidity fees* that, when triggered, may directly charge shareholders who redeem their shares to compensate MMFs and the remaining MMF investors for the potential cost of withdrawing this liquidity from the fund; or
- (ii) *temporary restrictions on redemptions*, or "gates" that, when triggered, would prohibit investors from redeeming and provide a period of time for a fund to restore its health.

The Council welcomes views on such features and how they, alone or in combination with other reforms, could provide a substantial reduction in the susceptibility of MMFs to runs. These proposals may provide some benefits by limiting investors' ability or motive to redeem during periods of stress and by potentially helping to restore a fund's NAV or NAV buffer. Some of these benefits may include fairer treatment of redeeming and non-redeeming investors, giving investors unfettered access to liquidity except during times of stress, and imposing additional discipline on fund managers, who would be motivated to manage their funds to avoid triggering a fee or a gate.

However, members of the Council are concerned that standby liquidity fees and temporary gates may not adequately address — and in fact may further increase — the potential for industry-wide runs in times of stress. Standby liquidity fees and temporary gates may increase the risk of preemptive runs by investors who would be motivated to redeem before a fee or gate is triggered.

Such fees or gates may also increase contagion risk, because the triggering of fees or gates in one MMF could encourage shareholder redemptions in other MMFs. Additionally, these proposals in isolation do not provide explicit loss-absorption capacity and may not significantly alter the activities and practices of MMFs discussed in Section IV.

Description of fees or gates. Standby liquidity fees or gates could provide targeted redemption restrictions that would only be implemented once a pre-determined threshold, intended to indicate stress in the fund, has been breached. While a variety of features have been proposed, the below discussion outlines several possible design considerations.

Trigger. Standby liquidity fees or gates could be imposed automatically based on specific measures indicating stress on an MMF's condition, such as a decline in the fund's NAV or in the fund's holdings of daily or weekly liquid assets below a certain level. For example, some have suggested imposing fees or gates if an MMF's shadow NAV fell below \$0.9975 per share or if its level of weekly liquid assets fell below 7.5 percent.¹¹⁴ Alternatively, the trigger could be at the discretion of an MMFs' board.

Duration. The fee or gate could apply to any redemption until the health of the MMF has improved and the trigger measure, such as the fund's NAV or liquid assets, returns to levels required under rule 2a-7. The length of the temporary fee or gate could be limited to a prescribed period, such as 30 days, after which the MMF would allow redemptions or liquidate.

Fee level. The level of a fee could be based on the level of stress in the fund. As the level of the stress grows, so would the size of the fee. For example, the fee size could be based on the size of the decline in the fund's NAV or its liquid assets. Alternatively, the fee could be structured as a fixed percentage of the amount sought to be redeemed. In either case, the fee would be intended to shift the cost of liquidity to redeeming shareholders and help relieve potential strains on the fund.¹¹⁵

Gate operation. While rule 22e-3 allows a fund's board to suspend redemptions if the fund has broken the buck or is in danger of breaking the buck, the board must first irrevocably approve the liquidation of the fund and notify the SEC of its decision to liquidate and suspend redemptions. The gates discussed here, in contrast, would be temporary and could provide the MMF a short period of time to increase its liquidity levels to meet redemption requests and could allow the fund to remain in operation after the gates are lifted.

¹¹⁴ See Blackrock Viewpoint, "Money Market Funds: A Path Forward" (2012) (recommending this trigger for the automatic imposition of a liquidity fee as opposed to a temporary gate), available at <http://www2.blackrock.com/global/home/PublicPolicy/ViewPoints/index.htm>; Comment Letter of HSBC Global Asset Management on the European Commission's Green Paper on Shadow Banking (May 28, 2012), available at http://ec.europa.eu/internal_market/consultations/2012/shadow/individual-others/hsbc_en.pdf.

¹¹⁵ For MMF shares held through omnibus accounts, the financial intermediary would need to ensure that any standby liquidity fees apply to the ultimate beneficial owners to prevent unfair results, just as they must do today when other types of mutual funds impose redemption fees.

