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January 9, 2013

Financial Stability Oversight Council  
Attn: Amias Gerety  
1500 Pennsylvania Avenue, N.W.  
Washington, D.C. 20220

RE: Docket FSOC-2012-0003; Proposed Recommendations  
Regarding Money Market Mutual Fund Reform

Dear Mr. Gerety:

Please find attached a paper responding to the Financial Stability Oversight Council's request for comment on proposed recommendations regarding money market funds.

Sincerely,

*Melanie L. Fein*

Melanie L. Fein

Attachment

# The Financial Stability Oversight Council's Proposals for Money Market Fund Reform

by

Melanie L. Fein

## Abstract

The Council's MMF proposals are flawed by the lack of empirical support for the Council's underlying premise that MMFs are susceptible to runs such that drastic changes are needed in their structure. Similarly, empirical support is lacking for the Council's proposed determination that MMFs spread systemic risk. Indeed, the evidence points to the contrary—the Council's proposals raise a significant danger of actually increasing systemic risk.

This paper shows that “systemic risk” and “financial stability” are developing concepts not completely understood by either regulators or academic economists. It suggests that regulators should wait for the results of ongoing research before proceeding with MMF changes in the name of “systemic risk” when such changes could harm investors, damage the short-term credit markets, and have other unintended consequences for financial stability.

Banking reforms mandated by Congress in the Dodd-Frank Act are expected to greatly improve the stability of the banking system and correct deficiencies in banking supervision that allowed the financial crisis to develop so severely. The Council cannot meaningfully consider the role of MMFs in the financial system until the role of banking organizations is clarified through reforms that remain as yet unimplemented.

Notwithstanding the Dodd-Frank Act mandates, banking regulators have hesitated to move forward with major structural changes to the banking system without the support of additional empirical research. The Council should be even more hesitant to move forward with structural changes to MMFs—for which Congress has mandated no substantive reforms—without strong empirical backing, which currently is lacking.

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## I. INTRODUCTION—THE COUNCIL’S ASSUMPTIONS ARE WRONG

This paper responds to the Financial Stability Oversight Council’s request for comment on “Proposed Recommendations Regarding Money Market Mutual Fund Reform.”<sup>1</sup> The Council has proposed three alternatives to address what the Council perceives as structural deficiencies in money market funds (“MMFs”) that the Council says makes them susceptible to runs.

As a preliminary matter, it bears noting that each of the Council’s proposals would fundamentally alter the basic structure of MMFs that has made them useful financial instruments valued by millions of investors. Each of the proposals would convert what is now a simple and efficient investment vehicle into a much more complex investment that many investors undoubtedly will find overly cumbersome, confusing, and difficult to use. The Council’s proposals will require many institutional investors that wish to continue using MMFs to make costly accounting and operational changes and may make MMFs impermissible investments for many such investors.

The Council recognizes the important benefits and utility of MMFs in the financial system:

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.<sup>2</sup>

Notwithstanding these benefits, the Council’s proposals threaten the continued viability of the MMF industry.

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<sup>1</sup> 77 Fed. Reg. 69455 (Nov. 19, 2012).

<sup>2</sup> 77 Fed. Reg. at 69457.

As a premise for its proposals, the Council proposes to make a formal determination for purposes of section 120 of the Dodd-Frank Act that, due to their perceived susceptibility to runs, MMFs are a source of systemic risk that spread the risk of liquidity, credit, and other problems to the financial markets.<sup>3</sup>

The Council has requested comment on a long list of questions concerning its specific proposals that it says will make MMFs less susceptible to runs. The Council's Federal Register notice states repeatedly that MMFs are susceptible to runs, using the word "run" or "runs" over 140 times. Yet the Council has presented no evidence that MMFs have a history of runs nor invited public comment on whether MMFs in fact are susceptible to runs, a premise that is unproven by empirical evidence and a topic of disagreement in the debate over the causes of the financial crisis.<sup>4</sup> Indeed, recent research has caused reputable academics to reverse their view of "runs" that occurred during the financial crisis and the role of MMFs in such runs.<sup>5</sup> Nor has the Council requested comment on its proposed determination that MMFs pose systemic risk by spreading liquidity and credit problems to the financial markets—also a matter of debate.

The Council's proposals are likely to have a dramatic impact on MMFs and diminish their utility in the financial markets. The Council is proposing to require MMFs to cease offering their shares at a fixed \$1.00 net asset value ("NAV") or maintain a capital buffer coupled with redemption restrictions on investors. These proposals previously have been studied and officially commented on by industry experts, investors, market participants, and other members of the public. For the past two years, the Securities and Exchange Commission ("SEC") has gathered a substantial record of letters, surveys, studies, and other public submissions addressing the very same type of proposals.

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<sup>3</sup> 77 Fed. Reg. at 69456. Section 120 authorizes the Council to recommend new or heightened standards and safeguards for financial activities if the Council determines that "the conduct, scope, nature, size, scale, concentration, or interconnectedness of such 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." Dodd-Frank Wall Street Reform and Consumer Protection Act § 120, 12 U.S.C. § 5330. The Council is proposing to make such a determination with respect to MMFs.

<sup>4</sup> Federal Reserve Governor Tarullo has stated that research concerning the runs on the financial system in 2007 and 2008 is incomplete and inconclusive. See Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, Shadow Banking After the Financial Crisis, Remarks at the Federal Reserve Bank of San Francisco Conference on Challenges in Global Finance: The Role of Asia, June 12, 2012 ("As those who have been following the academic and policy debates know, there are significant, ongoing disagreements concerning the roles of various factors contributing to the rapid growth of the shadow banking system, the precise dynamics of the runs in 2007 and 2008, and the relative social utility of some elements of this system.").

<sup>5</sup> See Gary Gorton and Andrew Metrick, "Who Ran Repo?" Oct. 4, 2012.

Overwhelmingly, commenters testified to the importance of maintaining MMFs as viable investment vehicles.<sup>6</sup>

Many commenters expressed concern that proposals of the type advanced by the Council would destroy the utility of MMFs and deprive investors of the convenience and efficiency they afford. A number of commenters also cautioned that dismantling MMFs would eliminate an important source of short-term funding in the financial markets. Overwhelmingly, commenters pointed to the benefits of MMFs and opposed changes that would alter their basic features.

Based on the public record and other analysis, a majority of the SEC's commissioners determined not to proceed with proposals that would dramatically restructure MMFs, including a floating NAV, capital charges, and redemption restrictions. Two of the commissioners reasoned as follows:

First, the Commission's 2010 money market fund reforms have not been shown to be ineffective in enabling money market funds to satisfy large redemptions and to remain resilient in the face of a sharp increase in withdrawals. In fact, the empirical evidence we have so far, such as the performance of money market funds during the ongoing Eurozone crisis and the U.S. debt ceiling impasse and downgrade in 2011, suggests just the opposite — that money market funds can meet substantial redemption requests, in large part, we have heard, because of the 2010 reforms.

Second, the necessary analysis has not been conducted to demonstrate that a floating NAV or capital buffer coupled with a holdback restriction would be effective in a crisis. Indeed, both alternatives disregard the predominant incentive of investors in a crisis to flee risk and move to safety. Reason indicates that such behavior — the “flight to quality” — is likely to overwhelm the buffer proposed by the Chairman and swamp the effect of a holdback. As for the floating NAV proposal, even if there is no stable \$1.00 NAV — i.e., even if, by definition, there is no “buck” to break — investors will still have an incentive to flee from risk during a crisis period such as 2008, because investors who redeem sooner rather than later during a

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<sup>6</sup> See Securities and Exchange Commission, President's Working Group Report on Money Market Fund Reform, Request for Comment, Release No. IC-29497; File No. 4-619, 75 Fed. Reg. 68636 (Nov. 8, 2010).

period of financial distress will get out at a higher valuation. . . .

Furthermore, we are concerned that the Chairman's proposal would, at a minimum, severely compromise the utility and functioning of money market funds, which would inflict harm on retail and institutional investors who have come to rely on money market funds for investing and as a means of cash management and on states, municipalities, and businesses that borrow from money market funds. . . .<sup>7</sup>

It seems inappropriate for the Council to move forward with proposals that already have been the subject of extensive public comment pursuant to an administrative process and are contrary to the weight of evidence in the public record. It especially seems inappropriate to do so on the basis of theoretical assumptions that have not been proven and are in dispute. The Council has failed to address many of the arguments made by commenters objecting to the concepts the Council is now proposing.

At a minimum, the Council should first seek public comment on the extent to which its operating premise is correct that MMFs are susceptible to runs and a source of systemic risk. Only if public comment or other evidence shows that the Council is correct in its assumptions can the Council credibly proceed with its proposals. Otherwise, the Council will be acting arbitrarily, capriciously, and contrary to the public interest. The Council will open itself to allegations that it is abusing its power under the Dodd-Frank Act, which includes no provisions justifying a dismantling of the MMF industry. There is no evidence in the language or legislative history of the Dodd-Frank Act suggesting that Congress viewed MMFs as a cause of the financial crisis, a menace to U.S. financial stability, or otherwise in need of substantive reforms.

This paper focuses on the Council's underlying presumptions that MMFs are susceptible to runs and a source of systemic risk and shows that these presumptions are flawed.

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<sup>7</sup> Statement on the Regulation of Money Market Funds, SEC Commissioners Daniel M. Gallagher and Troy A. Paredes, Aug. 28, 2012, available at <http://www.sec.gov/news/speech/2012/spch082812dmgtap.htm>.



## II. MMFs DO NOT ORIGINATE SYSTEMIC RISK

MMFs are not a source of risk, either to investors or the financial system. They incur only minimal credit risk and are almost completely unleveraged. MMFs and their investors respond to risks elsewhere in the financial system but they do not create such risk. Systemic risk originates not with MMFs but with institutions that rely on short-term funding to generate long-term assets and that multiply mismatched assets through leverage. Banking organizations are the primary source of systemic risk in the financial system, not MMFs.<sup>8</sup>

### A. MMFs Are Structured to Minimize Risk

MMFs are structured to comply with Rule 2a-7 of the SEC pursuant to the Investment Company Act of 1940. The Rule minimizes the risks MMFs can incur by imposing credit quality standards, portfolio limits, liquidity provisions, diversification, and other requirements that make MMFs among the safest investments—even safer than bank deposits for large investors.

Rule 2a-7 limits MMF investments to short-term, high quality debt securities and other instruments. Rule 2a-7 requires a MMF to limit its investments to securities that pose “minimal credit risk” as determined by the fund’s board independently of any credit rating. Accordingly, MMF investments generally are limited to government and agency securities, commercial paper, repurchase agreements, bank certificates of deposit, and other short-term notes.

Under Rule 2a-7, MMF portfolios must have a weighted average maturity of 60 days or less and a weighted average life of 120 days or less.<sup>9</sup> Diversification requirements further limit the risk level of MMF portfolios. Under Rule 2a-7, a MMF can invest no more than five percent of its portfolio in securities of any one issuer. In addition, a MMF can invest no more than one-

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<sup>8</sup> It is noteworthy that economists at the Federal Reserve Bank of New York recently have published research documenting the dominant role of banking organizations in so-called “shadow banking” activities that regulators have said led to the financial crisis. See Nicola Cetorelli and Stavros Peristianis, *The Role of Banks in Asset Securitization*, *Economic Policy Review*, July 2012, Volume 18, Number 2.

<sup>9</sup> The actual WAM of prime institutional MMFs was 39 days at the end of December 2011 and 44 days at the end of March 2012. Fitch Ratings, “U.S. Money Market Funds Sector Update: First Quarter 2012” (April 16, 2012) at 5, citing iMoneyNet data. The SEC has said that a fund with a WAM of 60 days could withstand a 50 basis point increase in credit spreads across its portfolio, 10 percent redemptions, and an increase in interest rates of over 150 basis points before breaking the buck, assuming a weighted average life limitation of 120 days. 75 Fed. Reg. 10060, 10071 (March 4, 2010).

half of one percent of its portfolio in securities of any one issuer of “second tier” securities, which can comprise no more than three percent of its portfolio.<sup>10</sup>

MMFs also are subject to strict liquidity requirements under Rule 2a-7. The Rule requires each MMF to hold securities that are sufficiently liquid to meet reasonably foreseeable shareholder redemptions. Each MMF must hold at least 10 percent of its total assets in daily liquid assets and at least 30 percent of its total assets in weekly liquid assets.<sup>11</sup> These requirements are designed specifically “so that a fund may more easily satisfy redemption requests during times of market stress.”<sup>12</sup> The Investment Company Institute has estimated that, as of year-end 2011, prime MMFs held in excess of \$650 billion in weekly liquid assets—more than twice the amount of the outflow from prime MMFs during the week of Lehman’s bankruptcy in 2008.<sup>13</sup>

Unlike banks, MMFs do not have the ability to create off-balance sheet liabilities by transferring their assets to securitization trusts or other structured vehicles. All of their assets are carried on-balance sheet. The securitization of toxic long-term assets in complex structured vehicles was instrumental in causing the financial crisis. MMFs do not have the ability to create such vehicles.

Unlike banks, MMFs are not permitted to own operating companies or other subsidiaries. Banking organizations can and do own dozens, sometimes hundreds and even thousands, of subsidiaries. MMFs specifically are prohibited from owning companies engaged in securities activities. The Investment Company Act generally prohibits MMFs from acquiring securities of broker-dealers, underwriters, and investment advisers.<sup>14</sup> Banking organizations, in

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<sup>10</sup> The President’s Working Group Report on Financial Markets, in a report on MMFs, concluded that Rule 2a-7, particularly as strengthened by amendments adopted in 2010, adequately addresses credit risk exposure in MMF portfolios. Report of the President’s Working Group on Financial Markets, Money Market Fund Reform Options, Oct. 2010 (“PWG Report”), at 16.

<sup>11</sup> Prime MMFs rated by Fitch held approximately 30 percent of their portfolios in daily liquid assets in the first quarter of 2012. Fitch Ratings, U.S. Money Market Funds Sector Update: First Quarter 2012 (April 16, 2012) at 1.

<sup>12</sup> 75 Fed. Reg. 10060, 10078 (March 4, 2010) (SEC release accompanying final amendments to Rule 2a-7). The rule defines “daily liquid assets” to include cash (including demand deposits), Treasury securities, and securities (including repurchase agreements) for which a MMF has a legal right to receive cash in one business day. The rule defines “weekly liquid assets” to include the same assets, plus short-term federal government agency notes, with the right to receive cash in five business days.

<sup>13</sup> Source: Investment Company Institute.

<sup>14</sup> This prohibition reflects concerns by Congress regarding a MMF’s exposure to the entrepreneurial risks of securities-related issuers and the potential for conflicts of interest, self-dealing, and reciprocal practices.

contrast, are permitted to own subsidiaries engaged in securities brokerage, underwriting and dealing and, over the course of the past 20 years, have acquired all of the major securities broker-dealers in the United States. MMFs also are subject to stricter limits on transactions with affiliates than are banks.<sup>15</sup>

## **B. MMFs Protect Investors' Liquid Assets**

It is a rare occurrence for a MMF to be unable to pay its shareholders \$1.00 per share. The SEC's Division of Investment Management, which regulates MMFs, has stated that it is a "rare occurrence" for a MMF to break a dollar.<sup>16</sup> Only two MMFs ever have "broken the buck" and investors in those cases got back substantially all of their investment.<sup>17</sup> A MMF breaks the buck when its market-valued net asset value ("NAV") falls half a penny below \$1.00. Then, the fund must operate without a fixed \$1.00 NAV or liquidate.