Sequencing. If paired together, standby liquidity fees and temporary gates could be structured such that the fees are triggered before or after gates. If standby liquidity fees are triggered first, this may reduce the likelihood that gates are needed. If standby liquidity fees are imposed after gates are triggered, this may allow funds to permit redemptions if they determine that the liquidity fee would reduce the risk these redemptions pose to the fund.

Enhanced Transparency. MMFs could be required to disclose information on their financial condition more frequently so investors could monitor if an MMF was approaching its triggers.

Questions on liquidity fees and gates. Would investors' concerns about the potential triggering of a standby liquidity fee or gate increase the likelihood of preemptive runs? Would one fund imposing fees or gates lead to runs at other funds? Would a fee, as some have suggested, serve as a sufficient deterrent to investor redemptions such that MMFs' liquidity buffers would prove able to absorb shareholder redemptions in times of stress?

Should the trigger be based on a fund's NAV, levels of daily and weekly liquid assets, or both? At what levels and why? Are there other triggers that would be more effective?

What would be the appropriate size of a standby liquidity fee? Should the fee's size be based on the magnitude of losses or liquidity costs, or should it be a fixed percentage of the investor's redemption? How would they affect the composition of funds' portfolios and funds' risk-taking? Would a flat fee based on the size of the investor's redemptions fairly allocate liquidity costs?

Should standby liquidity fees or gates be applied automatically based on pre-determined thresholds or instead at the discretion of the fund's board of directors (or its independent directors)? Would a fund's board fail to impose a fee or gate even when it would benefit the fund and its shareholders? How could such discretion be structured to make it more likely that it would be imposed when appropriate?

Would a gate be more effective combined with a liquidity fee? If so, how should the combination be structured? For example, should a fund impose a liquidity fee first, allowing investors to continue to redeem, but impose a gate if the fund is unable to sufficiently recover and reaches a higher level of stress? How would investors view gates?

Should there be exemptions to a fee or a gate based on the type of fund or investor? For example, should retail accounts or funds be exempt? If so, should such an exemption be based on account size? How could such exemptions work with omnibus accounts? Should there be exemptions for very small withdrawals? If so, what size? Should there be exemptions for Treasury or government MMFs?

The Council also requests comment on how a standby liquidity fee or gate would alter investors' view of MMFs.¹¹⁶ How might it impact the size of the MMF industry? How would the impact be different if the fee were mandatory or discretionary?

¹¹⁶ On the one hand, *see* Comment Letter of Fidelity Investments, SEC File No. 4-619 (Feb. 3, 2012) (stating that in a survey of their retail money market fund customers 43 percent stated that they would stop using a money market fund with a 1 percent non-refundable redemption fee charged if the fund's NAV per share fell below \$0.9975 and 27 percent would decrease their use of such a fund). *But see* Comment Letter of BlackRock on the IOSCO Consultation Report on Money Market Fund Systemic Risk Analysis and Reform Options (May 28, 2012) ("based on our client discussions, standby liquidity fees are less likely to cause clients to abandon the product in large numbers.").

VI. CONSIDERATION OF THE ECONOMIC IMPACT OF PROPOSED REFORM RECOMMENDATIONS ON LONG-TERM ECONOMIC GROWTH

*Under Section 120 of the Dodd-Frank Act, the Council is required to “take costs to long-term economic growth into account” when recommending new or heightened standards and safeguards for a financial activity. If the SEC accepts the Council’s recommendation, it is expected that the SEC would implement the recommendation through a rulemaking, subject to public comment, that would consider the economic consequences of the implementing rule as informed by the SEC staff’s own economic study and analysis.*¹¹⁷

The financial crisis demonstrated that MMFs’ activities and practices make them susceptible to runs that can have destabilizing implications for financial markets and the broader economy. If investors perceive a risk of even small losses, MMFs’ lack of explicit loss-absorption capacity, the first-mover advantage enjoyed by redeeming investors, investor uncertainty regarding sponsor support, and the similarity of MMFs’ portfolios can incite widespread runs on MMFs. Due to the significant role MMFs play in the short-term credit markets, an industry-wide run on MMFs can reduce the availability of credit to borrowers. During the financial crisis, despite government intervention, the run on the MMF industry led to rapid disinvestment by MMFs of short-term instruments which severely exacerbated stress in already strained financial markets.

The Council expects that the proposed recommendations would significantly reduce the risk of runs on MMFs and, accordingly, lower the risk of a significant long-term cost to economic growth.¹¹⁸ Specifically, the proposed recommendations could bolster the resilience and stability of MMFs during periods of financial stress, and reduce the severity of financial crises. Given the large adverse effects of financial crises on real GDP, such reductions imply important expected benefits. At the same time, the proposed recommendations described in Section V could lead to

¹¹⁷The Regulatory Flexibility Act (RFA) (5 U.S.C. §§ 601-612) provides that whenever an agency is required by 5 U.S.C. § 553, or any other law, to publish general notice of proposed rulemaking for any proposed rule, the agency must either provide an initial regulatory flexibility analysis or certify that the proposed rule will not have a significant economic impact on a substantial number of small entities. Because these proposed recommendations are not a “rule” for purposes of the RFA, neither an initial regulatory flexibility analysis nor certification by the Council is required. However, in any case, these proposed recommendations would not have a significant economic impact on a substantial number of small entities because the proposed recommendations would directly impact only the SEC, and any rulemakings by the SEC imposing the recommended standards would be expected to apply only to MMFs, of which few, if any, are believed to be small entities.

¹¹⁸In the consideration herein, long-term economic growth refers to the average rate of change of overall economic activity, as measured by the rate of change in real GDP (that is, GDP measured in constant dollars) over an extended period. Specifically, we consider expected costs and benefits over a horizon sufficient to include a transition period and the potential costs and benefits with respect to long-term capital formation and a diminished probability and severity of future financial crises. As such, these costs and benefits are likely to accrue over a period of a decade or substantially longer. The potential benefits of the proposed recommendations, in terms of long-term economic growth, arise from the higher level of economic activity expected to prevail from a reduction in the likelihood or severity of a financial crisis and the consequent adverse effects on investment and overall spending; similarly, the potential costs in terms of long-term economic growth stem from the reduced level of spending that may accompany higher costs of financing investment and other outlays. Such positive or negative effects on the level of real GDP would raise or lower the growth rate of economic activity in future years relative to the levels expected to prevail absent adoption of the recommendations.

an increase in the cost of lending that MMFs provide, which could reduce economic growth in normal periods.¹¹⁹ However, even assumptions that would tend to overstate these potential costs suggest a very small increase in the weighted-average cost of credit for U.S. businesses, households, and state and local governments, with commensurately small potential costs to long-term economic growth.

The Council's consideration of the cost to long-term economic growth is based on the potential effects of the proposed recommendations on the rates at which MMFs would lend to borrowers and the consequent effects of such higher borrowing costs on investment and other spending by U.S. businesses, households, and governments. The consideration assesses the cost of financing an NAV buffer for MMFs and how this could increase the lending rates of MMFs. For example, Alternatives Two and Three contemplate MMFs raising NAV buffers that would replace some short-term claims with longer-term, subordinated claims to absorb fluctuations in the value of the fund's assets. The longer-term, subordinated claims may raise costs because providers of the NAV buffer will require a higher return for their greater term, credit, and liquidity risk. This assumes a required return for NAV buffers based on historical experience in the United States for claims subject to similar risks and duration. This assumed return is used to estimate an implied increase in the rates at which MMF would lend if they were to raise an NAV buffer. Although the NAV buffer would diminish the risks associated with MMF shares it is assumed that the required returns on those claims (net yields paid to shareholders) would not decline.