Although MMFs function without any committed government guarantee program, their record of safety far surpasses that of banks, which failed by the hundreds during the financial crisis and in past crises despite being government insured.<sup>18</sup> The safety record of MMFs reflects their inherent risk-aversion and structural protections afforded by compliance with SEC Rule 2a-7.

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<sup>15</sup> Under section 23A of the Federal Reserve Act, a bank may make loans to and purchase securities issued by an affiliate and engage in other transactions with affiliates, in amounts up to ten percent of its capital and up to 20 percent of its capital for affiliates in the aggregate. Under section 23B, a bank may sell assets to an affiliate provided the sale is on market terms. MMFs, in contrast, may not make any loans to or purchase any securities issued by or from an affiliated person, absent an exemption by the SEC. The Investment Company Act restricts a wide range of transactions and arrangements involving funds and their affiliates. The Act's provisions protect MMFs and other registered investment companies from self-dealing and overreaching by affiliated persons. Among other things, the Act prohibits any affiliated person of a MMF from knowingly purchasing securities or other property from the fund and prohibits a MMF from engaging in any transaction in which an affiliate is a joint participant unless allowed by SEC rules.

<sup>16</sup> Securities and Exchange Commission, Division of Investment Management, Responses to Frequently Asked Questions about The Reserve Fund and Money Market Funds ("A fund whose net assets fall below \$1.00 per share is said to "break a dollar" or "break the buck." This is a rare occurrence—before the events of September 2008, the last (and only) time a registered money market fund broke a dollar was in 1994.").

Available at: <http://www.sec.gov/divisions/investment/guidance/reservefundmmffaq.htm>.

<sup>17</sup> Investors in the Reserve Primary Fund got back 99 cents on the dollar. Investors in a small MMF that broke a dollar in 1994 got back 96 cents on the dollar.

<sup>18</sup> Since January 1, 2008, 463 FDIC-insured banks have failed. Source: Federal Deposit Insurance Corporation. The U.S. Treasury Department imposed a temporary guarantee on MMFs during the financial crisis, unsought by the industry. The program incurred no losses, earned fees of \$1.2 billion for the U.S. Treasury, and terminated a year later.

Investors view MMFs as a safe haven for liquid assets, as demonstrated by the flight to MMFs during the financial crisis.<sup>19</sup> MMFs enable investors to invest in a pool of high quality, liquid assets with greater diversification, ease of administration, and credit analysis capability than they could obtain by investing in individual securities.

Many MMF investors view MMFs as safer than uninsured bank deposits. As noted by Federal Reserve researchers:

[B]ank deposits have safety disadvantages for large institutional investors whose cash holdings typically exceed by orders of magnitude the caps on deposit insurance coverage; for these investors, deposits are effectively large, unsecured exposures to a bank. MMF shares—which represent claims on diversified, transparent, tightly regulated portfolios—would continue to offer important safety advantages relative to bank deposits.<sup>20</sup>

Institutional investors are particularly sensitive to financial risks because they invest on behalf of others and often are subject to fiduciary duties. These investors include pension funds, employee benefit funds, charitable trusts, bank trust departments, corporate and municipal treasurers, and other institutional money managers acting as fiduciaries on behalf of millions of retirees, employees, taxpayers, and citizens. For sound reasons, these investors prefer MMFs to uninsured bank deposits.

### **C. MMFs Are Transparent and Do Not Obscure Risk**

Economists have identified opacity and lack of information as a potential systemic risk.<sup>21</sup> It cannot be said that MMFs present this risk. MMFs are the most transparent of all financial institutions.

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<sup>19</sup> Total MMF assets increased by approximately \$750 billion from January 2008 to January 2009 during the worst of the financial crisis, more than half of which came into MMFs prior to Lehman's bankruptcy on September 15, 2008. Source: Investment Company Institute, *Weekly Total Net Assets and Number of Money Market Mutual Funds*.

<sup>20</sup> 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) at 52.

<sup>21</sup> See, e.g., Janet L. Yellon, Vice Chairman, Federal Reserve Board, *Interconnectedness and Systemic Risk: Lessons from the Financial Crisis and Policy Implications*, Speech delivered Jan. 4, 2013.

MMFs are required to make extensive disclosures about their operations, activities, investments, risks, service providers, fees, and other matters in prospectuses and other information filed with the SEC and made available to investors. They also are required to disclose detailed information about each investment in their portfolios, including the name of the issuer, category of investment, CUSIP number, principal amount, maturity date, final legal maturity date, coupon or yield, and amortized cost value.

Banks are not required to publicly disclose any information concerning the composition of their loans or investment portfolios. MMFs regularly value their portfolios at market prices and publicly disclose their market priced net asset value to four decimal points. Banks value a substantial portion of their assets at book value, making it difficult for depositors, investors, and even regulators to know their true condition at any given time.

#### **D. MMFs Are Self-Liquidating and Loss Minimizing**

MMFs have the capacity to self-liquidate and return each investor's pro rata share of the fund's assets in a relatively simple process. A fund's board of directors may decide to liquidate the fund for a variety of reasons. For example, a number of funds in 2012 liquidated or merged with other funds after their investment advisers decided to exit the MMF business.<sup>22</sup> Investors in the liquidated funds received \$1.00 per share.

SEC rules also permit a MMF's board of directors to suspend redemptions and liquidate if it appears the fund may break the buck or if a material dilution or other unfair results to investors may follow from a deviation between the fund's amortized cost price and its market-based NAV.<sup>23</sup> If a MMF does break a dollar—which has occurred only twice—the fund no longer is permitted to operate with a \$1.00 NAV. In that event, the fund will be closed immediately and not generate further losses.<sup>24</sup> The fund's shareholders do not lose their investment but are entitled to a pro rata share of the fund's assets upon liquidation.

By requiring a MMF effectively to cease operating if its market-based NAV falls half a penny below a dollar, the SEC's rules ensure that investor

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<sup>22</sup> See Crane Data reports dated Dec. 18, Nov. 13, Oct. 25, and Aug. 21, 2012, reporting MMF liquidations.

<sup>23</sup> See SEC Rule 22e-3, 17 C.F.R. § 270.22e-3. The fund's board must notify the SEC of its decision to liquidate the fund.

<sup>24</sup> A MMF that breaks a dollar theoretically could operate with a floating NAV but would not be competitive as a practical matter. It thus is expected that any MMF that breaks a dollar will close.

losses are minimal if the fund breaks the buck. A vivid illustration of the loss-limiting effect of the rules is the return of 99 cents on the dollar to investors of the Reserve Primary Fund after that fund broke the buck in 2008 and was liquidated.<sup>25</sup>

The built in loss-minimizing feature of MMFs reduces the likelihood of a run on MMFs. Because investors know they are likely to suffer only minimal losses if a fund breaks the buck, they have less reason to run. The SEC has stated that the purpose of its rules is to “facilitate an orderly liquidation, reduce the vulnerability of shareholders to the harmful effects of a run on a fund, and minimize the potential for market disruption.”<sup>26</sup>

#### **E. MMFs Are Not Implicitly or Explicitly Guaranteed**

Some Federal Reserve officials have said that MMFs are “implicitly guaranteed” because some investors erroneously believe that MMFs are backed by the government or that the government will insure MMFs in the event of another crisis. No “implicit guarantee” of MMFs exists, and MMF investors are so informed. In accordance with SEC rules, MMFs conspicuously disclose that their shares are not FDIC insured or guaranteed by the government and that investors may lose money by investing in MMFs. During the financial crisis, the U.S. Treasury imposed a temporary partial guarantee program on MMFs, but that program was unsought by the MMF industry and expired unused. Indeed, the Treasury gained \$1.2 billion in fees charged to MMFs.

Unlike banks, MMFs also have no access to the Fed’s discount window. Nor do they need it due to their self-liquidating capability. During the financial crisis, the Fed established a temporary facility that enabled banks to borrow from the Fed using asset-backed commercial paper purchased from MMFs as collateral. That program helped absorb commercial paper shed by MMFs and eased pressure on banks that had sponsored and guaranteed such commercial paper. While the program no doubt enabled a number of MMFs to meet heavy redemption requests without liquidating, its first and foremost benefits were to keep the commercial paper market alive and provide liquidity to banks that otherwise likely would have failed under the weight of their commercial paper guarantees.

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<sup>25</sup> A fund may be liquidated in a relatively short period of time because of the short maturity of its portfolio. Shareholders understand that there may be a delay in repayment of their principal but generally view the delay as a justifiable inconvenience in order to recoup most of their investment. The Reserve Primary Fund was liquidated in a court-supervised process that took approximately one year due to allegations of fraud by the SEC, but shareholders received most of their assets in early phases of the process.

<sup>26</sup> Securities and Exchange Commission, Release No. IC-29132, Money Market Reform, at 116.

Sponsors of MMFs on occasion have provided financial support to their funds to prevent them from breaking a dollar. This practice is voluntary. To the extent it has created an unhealthy expectation of sponsor support, regulators have means to discourage the practice. To the extent the practice creates moral hazard, regulators should restrict or prohibit it.<sup>27</sup>

### III. MMFs DO NOT CAUSE RUNS

The Council has cited no evidence showing that the structure or activities of MMFs makes them uniquely susceptible to runs. The Council refers to the unprecedented events of September of 2008 when prime MMF investors, along with stock market investors generally, fled to safer asset classes as the entire financial system faced collapse. These events revealed vulnerabilities in the banking system, not MMFs. What the events of 2008 demonstrated was the resiliency and utility of MMFs as a source of liquidity, not systemic risk.

#### A. MMFs Have No History of Runs

Unlike banks, which have been plagued with runs throughout their history, MMFs have no history of runs. MMFs have weathered financial crises throughout their 40-year history without access to the federal safety net and have served as a safe haven for investors during times of stress.

Only two MMFs ever have “broken the buck” through multiple episodes of financial instability, including the recent financial crisis.<sup>28</sup> No runs have occurred, other than the rapid reallocation by prime MMF investors to government-only MMFs in 2008.

To the extent what occurred in 2008 may be viewed as a “run”, it was part of a general flight to safety triggered by extraordinary financial turmoil and a massive loss of confidence in the government’s ability to prevent a systemic collapse. If the entire financial system had not been in peril, it is unlikely the Reserve Primary Fund’s breaking a dollar would have had repercussions on other MMFs.

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<sup>27</sup> A pattern of sponsor support by bank-affiliated MMFs has been shown to generate moral hazard and increased risk and should be restricted. Bank-affiliated sponsors supported their funds three times as often and as much as non-bank-affiliated sponsors during the financial crisis. See Patrick E. McCabe, Senior Economist, Federal Reserve Board, *The Cross Section of Money Market Fund Risks and Financial Crises*, Finance and Economics Discussion Series 2010-51 (2010).

<sup>28</sup> As noted, in addition to the Reserve Primary Fund, a small non-retail fund broke a dollar in 1994 without triggering a run on other MMFs. Investors in that fund got back 96 cents on the dollar.

Even before the Reserve Primary Fund broke the buck, a run was underway in the interbank lending market with banks refusing to lend to each other. This run showed up in a sharp rise in the Libor-Overnight Index Swap (LIB-OIS) rate, which is a proxy for counterparty risk and a measure of overall risk and liquidity in the money markets. Economists have tracked the LIB-OIS rate during the financial crisis and shown that it spiked on the day of Lehman's bankruptcy:

The LIB-OIS, after a period of stability in the summer, began to rise in early September, and then passed the 100 bps threshold for the first time on the September 15 bankruptcy filing of Lehman Brothers. The subsequent weeks heralded near collapse of the interbank market, with the LIB-OIS peaking at 364 bps on October 10, before falling back to 128 bps by the end of 2008.<sup>29</sup>

The initial spike in the LIB-OIS rate was not caused by a run on MMFs but rather by fears of heightened counterparty risk due to the government's decision to let Lehman fail. Indeed, as the Council points out in its Federal Register notice, "the run on MMFs occurred not in the two business days immediately after the Lehman bankruptcy" but two days later, after the government's announced \$85 billion bailout of AIG caused further confusion and chaos in the markets.<sup>30</sup> This sequence points to a general loss of confidence by banks in each other and a "run" in the interbank lending market as a leading source of instability immediately preceding and following Lehman's bankruptcy. The exit of MMF investors from prime MMFs that occurred afterward was a follow-on effect from the instability that had already gripped the market.

What occurred was a classic incident of what economists call "Knightian uncertainty" caused by events before and after the government's failure to rescue Lehman following assurances that no major financial institution would be allowed to fail.<sup>31</sup> MMFs did not cause that uncertainty, but the response of MMF investors was entirely predictable under the circumstances. MMFs continued to

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<sup>29</sup> Gary Gorton and Andrew Metrick, *Securitized Banking and the Run on Repo*, at 16-18.

<sup>30</sup> 77 Fed. Reg. at 69464, citing Comment Letter of Treasury Strategies, Inc., SEC File No. 4-619 (June 1, 2012).

<sup>31</sup> See Matthew Pritsker, *Knightian Uncertainty and Interbank Lending*, Aug. 16, 2012, for a description of how Knightian uncertainty affected the interbank lending market in 2008. See also Ricardo J. Caballero and Arvind Krishnamurthy, *Collective Risk Management in a Flight to Quality Episode*, *The Journal of Finance*, Vol. LXIII, No. 5, Oct. 2008, p. 2195. The concept of "Knightian uncertainty" is named after University of Chicago economist Frank Knight and refers to an unforeseeable event that causes a flight to safety. See also M. Fein, *Shooting the Messenger: The Fed and Money Market Funds*, available at SSRN.com, discussing the impact of the Fed's reversal of policy in allowing Lehman Brothers to fail.



operate and meet redemptions throughout the week of September 15, 2008, notwithstanding the turmoil. Federal Reserve researchers have noted that all MMFs other than the Reserve Primary Fund continued to operate without breaking the buck during the week of September 15, 2008:

Even amid the severe run triggered by Lehman's bankruptcy early on Monday, September 15, every MMF except the Reserve Primary Fund managed to survive until the end of the week without breaking the buck (though in some cases, only because of considerable sponsor support).<sup>32</sup>

No run on MMFs occurred in 2011 when prime MMFs experienced sustained redemptions due to instability caused by the European sovereign debt crisis and the debt ceiling debacle in the United States. Nor is there any other history of "runs" on MMFs.

#### **B. MMFs Provide Crucial Liquidity to Investors in a Crisis**

MMFs provide liquidity to their investors during normal times as well as in a crisis. The structure of MMFs allows investors to withdraw cash or reallocate their assets through exchanges among funds and/or redemptions on a daily basis. Investors rely on MMFs as a cash management tool for that reason. Their structure affords investors ready access to liquidity.

Continued access to liquidity is crucial during times of crisis to enable market participants to complete transactions and continue economic activity, thereby lessening the potential for domino effects if market transactions were to halt. Access to liquidity reduces the potential for markets to seize up and minimizes economic disruption, thereby facilitating more rapid recovery.

MMFs are required by Rule 2a-7 to maintain the ability to rapidly liquidate their portfolios in order to meet investor redemptions. As noted above, the Rule requires MMFs to maintain 10 percent of their portfolios in assets that can be liquidated daily and 30 percent weekly. These requirements help ensure that MMFs can act as a source of liquidity to investors during a crisis.

Before recommending changes that would limit the ability of MMF investors to redeem their shares, the Council should consider what the systemic

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<sup>32</sup> 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) at 41.

impact would be if such investors did not have ready access to their liquid assets during episodes of financial turmoil. The result could be catastrophic for the economy.

### **C. MMFs' Limited Loss Capacity Is Not a Run Risk**

The Council notes that MMFs “lack any explicit capacity to absorb losses” and that “even a small threat to an MMF can start a run.”<sup>33</sup> Without necessarily agreeing with this statement and apart from the lack of any empirical evidence to support it, one may ponder how it is that MMFs have managed to exist without any runs in the 40 years preceding the events of 2008.

One reason undoubtedly is the strict regulatory framework under Rule 2a-7 that limits MMFs' ability to incur credit risk and requires a high level of liquidity. Another reason is the strong discipline and conservatism of MMF investment managers who know there is little or no room for error in making investment decisions. In some cases, as noted, MMF sponsors have stepped in to absorb losses, but this practice has been limited.

Indeed, MMFs are able to operate as efficiently as they do because, among other things, they have no formal loss absorption mechanism. As with other equity investments, MMF shareholders bear the risk of loss in MMF portfolios. If a MMF's net asset value falls half a penny below one dollar and it “breaks the buck,” the fund must operate without a fixed \$1.00 NAV or liquidate and distribute its assets to its investors pro rata. MMF investors are aware their investments can lose value, including loss of principal, although it would be a rare occurrence if a fund broke the buck.<sup>34</sup>

In view of the remarkable safety of MMFs through various economic cycles and episodes during the past 40 years, the need to burden them with explicit loss absorption capability to prevent the remote possibility that a MMF will break the buck in the future is unpersuasive.

### **D. The “First Mover Advantage” Is Not Unique to MMFs**

The Council repeatedly refers to a theoretical “first mover advantage” as a dynamic that ostensibly increases MMFs' susceptibility to runs. The first mover advantage arises, according to the Council, because MMF investors know that if they redeem early they will receive \$1.00 per share whereas, if they wait, the fund may break a dollar and they may get back less than \$1.00 per share.

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<sup>33</sup> 77 Fed. Reg. at 69461.

<sup>34</sup> Unlike banks, MMFs are required to disclose their market or “shadow” NAVs as well as their portfolio holdings. Investors thus can monitor MMF portfolios.

The “first mover advantage” is a normal investor reaction to increased risk and is not unique to MMFs. The SEC’s Division of Risk, Strategy, and Financial Innovation has stated that the first mover response is “not unique to money market funds.”<sup>35</sup> Academic studies have shown “first mover” behavior by investors in mutual funds generally.<sup>36</sup> Moreover, first mover behavior drives the stock market and is part of the process of price discovery and market discipline.

The first mover response is a typical reaction by equity investors to instability in the financial markets. MMF investors are equity investors. Each share of a MMF represents an equity interest in the fund’s pool of securities. Equity investors are motivated to exit the market before other equity investors during market stress, knowing that if they wait, the value of their investments will go down as other investors withdraw before them. Institutional equity investors are the first to exit because they monitor the markets more closely than individual investors do.

During the financial crisis in 2008, equity investors sought the first mover advantage on numerous occasions as the financial system wavered on the brink of collapse. Of the 20 largest one-day losses in the Dow Jones Industrial Average in history going back to 1929, ten of them occurred in 2008 on or after September 15.<sup>37</sup> Of the 20 largest percentage losses in Dow Jones Industrial Average history going back to 1899, four occurred in 2008 after September 15.<sup>38</sup>

It thus is not remarkable that institutional investors in prime MMFs followed the first mover response in redeeming their shares during the week of September 15. The Council’s inference that a variable NAV or capital requirement would have forestalled the first mover response of such investors is unrealistic and unsupported by empirical evidence. Indeed, as noted below, academics have shown that a variable NAV in particular would not have done so.<sup>39</sup>

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<sup>35</sup> Securities and Exchange Commission, Division of Risk, Strategy, and Financial Innovation, Response to Questions Posed by Commissioners Aguilar, Paredes, and Gallagher, Nov. 30, 2012.

<sup>36</sup> See Qi Chen, Itay Goldstein, and Wei Jiang, Payoff Complementarities and Financial Fragility: Evidence from Mutual Fund Outflows, 2010, *Journal of Financial Economics*, Vol. 97, 239-262.

<sup>37</sup> Wall Street Journal, Market Data Center, Historical Index Data.

<sup>38</sup> *Id.*

<sup>39</sup> 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 SSRN.com.

### E. MMFs' Fixed NAV Does Not Increase Run Risk

The Council says that MMFs' fixed \$1.00 NAV increases the first mover advantage and makes a run more likely at the first sign of trouble whereas a floating NAV would decrease the likelihood of runs. The Council cites no evidence for this proposition. There is no reason to suppose that investors in a floating NAV prime fund would be any less protective of their investment than investors in a fixed NAV fund.

Indeed, recent research cited in the Council's Federal Register notice disagrees with the Council. Specifically, the Council cites a paper by Gordon and Gandia<sup>40</sup> that examines data comparing the run risk of fixed NAV funds in the United States with variable NAV funds in Europe during the week of September 15, 2008.<sup>41</sup> The authors found no difference in run risk between the two. The paper concludes that requiring MMFs to adopt a variable NAV structure in lieu of the current \$1.00 NAV will not make MMFs less susceptible to runs. This paper provides empirical research showing that the Council's proposal to require MMFs to abandon the fixed \$1.00 NAV is misguided.

The President's Working Group on Financial Markets has questioned the feasibility of eliminating the \$1.00 NAV:

Such a change may have several unintended consequences, including: (i) reductions in MMFs' capacity to provide short-term credit due to lower investor demand; (ii) a shift of assets to less regulated or unregulated MMF substitutes such as offshore MMFs, enhanced cash funds, and other stable value vehicles; and (iii) unpredictable investor responses as MMF NAVs begin to fluctuate more frequently.<sup>42</sup>

\* \* \* \*MMFs with floating NAVs, at least temporarily, might even be more prone to runs.<sup>43</sup>

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<sup>40</sup> *Id.*

<sup>41</sup> Cited at 77 Fed. Reg. at 69460 n. 24.

<sup>42</sup> President's Working Group on Financial Markets, Report on Money Market Fund Reform Options, Oct. 2010 ("PWG Report"), at 4 and 19-23. The PWG is comprised of the Secretary of the Treasury and the chairmen of the Federal Reserve Board, Securities and Exchange Commission, and Commodity Futures Trading Commission.

<sup>43</sup> PWG Report at 22.

## F. Recent Reforms Mitigate Run Risks

The SEC in 2010 adopted reforms to Rule 2a-7 designed to enhance the resiliency of MMFs. In addition to tightening MMF credit, liquidity and diversification standards, the Rule requires MMFs to disclose their portfolio holdings and imposes stress testing and other safety requirements.

The SEC's reforms reduce potential MMF run risks, as the President's Working Group has recognized:

[T]he rules . . . reduc[e] the susceptibility of MMFs to runs, both by lessening the likelihood that an individual fund will break the buck and by containing the damage should one break the buck.<sup>44</sup>

\* \* \* \* The new SEC rules make MMFs more resilient and less risky and therefore reduce the likelihood of runs on funds, increase the size of runs that they could withstand, and mitigate the systemic risks they pose.<sup>45</sup>

The PWG pointed out that the SEC's reforms will reduce risks in several respects. Among other things, the PWG noted that the requirement for stronger liquidity enables MMFs to better withstand heavy redemption requests:

One of the most important SEC rule changes aimed at reducing systemic risk associated with MMFs is a requirement that each fund maintain a substantial liquidity cushion. Augmented liquidity should position MMFs to better withstand heavy redemptions without selling portfolio securities into potentially distressed markets at discounted prices.<sup>46</sup>

The PWG noted that stricter credit standards for MMFs make it less likely that a MMF will break a dollar:

These new constraints reduce the likelihood that individual funds will be exposed to a credit event that could cause the funds to break the buck. . . . [T]hese changes should

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<sup>44</sup> PWG Report at 14.

<sup>45</sup> PWG Report at 16.

<sup>46</sup> PWG Report at 14.

improve the ability of individual MMFs to maintain a stable NAV during periods of market volatility.<sup>47</sup>

The PWG also noted that the ability of MMFs to suspend redemptions during a crisis reduces risks:

The new SEC rules should reduce the systemic risk posed by MMFs by permitting a fund that is breaking the buck to promptly suspend redemptions and liquidate its portfolio in an orderly manner. This new rule should help prevent a capital loss at one fund from forcing a disorderly sale of portfolio securities that might disrupt short-term markets and diminish share values of other MMFs. Moreover, the ability of a fund to suspend redemptions should help prevent investors who redeem shares from benefiting at the expense of those who remain invested in a fund.<sup>48</sup>

#### **G. Academics Have Reversed Their Views on MMF Runs**

Banking regulators have relied heavily on research by Yale Professors Gary Gorton and Andrew Metrick in concluding that MMFs are a source of runs. In a series of widely acclaimed papers published in 2009-2010, Professors Gorton and Metrick asserted that a run in the market for repurchase agreements (the “repo market”) caused the banking system to become insolvent and led to the financial crisis.<sup>49</sup> MMFs are key lenders in the repo market and, as theorized by Gorton and Metrick, played a leading role in the run on repo and the ensuing financial collapse.

In their papers, Gorton and Metrick estimated the size of the repo market in 2007-08 to be between \$10 and \$12 trillion—exceeding the size of the banking system. They claimed that a dramatic increase in “haircuts” on repo

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<sup>47</sup> PWG Report at 15.

<sup>48</sup> PWG Report at 15. Further, the PWG pointed out that the new rules place additional constraints on MMFs’ exposure to counterparties through repurchase agreement transactions collateralized by securities other than cash equivalents or government securities and thereby lessen the potential for “fire sales” of MMF assets in the event of a counterparty failure. PWG Report at 16.

<sup>49</sup> Gary B. Gorton, Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007; Gary Gorton and Andrew Metrick, The Run on Repo and the Panic of 2007-2008, March 9, 2009; Gorton and Metrick, Haircuts, Federal Reserve Bank of St. Louis Review, Nov.-Dec. 2010; Gorton and Metrick, Securitized Banking and the Run on Repo, Nov. 9, 2010; Gorton and Metrick, Regulating the Shadow Banking System, Brookings Papers on Economic Activity, Fall 2010.

collateral by repo investors (including MMFs) caused a “run on repo” which in turn caused the entire banking system to become insolvent:

How did a breakdown in one part of the housing market lead to a systemic crisis in the whole financial sector? In this paper, we provide some evidence on . . . how the financial crisis spread from the subprime housing market sector to the broad panic that we had by the end of 2008. We argue that the crisis is “systemic” because it was a run on the sale and repurchase market (the “repo” market), which stopped functioning, leading to massive deleveraging of participants. In effect, the banking system became insolvent. \* \* \* \* Our answer is that there was a run in the repo market. . . .[by MMFs and other investors].<sup>50</sup>

To prevent a similar danger in the future, Gorton and Metrick recommended that MMFs be subjected to bank-like regulation.<sup>51</sup>

Federal Reserve officials repeatedly have cited the work of Gorton and Metrick as a basis for their understanding of the financial crisis and the role of MMFs in the crisis.<sup>52</sup> The “run on repo” theory of the financial crisis, however, has since been challenged by other academics and proven wrong in its conclusions regarding MMFs.

In 2012, economists at Northwestern and Stanford Universities published a paper refuting the conclusions of Gorton and Metrick. In contrast to the latter’s

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<sup>50</sup> Gorton and Metrick, *Securitized Banking and the Run on Repo*, supra.

<sup>51</sup> Gorton and Metrick, *Regulating the Shadow Banking System*, supra.

<sup>52</sup> See Federal Reserve Board Governor Daniel K. Tarullo, *Regulating the Shadow Banking System*, Remarks at the Brookings Panel on Economic Activity, Washington, D.C., Sept. 17, 2010 (“Gary Gorton and Andrew Metrick have, in setting forth this proposal, continued to shape our understanding of the role and risks of the shadow banking system, as well as to add a specific proposal to our menu of possible responses.”). Fed Chairman Bernanke repeatedly has cited Professor Gorton’s work and recommended it as required reading. See Michael Corkery, *Ben Bernanke’s Reading List*, *Wall Street Journal*, Sept. 3, 2010; David Ignatius, *Ben Bernanke, Quiet Tiger at the Fed*, *Washington Post*, May 28, 2009 (“Bernanke recommended studies by Gary Gorton, a Yale economist who has analyzed the ways the recent panic resembled those of the late 19th century. . . his latest paper, ‘Slapped in the Face by the Invisible Hand’.”). See also “Reflections on a Year of Crisis,” Remarks of Ben S. Bernanke at the Federal Reserve Bank of Kansas City’s Annual Economic Symposium, Jackson Hole, Wyoming, Aug. 21, 2009; Statement by Ben S. Bernanke, Chairman, Federal Reserve Board, before the Financial Crisis Inquiry Commission, Sept. 2, 2010; Remarks by Ben S. Bernanke at the New York University Law School, April 11, 2007, *Financial Regulation and the Invisible Hand*.

sweeping claims concerning the role of repo, they found that repo played “only a small role” in funding subprime mortgages and transmitting risks:

[R]epo accounts for only a small fraction of the short-term funding of securitized assets . . . prior to the crisis. This finding does not support [the] broad brush picture painted by Gorton and Metrick. . . .<sup>53</sup>

Moreover, Krishnamurthy and Nagel found that only three percent of outstanding asset-backed securities were financed with repo from MMFs and that most of the repo funding extended by MMFs was collateralized by government securities—a finding that undermines the “haircut” theory of Gorton and Metrick.

Researchers at the Federal Reserve Bank of New York also in 2012 published a paper contradicting the findings of Gorton and Metrick.<sup>54</sup> Other researchers reached a similar conclusion.<sup>55</sup>

It turns out that the data used by Gorton and Metrick as a basis for their heralded “run on repo” hypothesis were drawn from a sliver of the bi-lateral repo market not representative of the market as a whole. In particular, Gorton and Metrick did not properly account for the tri-party repo market, which forms a large part of the repo market and relies on safe government securities rather than mortgage-backed securities as collateral.

In light of the subsequent research undermining their theory, Gorton and Metrick have reassessed their broad claims concerning the role of MMFs in the

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<sup>53</sup> Arvind Krishnamurthy, Stefan Nagel, and Dmitry Orlov, *Sizing Up Repo*, Centre for Economic Policy Research, Discussion Paper No. 8795, Feb. 2012 at 50. These professors analyzed an SEC database of 15,000 separate transactions by the 20 largest money market fund families, covering some 80 percent of the assets in the industry.

<sup>54</sup> Adam Copeland, Antoine Martin, Michael Walker, *Repo Runs: Evidence from the Tri-Party Repo Market*, Federal Reserve Bank of New York Staff Report no. 506, July 2011, rev. March 2012 (“We study the behavior of haircuts and values of collateral posted over this period and document the surprising result that securities dealers’ funding was remarkably stable. Strikingly, even around times when a securities dealer experienced adverse shocks, we show the affected dealer is able to maintain its funding without changes in haircuts. . . . This paper provides a detailed description of the U.S. tri-party repurchase market. . . . We document that the level of haircuts and the amount of funding were surprisingly stable in this market, even for securities dealers who suffered adverse shocks.”)