In addition, for the purposes of this consideration, the Council has assumed that borrowers will not shift borrowing away from MMFs and as a result will be forced to fully absorb this higher cost. If substitution toward other sources of credit were considered, the estimated cost to economic growth likely would be smaller. In particular, if MMFs are not able to pass through their higher costs, and instead were forced to absorb some of the costs in the form of reduced profits for sponsors or lower yields for MMF shareholders, the costs to economic growth through the borrowing-cost channel would be lower. There may be economic impacts associated with lower profits for MMF sponsors if they are unable to pass through initial transition costs or higher operating costs, but the impact of such costs on long-term economic growth are likely to be less direct and smaller than the costs that affect borrowing rates.

There are substantial uncertainties around estimates of both the benefits and the costs to long-term economic growth. Moreover, both the benefits and costs to economic growth would vary for the different alternatives set forth in section V.

¹¹⁹ Policymakers with responsibility for mitigating systemic risks may face an economic tradeoff between accepting higher costs in normal times in order to significantly reduce the costs of financial crises. Systemic risks are an externality that individual firms would not, on their own, seek to mitigate efficiently, because they would bear the full costs of doing so while the benefits would accrue to the broader financial system and the economy.

Estimated costs to long-term economic growth. The cost of a 3 percent NAV buffer in Alternative Three is the component of the proposed recommendations that may have the most direct and largest effect on lending costs. The cost of financing a 3 percent NAV buffer would depend on providers' required return for absorbing first losses from any fluctuations in the value of MMF portfolios, particularly the declines in value that might result from credit losses. To put this required return in context, a range of riskier investment returns are considered. The yield on a ten-year BBB-rated corporate bond has averaged 6.5 percent since 1997, while prime MMF gross yields have averaged 3.2 percent over the same period, indicating an estimate of a spread for longer-term claims of 3.3 percentage points over the past 15 years. Another estimate of the additional required return is based on the long-run required return to equity, which is estimated to be about 9.0 percent since 1997, suggesting a spread to prime MMF gross yields of 5.8 percentage points. These calculations suggest reasonable assumptions for the additional required return can range from 3.3 percentage points to 5.8 percentage points. Hence, the remainder of this discussion of lending costs assumes a 5 percentage point additional required return.

Under the assumption that MMFs would fully pass on this additional cost to borrowers, the rate at which MMFs would lend would increase by 0.05 percentage points *for each percentage point* of short-term claims replaced by subordinated, longer-term claims. To the extent that higher costs result in lower net yields for MMF shareholders, and as a result are not passed on fully to borrowers, the estimated impact on costs to long-term economic growth through borrowing costs would be smaller.

This increased lending rate would impact economic growth through its effect on the weighted-average borrowing costs of U.S. businesses, households, and state and local governments that obtain financing, directly or indirectly, from MMFs. However, while MMFs provide such financing through a variety of channels and play a significant role in a number of credit markets (as discussed in Section IV), the total credit that they supply is relatively small compared to aggregate nonfederal, nonfinancial debt outstanding.

As of June 30, 2012, the financing provided by MMFs included their holdings of \$35 billion in domestic nonfinancial unsecured CP and \$341 billion in municipal securities. MMFs also held \$117 billion in ABCP, which is often backed by loans to businesses and households (for example, credit card and other receivables),¹²⁰ and \$60 billion in other notes and instruments issued by U.S. firms. In addition, MMFs purchase the debt of financial institutions and government agencies that themselves provide credit to businesses, households, and state and local governments, including \$56 billion in securities issued by U.S. financial institutions, \$396 billion of securities issued by U.S. government agencies and government-sponsored enterprises ("GSEs"), and \$323 billion in repo backed by such securities. MMFs also held \$71 billion in

¹²⁰Based on data reported to the SEC on Form N-MFP. This total includes all ABCP held by MMFs, not just paper issued by ABCP programs with U.S. sponsors, since foreign-sponsored ABCP conduits purchase the obligations of U.S. businesses and households.

repo backed by securities other than U.S. government securities, which may include nonfinancial business debt and asset-backed securities.¹²¹