<sup>55</sup> See, e.g., Richard Comotto, *Haircuts and Initial Margin in the Repo Market*, European Rep Council, Feb. 8, 2012 (“They [Gorton and Metrick] are therefore simply incorrect to attribute the entire deleveraging of the US financial system and loss of liquidity in the US money market to the dynamics of the repo market in form of deepening haircuts.”).



financial crisis. In a major admission of academic error, they recently recanted their earlier conclusion, stating:

As it turns out, MMFs were not at all representative during the crisis, with repo assets actually increasing for MMFs by more than \$100 billion at the same time that overall repo liabilities were falling by \$1.3 trillion.<sup>56</sup>

This admission of error by respected academics concerning the causes of the financial crisis and the role of MMFs suggests that policymakers who are relying on these sources similarly should revise their views.

#### **H. Eliminating Runs Is Not Possible**

The President's Working Group on Financial Markets has rejected the idea that MMFs can be made completely risk-free, or the potential for runs by prime MMF investors can be eliminated:

Making each individual MMF robust enough to survive a crisis of the size of that experienced in 2008 may not be an appropriate policy objective because it would unduly limit risk taking. . . . [N]ew rules to protect MMFs from material credit losses would be difficult to craft unless regulators take the extreme step of eliminating funds' ability to hold *any* risky assets. But that approach would be clearly undesirable, as it would adversely affect many firms that obtain short-term financing through commercial paper and similar instruments. In addition, such an extreme approach would deny many retail investors any opportunity to obtain exposure to private money market instruments and most likely would motivate some institutional investors to shift assets from MMFs to less regulated vehicles.<sup>57</sup>

Similarly, liquidity requirements sufficient to cover all redemption scenarios for MMFs would be impractical and inefficient.

The financial crisis demonstrated that it is not possible to eliminate the risk of bank runs. Despite the existence of deposit insurance, the Fed's discount

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<sup>56</sup> Gary Gorton and Andrew Metrick, *Who Ran Repo?* Oct. 4, 2012. Gorton and Metrick admitted that their data was flawed and their interpretation of the data misleading: "Our analysis demonstrates the danger of relying exclusively on official sources of data for repo markets. While it is tempting to focus where the data are strongest, such analyses can be misleading.")

<sup>57</sup> PWG Report at 17.

window, and comprehensive prudential supervision and regulation, U.S. banks experienced runs that destabilized not only themselves but the entire financial system. Unless the U.S. government is prepared to fully insure all bank deposits—which it is not—or prohibit banks from accepting uninsured deposits—which it is not—then the risk of bank runs in the United States will persist.

If it is not possible to eliminate bank runs with all the government infrastructure supporting the banking system, it is hardly likely that the potential for runs by MMF shareholders, small though it is, can be eliminated. Nor should it be. Regulations that aim to that make banks or MMFs absolutely run-free (assuming that were even possible) inevitably would increase moral hazard, which would increase risk in the financial system.

What can be done is to anticipate the predictable response of MMF investors in the event of a future crisis. Prime MMFs necessarily will need to liquidate assets in order to meet redemption requests in the unlikely event a future crisis causes heavy investor demand for redemptions that exceed the daily and weekly liquidity requirements. It is foreseeable that risk-averse institutional investors in particular will act to protect their liquid assets in the event of a major crisis, regardless of whether they hold such investments directly or through MMFs. Regulators and bank managers can prepare for anticipated liquidity pressures by reducing the banking system’s reliance on short-term funding and/or improving liquidity management and contingency planning at banks.<sup>58</sup> In a systemic crisis of dire proportions, intervention by the central bank again may be required to bolster the banking system.

#### IV. MMFS DO NOT SPREAD RISK

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.”<sup>59</sup>

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<sup>58</sup> In a recent speech, Federal Reserve Board Governor Jeremy Stein discussed his research regarding the impact on lending in the United States by foreign banks after MMFs and other wholesale investors reduced their funding of such banks during the European sovereign debt crisis in 2011. Governor Stein drew two policy conclusions from his research: first, that dollar swap arrangements with central banks are important and, second, that regulatory measures are needed to limit foreign bank heavy reliance on short-term wholesale funding. Jeremy C. Stein, Board of Governors of the Federal Reserve System, Dollar Funding and Global Banks, Speech at the Global Research Forum of the European Central Bank, Dec. 17, 2012.

<sup>59</sup> 77 Fed. Reg. at 69456.

Apart from ignoring the risk-limiting features of MMFs, the Council’s proposed determination misconceives MMFs’ relationship to risk in the financial system. MMF investors *respond* to risk—they do not create risk. Their response to risk may result in a withdrawal of funding to the sources of risk. In that way, they may *reduce*, rather than spread risk. Such behavior is a manifestation of market discipline, generally considered desirable.

In the systemic crisis that occurred in 2008, the withdrawal of prime MMF investors from the short-term credit markets deprived large financial institutions of short-term funding for their leveraged credit activities and forced them to fund such activities from their own capital. The fact that such institutions were over-leveraged, under-capitalized, illiquid, and ill-prepared for what was a foreseeable response by MMFs to the buildup of risk in the financial system does not mean that MMFs spread risk.

#### A. MMFs Are Unleveraged

Leverage is the principal means by which financial institutions multiply and spread risk. Banking organizations are highly leveraged. Using borrowed funds, they generate far more assets than they are capable of liquidating to meet their debt obligations upon demand. The large mismatch between their assets and liabilities is the principal reason why banks are susceptible to runs and why, to minimize such runs, the government provides banks with deposit insurance and access to central bank liquidity facilities.

In contrast to banks, MMFs are unleveraged. MMFs do not issue debt or engage in leveraged lending. They issue shares and use the proceeds to purchase securities on behalf of their shareholders—i.e., their “depositors” who are the source of their equity capital. They have 100 percent equity capital and do not borrow against their capital to expand their assets. Every dollar of equity in a MMF supports just one dollar of assets. Banks, in contrast, leverage their capital by 10 to one or greater.<sup>60</sup> MMFs invest only the amount of equity they receive from their shareholders on an almost dollar-for-dollar basis and no more. MMFs thus do not multiply or spread risk through leverage.

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<sup>60</sup> For every dollar of bank shareholder equity or other capital, a bank generally may acquire \$10 of assets, funded by deposits or other debt, such as commercial paper. Prior to the financial crisis, banking organizations were even more heavily leveraged. The Financial Crisis Inquiry Commission found that, “from 2000 to 2007, large banks and thrifts generally had \$16 to \$22 in assets for each dollar of capital, for leverage ratios between 16:1 and 22:1. For some banks, leverage remained roughly constant. JP Morgan’s reported leverage was between 20:1 and 22:1. . . . Citigroup’s increased from 18:1 to 22:1, then shot up to 32:1 by the end of 2007. . . . Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States, Jan. 2011, at 65.

## **B. MMFs Are Risk Barometers**

MMFs help to measure risk in the financial system. Because of the high credit standards they must meet, MMF portfolio managers constantly monitor risk levels of eligible investments, using sophisticated risk assessment tools and analysis. MMF managers apply rigorous credit standards to each portfolio investment in order to ensure they incur no more than minimal credit risk and otherwise meet the requirements of SEC Rule 2a-7. MMFs avoid investments with elevated risk as a matter of regulatory compliance and because their shareholders demand it. Limits on the maturity of MMF portfolios give MMFs the flexibility to shift their investments rapidly in response to changing risks. The ability of MMFs to engage in agile risk-management is a hallmark of their success and a reason why investors entrust so much of their cash to MMFs.

Because they invest heavily in obligations of financial institutions, MMFs detect risks in the financial system early and adjust their portfolios accordingly. MMFs also reflect their investors' collective assessment of market risk as manifested in shareholder movements among funds, particularly from prime funds to government-only funds.

MMFs thus are barometers of risk in the financial system as well as indicators of market confidence in financial institutions. As such, MMFs are agents of market discipline.

## **C. MMFs Encourage Market Discipline**

One of the key purposes of the Financial Stability Oversight Council is “to promote market discipline.”<sup>61</sup> Market discipline has been highlighted as a policy goal by the President’s Working Group on Financial Markets<sup>62</sup> and is one of the three pillars of the Basel II capital framework.<sup>63</sup> Federal Reserve Chairman Bernanke has said that “market discipline is a powerful and proven tool for constraining excessive risk-taking”<sup>64</sup> and he and other Fed governors have remarked on the utility of market discipline in mitigating risk in the financial system:

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<sup>61</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act § 112.

<sup>62</sup> President’s Working Group on Financial Markets, Policy Statement on Financial Market Developments, March, 2008. The report made recommendations to address weaknesses in the global financial markets, with the overriding goal to “strengthen market discipline, enhance risk management, and improve the efficiency and stability of capital markets.”

<sup>63</sup> Bank for International Settlements, Basel Committee on Banking Supervision, Consultative Document, Pillar 3 (Market Discipline), Supporting Document to the New Basel Capital Accord, Issued for comment by 31 May 2001.

<sup>64</sup> Ben S. Bernanke, Chairman, Federal Reserve Board, Financial Regulation and the Invisible Hand, Remarks at the New York University Law School, April 11, 2007.

In recent decades, public policy has been increasingly influenced by the insight that the market itself can often be used to achieve regulatory objectives.<sup>65</sup>

Market discipline can improve financial stability by aligning risks and rewards more closely.<sup>66</sup>

We must resurrect market discipline as a complementary pillar of prudential supervision.<sup>67</sup>

[T]he regulatory system has much to gain from increasing market discipline in financial markets.<sup>68</sup>

MMFs are major contributors of market discipline. The investment allocation decisions of their portfolio managers reflect expert analysis of changing risk levels at individual financial institutions and the market as a whole. One reason why only one MMF broke the buck during the financial crisis is that most MMF managers disposed of their holdings of Lehman Brothers' commercial paper as too risky prior to its bankruptcy, notwithstanding that the paper was rated AAA and despite Federal Reserve assurances that no major financial institution would be allowed to fail. In addition, MMFs exert market discipline by implementing the investment allocation decisions of their investors who independently assess risks.

The Council's proposals would reduce the role of MMFs as market discipliners by creating regulatory disincentives for MMF investors to act rationally in reallocating to lower risk assets during times of uncertainty. Moreover, the Council's proposals could inject an element of moral hazard into the risk assessments of MMF portfolio managers and thereby distort market discipline. To the extent the Council's proposals eliminate MMFs, this source of market discipline will be lost altogether. The loss of MMFs as a source of market discipline would increase systemic risk.

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<sup>65</sup> *Id.*

<sup>66</sup> Kevin Warsh, Governor, Federal Reserve Board, Financial Markets and the Federal Reserve, Remarks at the New York Stock Exchange, Nov. 21, 2006.

<sup>67</sup> Kevin Warsh, Governor, Federal Reserve Board, Regulation and Its Discontents, Remarks to the New York Association for Business Economics, Feb. 3, 2010.

<sup>68</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve Board, Involving Markets and the Public in Financial Regulation, remarks at the Council of Institutional Investors, April 13, 2010.

#### D. MMFs Diversify Risk

In addition to acting as risk barometers and agents of market discipline, MMFs lessen systemic risk by diversifying risk, both in their portfolios and within the financial system.

MMFs are subject to diversification requirements under Rule 2a-7 that require them to maintain highly diversified portfolios. A MMF generally can invest no more than five percent of its portfolio in securities of any one issuer. In addition, it can invest no more than one-half of one percent of its portfolio in securities of any one issuer of “second tier” securities, which can comprise no more than three percent of its portfolio.

More importantly, MMFs diversify risk in the financial system by serving as an alternative to bank deposits. For decades, MMFs have counterbalanced weaknesses in the banking system and provided a safe haven for cash investors who otherwise would have no alternative to uninsured bank deposits. Apart from being less safe than MMF shares, uninsured deposits are an unstable source of funding for banks, increasing the risk of bank runs and failures.<sup>69</sup>

The availability of MMFs as an alternative to bank deposits also reduces taxpayer risk by reducing the total amount of bank assets protected by the federal safety net and limiting the size of “too-big-to-fail” banks. The experience with unlimited deposit insurance for noninterest bearing checking accounts shows that the largest banks attracted most of the \$1.6 trillion in deposits covered by such insurance.<sup>70</sup>

The disappearance of MMFs would remove an important element of diversity from the financial system, as well as competition. Competition from MMFs in the 1980s forced federal regulators to remove antiquated restrictions on the ability of banks to pay interest on demand deposits, thereby enhancing competition in the financial marketplace, diversifying risk, and benefitting consumers. Because of their less complex structure, MMFs provide many of the same benefits as banks with greater cost efficiency than banks, particularly for institutional investors. For such investors, MMFs provide a higher degree of diversification, liquidity, efficiency, and safety.

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<sup>69</sup> See Federal Deposit Insurance Corporation, Study on Core Deposits and Brokered Deposits, July 8, 2011.

<sup>70</sup> Source: Federal Deposit Insurance Corporation, Quarterly Banking Profile. Much of this amount came from MMFs and is expected to flow back into MMFs after the expiration of unlimited deposit insurance on January 1, 2013, thereby reducing the size of such banks.

The concentration of financial assets in the banking system exposes those assets to political pressures regarding the allocation of credit in the economy. For example, banks are subject to regulations—including capital requirements—that encouraged excessive credit allocation to the household sector and over-leveraging by American consumers prior to the financial crisis. Those regulations contributed to the housing bubble that fueled the crisis and led to regulatory arbitrage that resulted in undercapitalized risk-taking by banks. MMFs are unaffected by such pressures in their investments.

If MMFs are eliminated by the Council's proposals, increased concentration of financial assets in the banking sector would result. More of the financial system then would be subject to banking regulation and the mistakes of banking regulators. As commentators elsewhere have described, regulatory action and inaction by U.S. banking regulators contributed in significant ways to the buildup of risks in the banking system prior to the crisis. A diversity of regulators, along with a diversity of institutions, is more likely to foster a healthy financial system in the long run.

#### **E. MMFs Remained Stable in the Turmoil of 2011**

MMFs demonstrated their resiliency in 2011 when global financial markets were disturbed by heightened risks due to the sovereign debt crisis in Europe and the debt ceiling crisis in the United States, which resulted in downgrades of U.S. government and European sovereign debt by credit rating agencies.

Prime MMFs, which held a sizeable portion of their assets in deposits of foreign banks, experienced sustained redemptions by their investors over a period of several months. MMFs met these redemptions without difficulty. No MMF broke the buck and there was no run on MMFs.<sup>71</sup> As the Council itself has pointed out, during the eight weeks ending on August 3, 2011, institutional prime funds experienced net outflows of \$179 billion without any run occurring.<sup>72</sup> During this period, only five prime MMFs experienced market-based NAV declines of more than four basis points and the largest monthly decline in any prime fund was only 12 basis points.<sup>73</sup>

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<sup>71</sup> Fitch Ratings studied MMFs during the European debt crisis and found that they remained stable due to the high credit quality of their portfolios, heightened risk-aversion by MMF shareholders and managers, and increased liquidity. Fitch Ratings, Inc., Study of MMF Shadow NAV Shows Stability, June 14, 2012.

<sup>72</sup> 77 Fed. Reg. at 69465.

<sup>73</sup> 77 Fed. Reg. at 69465 n. 65. As the Council points out, such small changes in MMF shadow NAVs are not unusual.

Some Federal Reserve officials have complained that MMFs spread the risks of the European debt crisis to U.S. markets by withdrawing funding for European banks, which in turn reduced such banks' lending to U.S. customers and foreign companies doing business in the U.S., necessitating an increase in the Federal Reserve's dollar swap arrangements with European central banks.<sup>74</sup> This complaint misconstrues the role of MMFs in the financial markets—MMFs are not a guaranteed source of funding, particularly not to risky borrowers or in risky markets.

Moreover, this complaint is addressed more appropriately by reforms directly aimed at global banking organizations, particularly those that rely heavily on short-term credit to fund longer-term assets. Indeed, the Federal Reserve recently proposed comprehensive reforms to its regulation of U.S. operations of foreign banks to address weaknesses revealed by the European debt crisis.<sup>75</sup> These reforms, among other things, would reduce foreign banks' reliance on short-term, wholesale dollar funding from MMFs and other investors. At least one Federal Reserve Governor has stated that such action is unlikely to have a significant impact on the U.S. economy.<sup>76</sup> Concerns that MMFs spread risk to the U.S. economy by providing funding to foreign banks thus seem unfounded.

## V. MMFs DID NOT CAUSE THE FINANCIAL CRISIS

Much of the reform activity in the aftermath of the financial crisis aims at weaknesses perceived to have caused or exacerbated the crisis. A proper understanding of the crisis and its causes thus is necessary if reforms are to be effective in preventing a future calamity. Without a clear understanding of the causal factors, policymakers cannot appropriately address vulnerabilities or, worse, might create new ones.

Academic researchers still are studying the causes of the crisis and have not reached a consensus as to the operative causes, as acknowledged by this statement posted on the web site of the Stanford Graduate School of Business:

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<sup>74</sup> See 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).

<sup>75</sup> 77 Fed. Reg. 76628 (Dec. 28, 2012).

<sup>76</sup> Statement by Federal Reserve Governor Jeremy C. Stein, Dec. 14, 2012 ("In particular, the proposal is intended to address funding fragility by encouraging banks to lengthen the maturities of their dollar liabilities. Although the proposal may reduce somewhat the gross cross-border positions of foreign banking organizations, from the evidence that I've seen, the effect on credit availability and on economic activity more broadly seems unlikely to be significant relative to the benefits.").



Understanding exactly what happened, and why, has been the subject of a good deal of academic work, much of it pointing in different directions. Solving this riddle, though, is more than an academic exercise: The answers could well shape public policy and the regulation of financial markets for some time.<sup>77</sup>

Numerous and varied causal theories have appeared. Yet no credible analysis of the financial crisis supports the view that MMFs were a cause. To the contrary, MMFs' high credit quality standards, compliance with strict regulatory requirements, and lack of leverage make them unlikely candidates for that distinction.

#### **A. Factors Completely Unrelated to MMFs Caused the Crisis**

Researchers studying the financial crisis have pointed to a variety of factors as causes. These include: overly accommodative monetary policy, government homeownership policies, the originate-to-distribute model of housing finance, subprime mortgage lending, over-leveraging by consumers and financial institutions, too-big-to-fail banking organizations, weak capital rules for banks, lax liquidity management, regulatory exemptions for banks, weakening of Glass-Steagall Act restrictions, unjustified credit ratings, unregulated derivatives activities, and mark-to-market accounting, among others.<sup>78</sup> MMFs had nothing to do with any of these likely causes.

The financial institutions most directly implicated in the causes of the crisis were banking organizations, their affiliates, and their sponsored entities engaged in so-called "shadow banking" activities through securitization and other highly-leveraged off-balance sheet activities.<sup>79</sup> Banking regulators also

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<sup>77</sup> Stanford Graduate School of Business, <http://www.gsb.stanford.edu/news/research/nagel-paper-repo.html> (last visited Dec. 28, 2012).

<sup>78</sup> Some academics who have studied the crisis have pointed to the Federal Reserve's erratic lender of last resort policy and other actions as causal elements in the crisis. See, e.g., John B. Taylor, "Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis," Hoover Inst. Press Publication, 2009, at 61 ("I have provided empirical evidence that government actions and interventions caused, prolonged, and worsened the financial crisis. They caused it by deviating from historical precedents and principles for setting interest rates that had worked well for twenty years. They prolonged it by misdiagnosing the problems in the bank credit markets and thereby responding inappropriately, focusing on liquidity rather than risk. They made it worse by supporting certain financial institutions and their creditors but not others in an ad hoc way, without a clear and understandable framework. Although other factors were certainly at play, those government actions should be first on the list of answers to the question of what went wrong.").

<sup>79</sup> Researchers at the Federal Reserve Bank of New York have shown that banks were "by far the predominant force in the securitization market." Nicola Cetorelli and Stavros Peristiani,

were a cause of the financial crisis to the extent they allowed banks to conduct such activities with insufficient capital and liquidity, and indeed adopted regulatory exemptions that incentivized banks to increase their involvement in activities that ultimately proved devastating.<sup>80</sup> Banking regulators also tolerated weak risk management at large banks and excessive reliance on short-term funding, and failed to adequately supervise shadow banking activities by banks and their affiliates.<sup>81</sup>

Among other likely causes, academics have highlighted capital arbitrage by banking organizations as a leading cause of the financial crisis.<sup>82</sup> The Federal Reserve itself has recognized that deficiencies in capital, liquidity, and risk management contributed to the failure or near failure of a number of banking organizations and exacerbated the financial crisis:

The financial crisis demonstrated the need for stronger regulatory and supervisory assessments of firms' financial resiliency. The Federal Reserve noted significant weaknesses in the adequacy of firms' point-in-time regulatory capital to cover accumulated and prospective risks, as well as in firms' liquidity buffers and risk

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The Role of Banks in Asset Securitization, Federal Reserve Bank of New York Economic Policy Review, July 2012, at 58. See also Senior Supervisors Group, Risk Management Lessons from the Global Banking Crisis of 2008, Oct. 21, 2009, highlighting the involvement of banking organizations in overleveraged "shadow banking" activities without adequate liquidity, capital, or risk-management.

<sup>80</sup> See, e.g., Viral V. Acharya, Philipp Schnabl, and Gustavo Suarez (senior economist, Federal Reserve Board), *Securitization Without Risk Transfer*, Aug. 8, 2011.

<sup>81</sup> See Senior Supervisors Group, Risk Management Lessons from the Global Banking Crisis of 2008, Oct. 21, 2009.

<sup>82</sup> Viral V. Acharya and Matthew Richardson, *Causes of the Financial Crisis*, available at SSRN.com. ("Why did the popping of the housing bubble bring the financial system—rather than just the housing sector of the economy—to its knees? The answer lies in two methods by which banks had evaded regulatory capital requirements. First, they had temporarily placed assets—such as mortgages—in off-balance-sheet "conduits," so that they did not have to hold significant capital buffers against them. Second, the capital regulations allowed banks to reduce the amount of capital they were required to hold against assets that remained on their balance sheets if these assets took the form of AAA rated nonprime or Fannie Mae/Freddie Mac securities, as opposed to individual mortgages. Thus, by repackaging mortgages into mortgage-backed securities, whether held on or off their balance sheets, banks reduced the amount of capital required against their loans, increasing their ability to make loans many-fold. The principal effect of this regulatory arbitrage, however, was to concentrate the risk of mortgage defaults in the banks and render them insolvent when the housing bubble popped.").

See also Arnold Kling, *Not What They Had in Mind: A History of Policies that Produced the Financial Crisis of 2008*, Sept. 15, 2009, available at SSRN.com. ("[C]apital regulations were the most important causal factor in the crisis. Capital regulations encouraged banks and other financial institutions to make bad bets, to finance those bets with excessive leverage, and to set up financial structures that were subject to domino effects and to 21st century runs.").

management practices. These weaknesses contributed to the failure or near failure of many financial firms and exacerbated the crisis.<sup>83</sup>

The Federal Reserve also has cited the size, leverage, and interconnectedness of large banking organizations, and weaknesses in banking supervision and regulation, as threats to financial stability:

The recent financial crisis demonstrated that certain U.S. financial companies had grown so large, leveraged, and interconnected that their failure could pose a threat to overall financial stability in the United States and globally. The financial crisis also demonstrated that large foreign banking organizations operating in the United States could pose similar financial stability risks. Further, the crisis revealed weaknesses in the existing framework for supervising, regulating, and resolving significant U.S. financial companies, including the U.S. operations of large foreign banking organizations.<sup>84</sup>

Any suggestion by banking regulators that MMFs were responsible for the financial crisis seems particularly misguided and disingenuous in light of the overwhelming evidence of deficiencies in the supervision and regulation of banking organizations that preceded—and likely caused—the crisis.

#### **B. MMF Managers Acted Responsibly**

MMFs were not causally implicated in any of the problems that led to the financial crisis. MMFs played the role of investors, not originators of risk. MMFs invested in highly rated commercial paper issued by banking organizations and their sponsored entities that met the high credit quality standards of SEC Rule 2a-7. MMFs did not create these assets. Nor were they responsible for supervising banking organizations, granting them regulatory exemptions, or providing a guaranteed source of funding to them.

There is no evidence that MMF portfolio managers acted irresponsibly, irrationally, or in violation of Rule 2a-7 during the financial crisis or the events leading up to it.<sup>85</sup> There is no evidence that fund managers withdrew from the

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<sup>83</sup> Federal Reserve Board, SR 12-17, Consolidated Supervision Framework for Large Financial Institutions, Dec. 17, 2012, at 4.

<sup>84</sup> 77 Fed. Reg. 76628 (Dec. 28, 2012).

<sup>85</sup> One possible exception is the Reserve Primary Fund whose managers the SEC alleges misled investors regarding their intention to support the fund following Lehman Brothers'

short-term credit markets other than in response to cautious credit analysis and asset movements by their shareholders designed to avoid risk.

The decision of MMF managers to avoid potentially risky assets does not signify that MMFs are structurally susceptible to runs. It signifies that fund managers exercise reasonable caution in accordance with the requirements of Rule 2a-7 and their objective to provide safety of principal for their investors. Investment decisions by MMF portfolio managers reflect asset inflows and outflows by MMF investors. Fund managers can purchase investments for fund portfolios only when investors buy MMF shares, and must sell investments when shareholders redeem their shares.

MMF managers acted responsibly during the financial crisis. When it became clear that bank-sponsored asset-backed commercial paper and other assets that MMFs invested in did not meet expected credit quality standards, MMF portfolio managers stopped purchasing such assets. As investors withdrew assets from prime MMFs, fund managers further liquidated their holdings of bank-sponsored commercial paper to meet redemptions. MMF managers acted fully in accordance with the requirements of Rule 2a-7.

Some regulators and others have said that MMFs increased the severity of the financial crisis because they withdrew from the bank commercial paper market at the height of the crisis. It is true that the pull-back of MMFs from the short-term credit markets meant that banks no longer could rely on MMFs to support their “shadow banking” activities and instead were forced to fund such activities themselves. Banks were ill-prepared to do so because banking regulators had exempted such activities from the capital rules<sup>86</sup> and banks thus lacked sufficient capital to support such activities.<sup>87</sup> Moreover, banks proved susceptible to runs on their capital by borrowers to whom they had made pre-committed lines of credit, and even refused to lend to each other on an overnight basis. Banking regulators have acknowledged that excessive reliance by banks on short-term funding and weaknesses in bank liquidity management were a

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bankruptcy. See Wall Street Journal, SEC Plans to Seek New Trial in Reserve Primary Fund Case, Dec. 13, 2012.

<sup>86</sup> In 2004, the banking regulators decided not to require banking organizations to consolidate their ABCP conduits on their balance sheets for regulatory capital purposes, notwithstanding an accounting standard adopted by the Financial Accounting Standards Board (FASB) in 2003 that otherwise required consolidated accounting. The regulators adopted a rule specifically excluding assets in ABCP conduits from a banking organization’s consolidated risk-weighted asset base. 69 Fed. Reg. 44908 (July 24, 2004). As a result, banking organizations were allowed to continue operating their ABCP programs without maintaining capital against the assets in the conduits.

<sup>87</sup> See Viral V. Acharya, Philipp Schnabl, and Gustavo Suarez, *Securitization Without Risk Transfer*, Aug. 8, 2011; Covitz, Liang, and Suarez, *The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market*, August 24, 2009, available at SSRN.com.

major cause of the crisis.<sup>88</sup> MMFs were not responsible for these deficiencies in the banking system.

### C. MMF Investors Responded Rationally

Institutional investors in prime MMFs responded rationally to the uncertainty created by the government's unexpected failure to rescue Lehman Brothers and its equally unexpected \$85 billion rescue of AIG during the week of September 15, 2008.<sup>89</sup> The response of such investors was to rapidly reallocate their assets from prime MMFs to government-only MMFs and other low-risk assets. This action by MMF investors to protect their assets was a reasonable response to what by then had become an unprecedented financial crisis.<sup>90</sup>

It is helpful to understand the fundamental nature of MMFs as equity investments. An investor in a MMF holds an equity interest in a portfolio of short-term securities. Like other equity investors in the stock market, MMF investors—especially investors in prime MMFs—know their equity interest is not guaranteed and may lose value. The absence of a guarantee is highlighted in prospectus disclosures and advertisements as required by law. During times of uncertainty or stress, MMF investors behave like other investors in the stock market—they transfer to lower-risk assets to protect the value of their principal. MMF investors who are fiduciaries particularly do so to protect fiduciary assets.

In the uncertainty and chaos during the week of September 15, 2008, the stock market as a whole faced historic withdrawals as investors acted to protect their investments.<sup>91</sup> The behavior of prime MMF investors was consistent with that of other investors and fiduciaries acting to safeguard their assets.

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<sup>88</sup> See 77 Fed. Reg. 594, 604 (Jan. 5, 2012) (Federal Reserve Board, Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies; proposed rule) (“Many of the liquidity-related difficulties experienced by financial companies were due to lapses in basic principles of liquidity risk management. . . . [F]ailure of liquidity risk management practices contributed significantly to the financial crisis.”).

<sup>89</sup> Approximately \$300 billion was withdrawn from prime MMFs during the week of September 15, 2008.

<sup>90</sup> Federal Reserve Chairman Bernanke has said the crisis was the “worst financial crisis in global history, including the Great Depression.” Testimony of Ben Bernanke before the Financial Crisis Inquiry Commission, Transcript dated Nov. 17, 2009 at 24 (“As a scholar of the Great Depression, I honestly believe that September and October of 2008 was the worst financial crisis in global history, including the Great Depression. . . .out of maybe the 13—13 of the most important financial institutions in the United States, 12 were at risk of failure within a period of a week or two.”).

<sup>91</sup> Of the 20 largest one-day losses on the Dow Jones Industrial Average since 1929, ten occurred on and following the day of Lehman's bankruptcy (September 15, 2008) in 2008, including a 504 point loss on September 15, a 449 point loss on September 17, and a 778 point loss on September 29—nearly a 10 percent drop in two weeks. The market continued to

The heavy redemptions by prime MMF investors does not signify that prime MMFs are structurally susceptible to runs. Rather, it shows that investors in prime MMFs know that their investments are not guaranteed and will act rationally to protect their principal in times of uncertainty. They typically will do so by transferring assets from prime funds to safer asset classes, including government-only MMFs or direct investments in U.S. government securities. MMFs are designed to withstand such asset movements and assure investors of access to their liquid assets.