Under the assumption that MMF financing for financial institutions, government agencies, and GSEs is ultimately used to provide credit to businesses, households, and state and local governments, this data suggests that MMFs provided direct and indirect credit of as much as \$1,400 billion to businesses, households, and state and local governments. While significant, this amount represented only 5 percent of the total debt outstanding of U.S. businesses, households, and state and local governments, which was \$27,874 billion as of June 30, 2012.¹²²

Based on this share of total debt outstanding and the estimated 0.05 percentage point increase in MMF lending rates per percentage point of capital, this implies that the weighted-average cost of credit for businesses, households, and state and local governments would increase 0.0075 percentage points if the required NAV buffer were 3 percent.¹²³ As already noted, this estimate assumes that the costs of the buffer are passed on entirely to businesses, households, and state and local governments that ultimately obtain credit directly or indirectly from MMFs, rather than absorbed by MMF shareholders, asset management firms, or other financial intermediaries. This assumption leads to a larger estimated increase in borrowing costs for the nonfinancial sector than would occur if MMF shareholders or others absorbed some of the cost. The estimate also assumes that other providers of short-term funding do not increase their lending rates.

The small estimated increment to borrowing costs implies that the potential costs to long-term economic growth also would be small. An illustration of the magnitude of such effects can be derived using recent analyses that model the effects of higher interest spreads on economic activity. For example, the Macroeconomic Assessment Group (established by the Financial Stability Board and the Basel Committee on Banking Supervision) examined the impact of higher borrowing costs on aggregate output. Based on that group's standard approach, an increase in borrowing spreads of 15 basis points was associated with median expected reductions in GDP for 32 quarters ahead (the longest horizon considered in the report) of 0.10 percent.¹²⁴ Importantly, these estimates incorporated reduced loan volumes as well as higher lending spreads. Scaling these estimates, the 0.0075 percentage point increment in borrowing costs for

¹²¹ This total includes all such repo held by MMFs, not just repo conducted with U.S. counterparties, since repo with foreign counterparties may be used to finance the obligations of U.S. businesses and households.

¹²² Based on the Flow of Funds Accounts of the United States. A similar analysis focusing only on business debt indicates that financing provided by MMFs represented less than 3 percent of all nonfinancial business debt at the end of June 2012. Indeed, relatively few firms rely heavily on short-term financing through the types of instruments held by MMFs. See Paolo Colla, Filippo Ippolito, and Kai Li, "Debt specialization," Working Paper, University of British Columbia (2011) (showing that, among a sample of roughly 3,000 publicly traded firms, 0.1 percent of firms obtained more than 90 percent of their total debt financing from CP, but 26 percent of firms obtained more than 90 percent of their debt financing from senior bonds and notes).

¹²³ This figure reflects the assumption that MMF lending rates would increase 0.15 percentage points in total and the fact that MMF lending could represent as much as 5 percent of overall borrowing for these entities.

¹²⁴ There is considerable uncertainty around these estimates. Nonetheless, the overall effects remain modest across the range of assumptions considered in this study. For a discussion of this range, see Macroeconomic Assessment Group, "Interim Report: Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements," Bank for International Settlements (Aug. 2010), at 18.

U.S. businesses, households, and state and local governments translates into an 0.005 percent reduction in output 32 quarters after the capital requirement is imposed. In terms of per-year economic growth, this level effect is very small.

Estimated benefits for long-term economic growth. As noted in Section IV, several activities and practices of MMFs combine to make them vulnerable to runs. Because of MMFs' lack of loss-absorption capacity, the first-mover advantage enjoyed by redeeming investors, and investor uncertainty regarding sponsor support, a run on a single MMF can spread quickly to other funds, as MMF investors seek to minimize losses in funds with potentially correlated portfolio holdings. Due to the fact that MMFs are large and highly interconnected with the rest of the financial system and can act as a channel for transmission of risks and contagion, a run on MMFs can create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies, nonbank financial companies, and U.S. financial markets.