#### **D. MMF Interconnectivity Did Not Cause the Crisis**

The interconnectivity of MMFs with other financial institutions was not a cause of the crisis. Only a relatively small number of MMFs held investments in Lehman Brothers' commercial paper and only one of those—the Reserve Primary Fund—broke the buck, ultimately returning 99 cents on the dollar.

Moreover, the crisis at banks already was well underway before Lehman failed. Banks already had stopped lending to each other and were beset by runs on pre-existing credit lines by corporate borrowers. Banks were unable to withstand the withdrawal of MMFs from the commercial paper market not because of interconnectivity with MMFs but because of interconnectivity with themselves and because they lacked adequate capital and liquidity. This vulnerability was a major failure of banking regulation and risk management, not interconnectivity with MMFs.<sup>92</sup>

#### **E. MMFs Did Not Cause a Credit Shortage**

The withdrawal of prime MMFs from the commercial paper market during the financial crisis did not cause a shortage of credit to the economy, as

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plummet even further in the ensuing weeks from 10,918 at the close on September 15 to 8,149 on December 1, 2008. Wall Street Journal Market Data Center, Historical Index Data. Ten of the 20 largest point gains in DJIA history also occurred in 2008, evidencing extreme market volatility.

<sup>92</sup> In any event, interconnectivity is a necessary and beneficial aspect of modern financial systems. See Janet L. Yellon, Vice Chairman, Federal Reserve Board, *Interconnectedness and Systemic Risk: Lessons from the Financial Crisis and Policy Implications*, Speech delivered Jan. 4, 2013 (“Financial economists have long stressed the benefits of interactions among financial intermediaries, and there is little doubt that some degree of interconnectedness is vital to the functioning of our financial system. Economists take a well-reasoned and dim view of autarky as the path to growth and stability. Banks and other financial intermediaries channel capital from savers, who often have short-term liquidity demands, into productive investments that typically require stable, long-term funding. Financial intermediaries work with one another because no single institution can hope to access the full range of available capital and investment opportunities in our complex economy. Connections among market actors also facilitate risk sharing, which can help minimize (though not eliminate) the uncertainty faced by individual agents.”).

the Council claims. Studies have shown that many investors who left prime MMFs during the crisis transferred their funds to banks in the form of deposits, thereby increasing available funding for bank loans.<sup>93</sup> Deposits are the principal source of funding by which banks make credit available to the economy. To the extent there was a “run” on prime MMFs, it likely generated an increase, rather than a decrease, in direct funding for bank loans.<sup>94</sup>

The reason why a credit crunch occurred was because banks held insufficient capital to support loans to the economy. The capital they did have was exhausted by pre-committed credit lines to corporate borrowers and commercial paper guarantees that were rapidly drawn upon.<sup>95</sup>

A run by prime MMF investors would not curtail the availability of short-term credit in the financial system, as the Council posits. Rather, a run most likely would result in a transfer of liquid assets to government-only MMFs and to banks in the form of deposits—including uninsured deposits of banks perceived to be too-big-to-fail.

#### **F. The Government Protected Banks, Not MMFs**

The heavy redemptions by prime MMF investors in September of 2008 prompted the government to temporarily impose a partial guarantee on MMFs and provide liquidity facilities whereby the Federal Reserve effectively purchased asset-backed commercial paper that MMFs refused to purchase or were liquidating. At the time, regulators stated that these measures were designed to protect MMFs and stabilize the short-term credit markets.

The principal effect of these measures, however, was to protect banks, which faced ruinous liability on their guarantees of asset-backed commercial paper, which MMFs could no longer purchase. Absent the government’s emergency actions, it is likely that a number of large banks faced with such

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<sup>93</sup> David S. Scharfstein and Victoria Ivashina, *Bank Lending During the Financial Crisis of 2008*, Dec. 15, 2008, at 3 (“[A]s concerns about general credit quality rose during the crisis, investors pulled their money from uninsured money market funds and the commercial paper market, and redeployed their funds to banks in the form of insured deposits. Therefore, banks that were in a better position to attract deposits, were likely less credit-constrained and thus in a better position to lend than banks without a strong deposit base. . . . [I]nvestors will withdraw from money market funds that invest in commercial paper, and instead place their money in insured deposits.”).

<sup>94</sup> FDIC data show a nearly \$1.0 trillion increase in bank deposits from 2007-2009. Deposits increased from \$6.695 trillion in 2007 to \$7.019 trillion in 2008, and \$7.553 trillion in 2009, ultimately rising to \$8.923 in 2012. Some of this increase was due to temporary unlimited deposit insurance provided by the FDIC for noninterest bearing checking accounts, which expired on January 1, 2013.

<sup>95</sup> Scharfstein and Ivashina, *supra*.

obligations would have become critically undercapitalized and failed. A number of prime MMFs also might have been forced to liquidate, but the shareholders of those funds likely would have recovered most of their investment, as did shareholders of the Reserve Primary Fund.

The government's emergency measures were necessary to avert a collapse of the banking system, not to protect MMF investors.<sup>96</sup>

### **G. Multiple Bank Runs Occurred**

The damaging runs that occurred during the financial crisis were runs on banks, not MMFs. Multiple bank runs occurred during the crisis, requiring massive government intervention. Five separate runs on the banking system occurred during 2007-2008.

First was the run on bank sponsored asset-backed commercial paper conduits ("ABCP") in 2007, sparked by the bursting of the housing bubble and concerns by MMFs and other investors that ABCP was contaminated with toxic assets. These investors refused to renew their holdings of ABCP, forcing bank sponsors to take the ABCP onto their own balance sheets in fulfillment of backup letters of credit and other guarantees. Banks lacked sufficient capital and became temporarily insolvent.<sup>97</sup> A run on repurchase agreements used to finance ABCP and other bank activities ensued.<sup>98</sup> Banks stopped lending to each other, hoarded liquidity, and the financial markets froze.<sup>99</sup> To contain the effects of this "run," the Federal Reserve established special liquidity facilities for banks and began a sustained program of monetary policy actions that reduced short-term interest rates at an unprecedented pace.<sup>100</sup>

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<sup>96</sup> See M. Fein, *Shooting the Messenger: The Fed and Money Market Funds*, available at SSRN.com, for an elaboration of this view.

<sup>97</sup> Banking regulators exempted bank-sponsored ABCP conduits from regulatory consolidation in 2004 following a financial accounting standard interpretation adopted by the Financial Accounting Standards Board (FASB) that otherwise required consolidation. See Sandra C. Krieger, Executive Vice President, Federal Reserve Bank of New York, "Reducing the Systemic Risk in Shadow Maturity Transformation," March 8, 2011 ("The banks did not have the capital to bring all of their off-balance-sheet liabilities onto their balance sheets...."). See also Gary B. Gorton and Andrew Metrick, *Securitized Banking and the Run on Repo*, November 9, 2010, Yale ICF Working Paper No. 09-14 ("the U.S. banking system was effectively insolvent for the first time since the Great Depression.").

<sup>98</sup> See Gary B. Gorton, *Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007*, available at SSRN.com.

<sup>99</sup> See Jose Berrospide, *Economist*, Federal Reserve Board, *Liquidity Hoarding and the Financial Crisis: An Empirical Evaluation*, April 2012.

<sup>100</sup> In December 2007, the Fed established a Term Auction Facility to provide short-term loans to banks secured by a wide range of collateral including residential mortgages, mortgage-backed securities, and collateralized mortgage obligations—in other words, assets held by bank-



Second, there was a run in 2008 on individual banks that were heavily involved in subprime mortgage lending. Depositors whose deposits exceeded the then \$100,000 deposit insurance limit fled these banks, leading to the failure, takeover or propping up of several major U.S. banking organizations.<sup>101</sup>

Third, there was a run in September of 2008 by corporate borrowers who drew down pre-committed credit lines out of fear their lending banks would fail, depriving them of access to credit, which further depleted bank capital and constrained bank lending to the broader economy.<sup>102</sup> This increased borrowing added assets to bank balance sheets, requiring the allocation of capital to support the loans at a time when bank capital was already highly stressed.

Fourth, there was the further run on bank ABCP in September of 2008 when MMFs and other investors declined to renew their ABCP holdings amid uncertainty following Lehman's bankruptcy. This run necessitated additional emergency liquidity facilities by the Fed to purchase ABCP and other commercial paper guaranteed by banks.

Massive government intervention was required to stabilize the banking system following these runs.<sup>103</sup> A Federal Reserve research paper has shown

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sponsored ABCP conduits. Aggregate liquidity under this program totaled \$3.8 trillion from December 2007 through January 2010. The peak amount outstanding at any one time was \$493 billion. See Federal Reserve Board, *Usage of Federal Reserve Credit and Liquidity Facilities* (Nov. 30, 2011).

<sup>101</sup> These included Countrywide, Indymac, Washington Mutual, and Wachovia, among others.

<sup>102</sup> See Judit Montoriol-Garriga, Federal Reserve Bank of Boston, and Evan Sekeris, Federal Reserve Bank of Richmond, *A Question of Liquidity: The Great Banking Run of 2008? Quantitative Analysis Unit, Federal Reserve Bank of Boston, Working Paper No. QAU09-04* (March 30, 2009) ("In other words, when a bank was thought to be at high risk of default, firms that had credit lines with them were more likely to use them than if their credit line was with a healthier bank. This was a run on the banks by investors who ran away from the financial paper market which in turn triggered a run by borrowers of the weakest banks. This sequence of events was made possible by the combination of an increased reliance on the commercial paper market by financial institutions for their short-term liquidity needs and the, often lax, underwriting of credit lines during the good years."). See also Victoria Ivashina and David Scharfstein, *Bank Lending During the Financial Crisis of 2008*, available at SSRN.com/abstract=1297337, at 2-3 ("We document that there was a simultaneous run by borrowers who drew down their credit lines....firms state that they drew on their credit lines to ensure that they had access to funds at a time when there was widespread concern about the solvency and liquidity of banking sector....These credit line drawdowns were part of "run" on banks that occurred at the height of the crisis."). The Fed researchers recommended that banking regulators strengthen capital requirements for unused lending commitments and increase their prudential oversight of liquidity risk management at banks.

<sup>103</sup> The runs by uninsured bank depositors prompted Congress to increase temporarily, and then permanently, the amount of deposit insurance from \$100,000 to \$250,000 per depositor. In addition to the emergency liquidity facilities established by the Fed, the FDIC launched the Temporary Liquidity Guarantee Program, providing *unlimited* insurance for noninterest bearing

that these and related government support actions substantially increased the federal safety net's coverage from approximately 45 percent of all financial firm liabilities in 1999 to approximately 59 percent of such liabilities at the end of 2009.<sup>104</sup>

These bank runs are what destabilized the financial system, not a run on MMFs. Structural weaknesses in the banking system, not MMFs, caused these runs on banks. Bank runs, not runs on MMFs, caused the credit markets to freeze and required massive government intervention. The runs were damaging to banks because regulators had allowed banking organizations to engage in leveraged "shadow banking" activities with insufficient capital, liquidity, or risk controls.

#### **H. Eliminating MMFs Will Not Prevent Another Crisis**

Some observers of recent regulatory reform initiatives targeting MMFs have concluded that the aim of such measures is to eliminate MMFs from the financial system.<sup>105</sup> Industry experts have voiced concern that measures such as the Council has proposed will negate the utility of MMFs and lead to their exit from the financial markets.<sup>106</sup>

Statements by current and former Federal Reserve officials suggest that, despite the proven benefits of MMFs to investors, the central bank has long viewed MMFs with hostility. Among other things, the Federal Reserve appears to view MMFs as an illegitimate product of regulatory arbitrage, a competitive threat that diverts deposits from banks, an unwanted complication to monetary policy, and a missing link in the Fed's regulatory jurisdiction.<sup>107</sup>

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business checking accounts at banks and guaranteed debt issued by banking organizations. Congress appropriated \$750 billion in emergency relief in the Troubled Asset Relief Program ("TARP").

<sup>104</sup> Nadezhda Malysheva and John R. Walter, How Large Has the Federal Financial Safety Net Become? Federal Reserve Bank of Richmond, *Economic Quarterly*, Vol. 96, No. 3, 10-03, March 10, 2010.

<sup>105</sup> See, e.g., remarks of Paul Schott Stevens, President, Investment Company Institute, quoted in "Fund Industry Rejects Money Market Proposals," *Bloomberg*, Feb. 7, 2012 ("My concern is that within the councils of government there are people whose agenda it is to kill money market funds).

<sup>106</sup> See statement by Investment Company Institute, Executive Council, dated March 14, 2012 ("We are concerned that these changes will eliminate the utility of money market funds for most investors. As a result, these funds no longer would serve, as they do today, as a critical source of financing for businesses, banks, state and local governments, and the federal government.").

<sup>107</sup> See M. Fein, *Shooting the Messenger: The Fed and Money Market Funds*, available at SSRN.com for a discussion of the historical roots of the Federal Reserve's animus toward MMFs.

It thus is not surprising that the Federal Reserve supports proposals such as those advanced by the Council. There is little evidence to suggest, however, that either the Federal Reserve or the Council has empirically studied the operations of MMFs or their role in the financial system or has a broadly informed understanding of their utility to investors and the financial markets.<sup>108</sup>

The idea that eliminating MMFs will prevent another financial crisis from occurring is not one that has been articulated by either the Federal Reserve or the Council. Nevertheless, it is a clear implication of the Council's regulatory proposals. Given the multitude of causes of the last financial crisis having nothing to do with MMFs, it would be highly speculative to conjecture that the dismantling of MMFs could prevent another crisis in the future. Nothing in the economic literature or elsewhere supports such a view. Indeed, there is much to suggest that the elimination of MMFs could increase systemic risk and weaken financial stability.

## VI. MMF CHANGES COULD INCREASE SYSTEMIC RISK

Following the financial crisis, Congress held extensive hearings on the causes of the crisis and areas of financial activity needing structural reform. The Dodd-Frank Act was the result of comprehensive congressional deliberations and includes multiple provisions designed to minimize systemic risk and enhance the financial stability of the United States.

Nowhere in the legislative history of the Dodd-Frank Act is there any suggestion that Congress viewed MMFs as a source of systemic risk. Nowhere in the Act are MMFs identified as a threat to the financial stability of the United States or in need of substantive reform.

Contrary to the intent of the Dodd-Frank Act, the Council's MMF proposals create a significant potential for increasing systemic risk and weakening U.S. financial stability. The Council should consider seriously the possibility that its proposals could damage credit markets, increase investor risks, increase run risk, and exacerbate systemic risk. Reform for the sake of reform is unjustified, particularly when it produces harmful consequences.

### A. The Council's Proposals Could Damage Credit Markets

Credit availability is an important indicia of the financial health and stability of the economy. MMFs are an important source of short-term credit in

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<sup>108</sup> See *id.*

the financial system, as the Council itself has recognized.<sup>109</sup> The President's Working Group on Financial Markets also has recognized the important role of MMFs in the credit markets:

MMFs are important providers of credit to businesses, financial institutions, and governments. Indeed, these funds play a dominant role in some short-term credit markets. For example, MMFs own almost 40 percent of outstanding commercial paper, roughly two-thirds of short-term state and local government debt, and significant portions of outstanding short-term Treasury and federal agency securities.<sup>110</sup>

Notwithstanding MMFs' important role, the Council's proposals potentially could eliminate MMFs as purchasers of commercial paper and other short-term credit instruments. MMFs are an efficient means by which investors hold these instruments. Without MMFs, investors may not invest in them as readily. The PWG has recognized that "tighter restrictions on MMFs might, for example, lead to a reduction in the supply of short-term credit" and that a change in the structure of MMFs to a floating NAV could have the unintended consequence of reducing MMFs' capacity to provide short-term credit due to lower investor demand.<sup>111</sup>

Before proceeding with its MMF proposals, the Council should gather empirical data and carefully study the implications for the short-term credit markets and the economy as a whole of an exit by MMFs from these markets.

## **B. The Council's Proposals Could Increase Investor Risks**

If MMFs cease to exist in their current form, investors would lose a repository for their liquid assets and would be forced to seek less safe alternatives. One alternative would be uninsured bank deposits, with the risks of bank failure, which are unacceptable to many investors. Another alternative would be unregulated funds that are similar to MMFs but not subject to the protections of Rule 2a-7. In either case, MMF investors would be exposed to heightened risks they now can avoid by investing in MMFs. If MMFs cease to exist, investors would lose an investment product that offers superior diversification, liquidity, transparency, efficiency, and safety.

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<sup>109</sup> 77 Fed. Reg. at 69455 ("MMFs are a significant source of short-term funding for businesses, financial institutions, and governments.").

<sup>110</sup> PWG Report at 7.

<sup>111</sup> See PWG Report at 4 and 13.

Before proceeding with its MMF proposals, the Council should gather data regarding available investment alternatives to MMFs and study the implications of increased risks for investors if such alternatives replace MMFs.

### **C. The Council's Proposals Could Increase Run Risk**

The PWG Report on Money Market Funds discussed the option of requiring MMFs to adopt a floating NAV and concluded that this option could potentially increase, rather than decrease, the risk of MMF runs. The Report noted that MMFs with floating NAVs “might even be more prone to runs” than MMFs with \$1.00 NAVs to the extent investors react to small or temporary changes in the value of their shares.<sup>112</sup>

A capital buffer requirement and redemption restrictions similarly could increase the risk of MMF runs to the extent investors become more sensitive to small changes in MMFs’ market-based NAVs and seek to exit funds at the first hint of trouble to avoid redemption restrictions. The Council needs to carefully weigh the potentially significant costs of its proposals against the benefits, which seem elusive.

### **D. The Council's Proposals Could Increase Systemic Risk**

Rather than reduce systemic risk, the Council’s proposals could magnify such risk. Damage to credit markets, increased investor risk, and increased run risk all could lead to heightened systemic risk if the Council’s proposals are adopted.

In the Federal Register notice accompanying its MMF proposals, the Council rightly asks where investors would shift their investments and “how would this mitigate or increase risks to financial stability?”<sup>113</sup>

An almost certain result of the Council’s proposals would be the shift of MMF assets to uninsured deposits in banks as well as other less regulated investment funds. Uninsured deposits are not a stable source of funding for banks. An increase in bank deposits in any event would increase systemic risk by causing “too-big-to-fail” banking organizations to become even larger and more of a threat to financial stability. The experience with unlimited deposit insurance for noninterest bearing checking accounts strongly suggests that big banks would be major recipients of outflows from MMFs.<sup>114</sup> Rather than enlarge

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<sup>112</sup> PWG Report at 20-23.

<sup>113</sup> 77 Fed. Reg. at 69469 and 69474-75.

<sup>114</sup> Pursuant to the Dodd-Frank Act, the FDIC extended unlimited deposit insurance to noninterest bearing checking accounts at banks until January 1, 2013. As a result of this

too-big-to-fail banks, the Council should focus on ways to reduce their size and lessen the need for taxpayer funded bailouts.

The President's Working Group raised concerns that MMF investors might shift their assets to less-regulated alternatives and that such alternatives might increase systemic risk:

In particular, many institutional investors might move assets to less regulated or unregulated cash management vehicles, such as offshore MMFs, enhanced cash funds, and other stable value vehicles that hold portfolios similar to those of MMFs but are not subject to the ICA's restrictions on MMFs. These unregistered funds can take on more risks than MMFs, but such risks are not necessarily transparent to investors. Accordingly, unregistered funds may pose even greater systemic risks than MMFs, particularly if new restrictions on MMFs prompt substantial growth in unregistered funds. Thus, changes to MMF rules might displace or even increase systemic risks, rather than mitigate them, and make such risks more difficult to monitor and control.<sup>115</sup>

The Council itself has raised concern that, to the extent its proposals likely would result in MMFs maintaining even higher levels of liquid assets, the supply of term funding to financial institutions and other economic sectors might be reduced. In consequence, these institutions may need to rely on funding with even shorter durations than presently, making their exposure to short-term markets more pronounced and "potentially increasing the fragility of the financial system."<sup>116</sup>

Federal Reserve researchers have highlighted the potential for an increase in systemic risk if capital buffers are imposed on MMFs:

Capital buffers have drawbacks . . . A small buffer *on its own* would do little to mitigate systemic risks; investors would likely flee from MMFs in any crisis out of fear that losses would exceed the size of the buffer. Even so, capital might blunt MMF portfolio managers' incentives for prudent risk management and investors' incentives to monitor risks in their funds, since capital could absorb

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insurance, approximately \$1.4 trillion flowed out of MMFs into banks, most of which went to the 19 largest banks. Source: FDIC Quarterly Banking Profile, 2012.

<sup>115</sup> PWG Report at 21.

<sup>116</sup> 77 Fed. Reg. at 69477.

losses associated with small mistakes. Of course, a very large buffer could diminish these concerns, but raising sufficient capital to absorb the losses that might be associated with systemic events would be challenging, particularly in light of the very low yields that MMFs earn when short-term rates are low.<sup>117</sup>

#### **E. Making MMFs Risk-Free Is Not a Sound Goal**

Making MMFs risk-free is not a sound public policy goal. The President’s Working Group report rejected the idea of making MMFs risk-free:

[T]he economic importance of risk-taking by MMFs—as lenders in private debt markets and as investments that appeal to shareholders’ preferences for risk and return—suggests that the appropriate objective for reform should not be to eliminate all risks posed by MMFs.<sup>118</sup>

Indeed, the PWG recognized that it would be impossible to make MMFs risk-free without destroying their value to investors and the short-term credit markets:

Making each individual MMF robust enough to survive a crisis of the size of that experienced in 2008 may not be an appropriate policy objective because it would unduly limit risk taking. . . . Beyond diversification limits, new rules to protect MMFs from material credit losses would be difficult to craft unless regulators take the extreme step of eliminating funds’ ability to hold *any* risky assets. But that approach would be clearly undesirable, as it would adversely affect many firms that obtain short-term financing through commercial paper and similar instruments. In addition, such an extreme approach would deny many retail investors any opportunity to obtain exposure to private money market instruments and most likely would motivate some institutional investors to shift assets from MMFs to less regulated vehicles.

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<sup>117</sup> 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), at 6.

<sup>118</sup> PWG Report at 13-14.

The PWG noted that MMF liquidity requirements adopted in 2010 will enable MMFs to meet redemption requests under all but the most severe economic conditions but that stricter requirements would be counterproductive:

Similarly, liquidity requirements sufficient to cover all redemption scenarios for MMFs probably would be impractical and inefficient. The SEC's new liquidity requirements help mitigate liquidity risks borne by the funds, and if MMFs had held enough liquid assets in September 2008 to meet the new liquidity requirements, each MMF would have had adequate daily liquidity to meet redemption requests on most individual days during the run. Even so, the cumulative effect of severe outflows on *consecutive* days would have exceeded many funds' liquidity buffers. . . .

Raising the liquidity requirements enough so that each MMF would hold adequate daily liquidity to withstand a large-scale run would be a severe constraint and would fail to take advantage of risk-pooling opportunities that might be exploited by external sources of liquidity. During the run in 2008, individual MMFs experienced large variations in the timing and magnitude of their redemptions. Liquidity requirements stringent enough to ensure that every individual MMF could have met redemptions without selling assets would have left most of the industry with far too much liquidity, even during the run, and would have created additional liquidity risks for issuers of short-term securities, since these issuers would have had to roll over paper more frequently. . . .<sup>119</sup>

These statements underscore the very real possibility of increased risk in the financial system due to unneeded regulatory MMF changes.

#### **F. Unintended Consequences Should Be a Concern**

The President's Working Group has urged regulators to proceed with caution in considering MMF reforms in order to preserve the important benefits of MMFs and avoid unintended consequences:

[T]he significance of MMFs in the U.S. financial system suggests that changes must be considered carefully. Tighter

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<sup>119</sup> PWG Report at 17-18.



restrictions on MMFs might, for example, lead to a reduction in the supply of short-term credit, a shift in assets to substitute investment vehicles that are subject to less regulation than MMFs, and significant impairment of an important cash-management tool for investors.<sup>120</sup>

\* \* \* \* [C]hanges to MMF rules might displace or even increase systemic risks, rather than mitigate them, and make such risks more difficult to monitor and control.<sup>121</sup>

As the PWG has recognized, efforts to make MMFs risk-free creates significant potential for unintended consequences. The PWG identified the following adverse effects as possible if MMFs' stable \$1.00 NAV is eliminated:

[E]limination of the stable NAV for MMFs would be a dramatic change for a nearly \$3 trillion asset-management sector that has been built around the stable share price. Such a change may have several unintended consequences, including: (i) reductions in MMFs' capacity to provide short-term credit due to lower investor demand; (ii) a shift of assets to less regulated or unregulated MMF substitutes such as offshore MMFs, enhanced cash funds, and other stable value vehicles; and (iii) unpredictable investor responses as MMF NAVs begin to fluctuate more frequently.<sup>122</sup>

A two-tiered system of floating and fixed NAV MMFs also has drawbacks identified by the PWG:

[I]mplementation of such a two-tier system would present the same challenges as the introduction of any individual enhanced protections (such as mandated access to a private emergency liquidity facility) that would be required for stable NAV funds, and the effectiveness of a two-tier system would depend on investors' understanding the risks associated with each type of fund. . . . [A] prohibition on sales of stable NAV MMFs shares to institutional investors may have several of the same unintended consequences as a requirement that all MMFs adopt floating NAVs.<sup>123</sup>

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<sup>120</sup> PWG Report at 13-14.

<sup>121</sup> PWG Report at 21.

<sup>122</sup> PWG Report at 4.

<sup>123</sup> PWG Report at 5.

A proposal to create an insurance system for MMFs also might have unintended consequences, according to the PWG:

Unlike a private liquidity facility, insurance would limit credit losses to shareholders, so appropriate risk-based pricing would be critical in preventing insurance from distorting incentives, but such pricing might be difficult to achieve in practice. The appropriate scope of coverage also presents a challenge; unlimited coverage would likely cause large shifts of assets from the banking sector to MMFs, but limited insurance might do little to reduce institutional investors' incentives to run from distressed MMFs. The optimal form for insurance—whether it would be private, public, or a mix of the two—is also uncertain, particularly given the recent experience with private financial guarantees.<sup>124</sup>

Other unforeseen consequences also could result from regulations that alter the structure and role of MMFs.

## VII. SYSTEMIC RISK IS A DEVELOPING CONCEPT

A key purpose of the Dodd-Frank Act is to address weaknesses that caused the financial crisis and to control systemic risks that threaten the financial stability of the United States. The term “systemic risk” is used over 30 times in the Act and the term “financial stability” appears over 90 times. Yet neither term is defined in the Act.

Systemic risk and financial stability are wide ranging concepts and as yet are not clearly understood by either regulators or academics. Without a clear understanding of these guiding concepts, the Council cannot advisedly impose far-reaching regulatory changes on MMFs in the name of systemic risk and financial stability.

### A. The Meaning of “Financial Stability” Is Unclear

To help measure systemic risk and promote financial stability, the Dodd-Frank Act created the Office of Financial Research (“OFR”) and charged it with conducting research on risks to financial stability and evaluating responses to those risks. The OFR has defined “financial stability” broadly (and very

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<sup>124</sup> PWG Report at 5.

vaguely) to mean “the financial system is operating sufficiently to provide its basic functions for the economy even under stress.”<sup>125</sup>

The OFR is considering various measures of financial stability and systemic risk and in 2012 published a survey of 31 different quantitative measures of systemic risk in the academic literature.<sup>126</sup> None of the measures in the OFR’s survey focused specifically on MMFs as a source of systemic risk. Nor would they appear to provide a basis for structural changes to MMFs of the type proposed by the Council.

Federal Reserve Governor Tarullo recently acknowledged that regulators do not have a clear understanding of the meaning of “financial stability” as used in the Dodd-Frank Act:

[T]he statute itself provides only limited guidance to regulators on how to implement financial stability where it is established as a standard, or how to weigh it against economic growth and other considerations. . . . Moreover, one does not really find in the statute or its legislative history an implicit theory of financial stability from which to infer answers to the regulatory questions. . . . To the extent one can fairly induce an underlying principle, it is that the moral hazard associated with too-big-to-fail institutions should be counteracted in a variety of ways. . . . [T]he absence of an informing, grand unified theory of financial stability is hardly surprising. . . . Indeed, two years after passage of Dodd-Frank, there is not really an officially embraced consensus theory of how financial stability is undermined.<sup>127</sup>

Governor Tarullo stated that banking regulators are operating under still undeveloped theories of financial stability in attempting to create a financial stability regulatory regime:

. . . the job of creating a financial stability regulatory system in light of these features of Dodd-Frank and of the

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<sup>125</sup> Office of Financial Research, Annual Report, 2012, at 1.

<sup>126</sup> Dimitrios Bisias, Mark Flood, Andrew W. Lo, Stavros Valavanis, A Survey of Systemic Risk Analytics, Jan. 5, 2012. The authors are affiliated with MIT and the OFR. According to the OFR, “the academic community has proposed hundreds of financial stability measures since the financial crisis.” OFR, Annual Report, 2012, at 3.

<sup>127</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, Financial Stability Regulation, speech dated Oct. 10, 2012.

fact that theories of financial stability that might inform the fashioning of this system are in many respects still undeveloped or, at the least, contested.<sup>128</sup>

Federal Reserve Vice Chairman Yellon recently commented on “systemic risk” and interconnectedness as a new area of academic research:

Academic research that explores the relationship between network structure and systemic risk is relatively new. Not surprisingly, interest in this field has increased considerably since the financial crisis. A search of economics research focusing on “systemic risk” or “interconnectedness” since 2007 yields 624 publications, twice as many as were produced in the previous 25 years.<sup>129</sup>

The OFR recently published a paper highlighting deficiencies in risk models used by regulators to understand and respond to systemic risks:

The financial crisis revealed important weaknesses in the risk models used by financial institutions, supervisors, and financial economists to understand and respond to risks in the financial system. The current generation of models is unable to model financial vulnerabilities, the shocks that might expose these vulnerabilities, and the process by which such shocks might propagate through the financial system.<sup>130</sup>

The paper concluded that “rectifying these weaknesses is a critical first step in developing the capability for dealing with threats to financial stability.”<sup>131</sup>

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<sup>128</sup> *Id.*

<sup>129</sup> Janet L. Yellon, Vice Chairman, Federal Reserve Board, *Interconnectedness and Systemic Risk: Lessons from the Financial Crisis and Policy Implications*, Speech delivered Jan. 4, 2013. Ms. Yellon notes that models of systemic interconnectivity existed before 2007 but were misleading.