By reducing the likelihood of runs on MMFs, the proposed recommendations would be expected to diminish the severity of financial crises. The Council acknowledges the inherent difficulty in assigning a probability to runs on MMFs and how such runs could contribute to a financial crisis. Nonetheless, the very high degree of interconnectedness of MMFs and other parts of the financial system indicates that runs on MMFs and subsequent disruptions to financing are likely to occur at the same time when other parts of the financial system also are under stress, so runs on MMFs would be expected to increase the severity of a crisis. Indeed, the run in September 2008 exacerbated already severe strains in financial markets and contributed to a broader curtailment in the availability of credit. In addition, as described in section IV, some evidence suggests that institutional investors have become more attuned to MMF risks in the aftermath of the financial crisis, which may make them more prone to runs.

Reducing the likelihood of financial crises or the damage that they cause would have large salutary effects on long-term economic growth. A recent review of multiple studies documents extensive evidence that financial crises have large adverse effects on economic activity over an extended period. Estimated costs of financial crises ranged from about 20 percent to more than 150 percent of real GDP, depending on whether the effects of the crisis are transitory or permanent, with a central tendency of about 60 percent of real GDP.¹²⁵ Given these large costs, reforms that even modestly reduce the probability or severity of a financial crisis would have considerable benefits in terms of greater expected economic activity and, therefore, higher expected economic growth.

Effects of other alternatives. This consideration of the impact on long-term economic growth of the proposed recommendations in Section V focuses on the significant NAV buffer in Alternative Three because, among the different alternatives set forth in section V, that

¹²⁵ See Basel Committee on Banking Supervision, "An assessment of the long-term economic impact of stronger capital and liquidity requirements," Bank for International Settlements (Aug. 2010), at 12-13.

component would have the most direct potential effect on borrowing costs. Alternative Two would require a smaller NAV buffer than Alternative Three, so the direct effect on MMF lending rates under Alternative Two would be smaller. However, the 3 percent MBR in Alternative Two would reduce the liquidity of investments in MMFs for large investors. While the effects of such a reduction in investors' liquidity on borrowing costs are less clear, they are not likely to exceed those associated with financing a larger NAV buffer.¹²⁶ Because the Council views both Alternatives Two and Three as means of reducing the structural vulnerabilities of MMFs, Alternative Two's smaller NAV buffer and 3 percent MBR could be expected to have similar benefits for long-term economic growth as Alternative Three.

Alternative One, which would mandate that MMFs adopt a floating NAV, would not require that MMFs have an NAV buffer or other protections that would be required of MMFs under Alternatives Two or Three. When evaluated using the methodology described above, Alternative One likely would have a smaller direct impact on borrowing costs and hence smaller costs to long-term economic growth than the other alternatives. However, the adoption of Alternative One in isolation, and hence a requirement that *all* MMFs adopt a floating NAV, could prompt shifts by MMF shareholders away from MMFs to alternative cash-management or investment products that maintain stable NAVs. Such a shift could reduce the expected benefits if the alternative products were vulnerable to runs.

The scope of the reform package that is adopted will affect investors' demand for MMFs and the costs to long-term economic growth. A package of reforms that allows asset managers to offer different types of MMFs would allow investors to choose the MMF that best suits their preferences. For example, if the range of options includes both floating NAV and stable NAV funds (with additional protection provided by an NAV buffer, an MBR, or a portfolio that is limited to Treasury securities or Treasury repo), investors who are willing to sacrifice some principal stability might choose the floating NAV funds, those willing to sacrifice some yield might choose a Treasury-only MMF or a fund with a significant NAV buffer, and those willing to sacrifice some liquidity might prefer a fund with an MBR.¹²⁷ Hence, a broad range of options could reduce the likely impact of the recommended reforms on demand for all MMFs while preserving the net benefits to long-term economic growth that would result from the reduced vulnerability of MMFs to destabilizing runs.

Uncertainty regarding estimates of costs and benefits for long-term economic growth. There are substantial uncertainties around the estimates of costs to long-term economic growth. Several assumptions noted above, including a full pass-through of higher costs to borrowers, attempt to produce a conservative estimate of the costs to long-term economic growth. To the extent that

¹²⁶ In the extreme, each investor subject to an MBR that desired to maintain full liquidity might maintain an extra balance of approximately 3 percent to main that liquidity, so MMF shareholders themselves effectively would provide a buffer equal to the size of the MBR.

¹²⁷ Such investor sorting may indeed be beneficial, since the most risk-averse, run-prone investors would likely invest in Treasury funds or MMFs with substantial NAV buffers or other protections.

borrowers substitute away from the short-term financing provided by MMFs, for example, and sell short-term instruments directly to investors or to other types of cash-management vehicles, costs to long-term economic growth could be smaller. As noted above, however, such substitution would reduce expected benefits for long-term economic growth if investors move money to products that are vulnerable to runs.

Of course, some factors could lead to larger estimated costs to economic growth. For example, the estimated effects on the weighted-average cost of credit could be larger if short-term funding markets were to become less liquid, raising the costs of short-term funding provided by other lenders. But the overall effect of a broader increase in short-term rates on the weighted-average cost of capital would still be minimal, given the small share of business, household, and state and local government debt that is short-term. For example, commercial paper outstanding accounted for just 1.1 percent of domestic nonfinancial business debt on June 30, 2012.¹²⁸ There could be costs that are associated with lower profits or shrinkage for MMF sponsors if they are not able to fully pass on higher costs or are capital constrained and cannot quickly and economically build an NAV buffer. However, lower profits and transition costs associated with building the buffer are not likely to have a significant direct effect on long-term economic growth. In addition, the estimates from the macroeconomic studies cited above suggest some uncertainty about the drag on economic activity from higher borrowing costs.

Expected benefits could be diminished if investors switched to alternative cash-management vehicles because MMFs become less attractive. If those cash-management vehicles are themselves vulnerable to runs and are also interconnected with other parts of the financial system, the benefits to long-term economic growth that result from mitigating the probability and severity of financial crises could be reduced. Nonetheless, the expected reductions in the probability or severity of crises associated with MMF reform would imply a sizable net benefit in terms of higher expected economic growth, given the very large costs of financial crises on economic output. Moreover, the Council and its members intend to use their authorities, where appropriate and within their jurisdictions, to reduce or eliminate regulatory gaps to address any risks to financial stability that may arise from dissimilar standards for other cash-management products with risks similar to MMFs.

QUESTIONS

How can the assumptions used to estimate costs to long-term economic growth be further refined?

For each of the alternative reform proposals, what do you estimate would be the effect on the total AUM in MMFs? For each of your estimates, what are your underlying assumptions?

¹²⁸ Based on the Flow of Funds Accounts of the United States.

Given these estimates, what would be the effect on long-term economic growth of such change in the total AUM of MMFs?

Which features, if any, of the alternatives would potentially make MMFs less attractive to investors? If MMFs became less attractive to potential shareholders, where would they invest their funds? Would institutional customers or retail investors be more likely to withdraw funds? What alternative cash-management vehicles would investors likely move to? Would this affect the expected benefits of MMF reform? What impact would this have upon the credit markets in which MMFs invest? How should the role of other financial intermediaries be considered? What risks could that pose for financial stability?

If MMFs became less attractive to potential borrowers, how might they change their financing methods? Would this affect the expected costs or benefits of MMF reform for long-term economic growth?

Would yields on redeemable MMF shares decline, in light of reductions in risk? Would there be additional costs to long-term economic growth from reduced yields to MMF shareholders? If yes, what would they be?

Would a reduction in profits for MMFs sponsors absorb some of the increase in costs? How would their reduced profits affect long-term economic growth?

Are there factors other than borrowing costs, reduced yields to shareholders, and reduced profits for MMF sponsors that may be expected to impact long-term economic growth?

Would higher short-term borrowing rates from MMFs affect other short-term borrowing rates? Are BBB corporate rates and the equity risk premium appropriate proxies for the returns likely to be demanded by providers of the NAV buffer? How should reductions in the structural vulnerability of MMFs impact the potential probability of a financial crisis? The severity of such a crisis? What additional benefits to long-term economic growth might result from reductions in the structural vulnerability of MMFs?