<sup>130</sup> Richard Bookstaber, Office of Financial Research, *Using Agent-Based Models for Analyzing Threats to Financial Stability*, Working Paper #0003, Dec. 21, 2012, at 2.

<sup>131</sup> *Id.* The paper noted that new measures of financial stability have been proposed since the crisis to improve regulators’ understanding of financial shocks and vulnerabilities, but these models are not satisfactory: “But absent a model that can chart the course of events during financial disruptions, it is difficult to assess the value of these measures, especially given the many changes in the financial landscape that occur over time which lead to new vulnerabilities and paths through which shocks can propagate across the system. And existing models of the financial system are partial equilibrium models that are not built for this task.”

Accordingly, absent a clear meaning of “financial stability,” more accurate measures of systemic risk, and better risk models, proposals for major regulatory changes to MMFs at best are premature. Further research may suggest a different approach to systemic risk than is currently being pursued by financial regulators and the FSOC with respect to both MMFs and other financial institutions.

## B. Uncertainty Risk Requires a Different Approach

Economic research suggests that the financial crisis unfolded with such severity because it was an event of Knightian uncertainty.<sup>132</sup> A “Knightian uncertainty” is known among financial economists as a shock triggered by unusual or unexpected events that prompt a “flight to quality.”<sup>133</sup> A Knightian uncertainty crisis is distinct from a crisis arising from excessive risk-taking by financial institutions. A financial crisis may combine elements of both.

Economists have argued that a crisis driven by Knightian uncertainty requires a different government response than a crisis resulting from excessive risk-taking—namely, massive injections of government liquidity.<sup>134</sup> Whereas a crisis based on excessive risk-taking warrants prudential regulation to limit risk-taking—such as leverage limits, tightened capital requirements, and liquidity ratios—such measures are an inappropriate response to a crisis driven by Knightian uncertainty:

[I]t is unclear whether any entity, private or public, can arrive at the appropriate ex ante risk management strategy, calling into question the feasibility of these policy

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<sup>132</sup> See, e.g., Ricardo J. Caballero and Arvind Krishnamurthy, Collective Risk Management in a Flight to Quality Episode, *The Journal of Finance*, Vol. LXIII, No. 5, Oct. 2008, p. 2195. The concept of “Knightian uncertainty” is named after University of Chicago economist Frank Knight.

<sup>133</sup> See *Id.* at 2196-97 (“Most flight to quality episodes are triggered by unusual or unexpected events. . . . The one-of-a kind aspect of flight to quality episodes suggests that these events are fundamentally about uncertainty rather than risk.”).

<sup>134</sup> *Id.* See also Alan Greenspan, Risk and Uncertainty in Monetary Policy, Remarks at the Meetings of the American Economic Association, Jan. 3, 2004 (“When confronted with uncertainty, especially Knightian uncertainty, human beings invariably attempt to disengage from medium to long-term commitments in favor of safety and liquidity. Because economies, of necessity, are net long--that is, have net real assets--attempts to flee these assets cause prices of equity assets to fall, in some cases dramatically. In the crisis that emerged in the autumn of 1998, pressures extended beyond equity markets. Credit-risk spreads widened materially and investors put a particularly high value on liquidity, as evidenced by the extraordinarily wide yield gaps that emerged between on-the-run and off-the-run U.S. Treasuries. The immediate response on the part of the central bank to such financial implosions must be to inject large quantities of liquidity. . . .”).

recommendations. Instead, in our uncertainty model, the most beneficial ex ante actions are ones that help to reduce the extent of uncertainty should a crisis occur. In some cases, this may simply involve making common knowledge information that is known to subsets of market participants—for example, making common knowledge the portfolio positions of the major players in the market. In other cases, this may involve the central bank facilitating discussions among the private sector on how each party will react in a crisis scenario.<sup>135</sup>

The Council’s MMF proposals would address the potential for a Knightian certainty crisis with prudential regulation of MMFs and thus is inconsistent with Knightian uncertainty theory. MMFs do not engage in excessive risk-taking and have demonstrated that they can remain stable during periods of elevated risk and heavy redemptions. Only in the event of Knightian uncertainty—such as occurred during the week of September 15, 2008—is a turbulent flight to quality by MMF investors a likely outcome. In that event, if investor redemptions exceed the substantial liquidity capacity of MMFs, some funds may close and liquidate. If regulators believe that financial stability depends on the continued investment activities of MMFs, the academic literature suggests the only effective solution will be the exercise of lender of last resort authority by the central bank, such as occurred in 2008, in accordance with the Bagehot dictum to lend liberally in a crisis.<sup>136</sup>

The imposition of inappropriate regulations to deter MMF investors from responding rationally to an uncertainty event will only give regulators—and the central bank—a false sense that they have adequately prepared for a future crisis. Worse, such requirements—particularly redemption restrictions—may actually increase systemic risk and the potential for a bad outcome by denying investors access to liquidity when they most need it. Reforms such as increased transparency and improved ability to predict a flight to quality can help prepare for a crisis. But an event triggered by Knightian uncertainty—certainly on the scale of 2007-08—ultimately will seem unavoidably to necessitate central bank liquidity.<sup>137</sup>

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<sup>135</sup> *Id.* at 2224.

<sup>136</sup> See Brian F. Madigan, *Bagehot’s Dictum in Practice: Formulating and Implementing Policies to Combat the Financial Crisis*, delivered at Financial Stability and Macroeconomic Policy symposium, Aug. 20-22, 2009. See also Ben S. Bernanke (2008), *Liquidity Provision by the Federal Reserve*, speech delivered at the Federal Reserve Bank of Atlanta Financial Markets Conference, May 13, 2008.

<sup>137</sup> The Federal Reserve retains significant authority under section 13(3) and other provisions of the Federal Reserve Act to act as lender of last resort in the event of a Knightian

### C. Confusion Exists Regarding 2010 MMF Reforms

As noted earlier, the SEC in 2010 adopted several regulatory reforms to strengthen the risk-limiting provisions governing MMFs. Among other things, the SEC required MMFs to reduce the average weighted maturity of their portfolios and publicly disclose their portfolio holdings.

The SEC said the 2010 changes were designed to “make money market funds more resilient to certain short-term market risks. . . . and less likely to break a buck as a result of disruptions such as those that occurred in the fall of 2008.”<sup>138</sup> The SEC stated:

The amendments are designed to reduce the risk that a money market fund will break the buck, and thereby prevent losses to fund investors. To the extent that money market funds are more stable, they also will reduce systemic risk to the capital markets and provide a more stable source of financing for issuers of short-term credit instruments, thus promoting capital formation. If money market funds become more stable investments as a result of the rule amendments, they may attract further investment, increasing their role as a source of capital.<sup>139</sup>

The 2011 European sovereign debt crisis tested the 2010 reforms, and MMFs remained resilient. Nevertheless, despite the demonstrated benefits of the 2010 reforms, some economists have questioned whether the reforms have created *more* systemic risk rather than less.

Specifically, a recent paper by Federal Reserve economists examined the impact of the European debt crisis on lending in the United States by branches of foreign banks. Remarkably, the paper concludes that the new portfolio disclosure requirements for MMFs adopted in 2010 are a channel for spreading risk and resulted in the transmission of shocks from Europe to the United States in 2011:

Our paper suggests that the transmission of shocks from the European sovereign crisis into U.S. credit markets was facilitated by disclosure requirements for U.S. money market funds implemented in early 2011, which made it easier for investors to monitor the portfolio holdings of

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uncertainty event, notwithstanding provisions of the Dodd-Frank Act that preclude the use of such authority to rescue individual institutions.

<sup>138</sup> 75 Fed. Reg. 10060, 10062 (March 4, 2010).

<sup>139</sup> 75 Fed. Reg. at 10095.

money market funds. The European events led to a shift in the degree of information sensitivity of the securities issued by U.S. money market funds.<sup>140</sup>

\* \* \* \* These results provide evidence for the role of investor disclosure requirement in establishing a channel between sovereign risk and the liquidity shocks suffered by U.S. branches of foreign banks in 2011.<sup>141</sup>

\* \* \* \* Our findings suggest that a new requirement for U.S. money market funds to disclose their detailed exposures, implemented at the beginning of 2011, further impaired the European banks' access to U.S. dollar funding. . . . Further research should address these important issues.<sup>142</sup>

The paper does not conclude that MMF disclosure requirements should be reversed.<sup>143</sup> Nevertheless, the fact that Federal Reserve economists view public disclosure requirements as a systemic threat suggests that the Federal Reserve has a far more wide ranging definition of systemic risk than is commonly understood. Indeed, the view of these economists suggests the novel idea that the entire system of securities regulation and consumer protection, based on disclosure, may present systemic risk.

Another academic paper argues that the SEC's 2010 MMF reforms increase systemic risks by shortening the maturity of MMF portfolios. Authors Gordon and Gandia point out that "increased liquidity is a double-edged sword" that will heighten systemic risk:

As average maturities shorten, the pool of potential MMF fund users will shrink. What non-financial firm can feasibly finance its activities with repo financing? As we have already observed, the composition of MMF debtors has shifted from non-financial firms to financial firms. As increased liquidity requirements reduce the capacity of

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<sup>140</sup> Ricardo Correa, Horacio Sapriza, Andrei Zlate, Division of International Finance, Board of Governors of the Federal Reserve System, *Liquidity Shocks, Dollar Funding Costs, and the Bank Lending Channel During the European Sovereign Crisis*, Sept. 28, 2012, at 3.

<sup>141</sup> *Id.* at 18.

<sup>142</sup> *Id.* at 19. For a different view arguing that disclosure prevents runs, see Tanju Yorulmazer, *Herd Behavior, Bank Runs and Information Disclosure*, May 21, 2003, available at SSRN.com.

<sup>143</sup> The paper concludes that "banks that rely on unstable sources of foreign currency funding should keep part of their liquidity buffer in that foreign currency." *Id.* at 5.



MMFs to engage in maturity transformation, other financial firms (or entities such as securitization vehicles) will step into the breach. MMFs will end up holding wholesale short-term credit claims on these other financial firms (entities), which in turn engage in maturity transformation. This will create two sorts of systemic risk: First, the financial industry concentration will present more highly correlated solvency risk for MMF portfolios. As argued above, this kind of correlated risk can convert an individual fund's loss into a run against MMFs generally. Second, as financial sector solvency risk increases, MMFs will protectively refuse to rollover financing for financial firms. This itself will create systemic distress.<sup>144</sup>

In contrast to these views, the SEC concluded that reducing the maximum weighted average maturity of MMFs would decrease their interest rate sensitivity and also “increase their ability to maintain a stable net asset value in the face of multiple shocks . . . such as occurred during the fall of 2008.”<sup>145</sup>

The academic papers discussed above indicate that there is disagreement over the impact SEC's 2010 reforms. If nothing else, these papers highlight the potential for unintended consequences of MMF reforms, and show that further analysis is warranted before additional changes to MMFs are considered. More importantly, the papers suggest that confusion exists at the Federal Reserve and elsewhere concerning the scope of systemic risk, the goal of financial stability, and the role of MMFs.

The FSOC itself appears to be operating under contradictory assumptions regarding the role of MMFs in the credit markets. On the one hand, the Council recognizes that “MMFs are a significant source of short-term funding for businesses, financial institutions, and governments.”<sup>146</sup> On the other hand, when weighing the benefits of its proposals against the costs, the Council claims that the amount of financing contributed by MMFs is “relatively small.”<sup>147</sup>

The need for and the impact of regulatory changes to MMFs in reducing levels of risk in the financial system must be more thoroughly analyzed before further reforms are considered. The fact that Federal Reserve researchers and

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<sup>144</sup> 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 SSRN.com.

<sup>145</sup> 75 Fed. Reg. at 10095.

<sup>146</sup> 77 Fed. Reg. at 69455.

<sup>147</sup> 77 Fed. Reg. at 69481.

others have concluded that the 2010 MMF reforms actually *increased* rather than decreased systemic risk strongly suggests that regulators and academic researchers first need to agree on what is and what is not systemic risk before pursuing radical changes to MMFs.

#### **D. More Research Is Needed**

More research is needed on the dynamics of systemic risk and the financial structure before sweeping changes to MMFs reasonably can be contemplated. Without agreement as to the nature of systemic risk and the role of different financial institutions in relation to systemic risk, regulators cannot be certain that their reforms will reduce, rather than increase, financial stability.

Federal Reserve Governor Tarullo has acknowledged that research concerning runs on the financial system in 2007 and 2008 is incomplete and inconclusive:

As those who have been following the academic and policy debates know, there are significant, ongoing disagreements concerning the roles of various factors contributing to the rapid growth of the shadow banking system, the precise dynamics of the runs in 2007 and 2008, and the relative social utility of some elements of this system.<sup>148</sup>

Governor Tarullo also has commented on the lack of research on financial industry structure, both before and after the financial crisis:

As I have suggested previously, when one considers the significance of issues concerning industry structure for the design of an effective and efficient regulatory system to contain systemic risk, it is surprising that relatively little research has been undertaken in this area, even in the aftermath of the financial crisis.<sup>149</sup>

Federal Reserve Vice Chairman Yellon has emphasized the need for research on interconnectivity and systemic risk:

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<sup>148</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, Shadow Banking After the Financial Crisis, Remarks at the Federal Reserve Bank of San Francisco Conference on Challenges in Global Finance: The Role of Asia, June 12, 2012.

<sup>149</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, Industry Structure and Systemic Risk Regulation, Speech before the Brookings Institute, Dec. 4, 2012.

[E]fforts to collect more and better data on the precise linkages among financial institutions are so important. Without such comprehensive and detailed data, it is simply not possible to understand how stress in one part of the network may spread and affect the entire system. \* \* \* \* [D]etailed and comprehensive data on the structure of financial networks is needed to understand the systemic risks facing the financial system and to gauge the contributions to systemic risk by individual institutions.<sup>150</sup>

Academics have said research is needed on a number of issues critical to regulators' understanding of systemic risk dynamics. For example, one issue is the role of short-term debt in the financial system, including what level of short-term debt is optimal.<sup>151</sup> Having an answer to this question would seem essential before far-reaching regulatory changes are made to MMFs in view of their pivotal role in the short-term debt markets.

Another issue is what the optimum liquidity ratios should be for banking organizations. Research is needed on whether there are enough liquid assets in the system to meet supervisory requirements for banking organizations<sup>152</sup> and whether capital can cure a liquidity mismatch.<sup>153</sup> Research also is needed on the tradeoffs between the costs of financial intermediation, economic growth, and the risk of a crisis, and how to regulate the optimal quantity of "money" in the financial system.<sup>154</sup>

All of these issues have strong implications relating to MMFs and need to be addressed before additional MMF changes are considered. New macroprudential areas of research will shed light on the true sources of systemic risk and suggest ways of applying regulatory tools to mitigate systemic vulnerabilities. It is possible that risks thought to exist in one area actually may originate in or be transmitted from another area where they can more effectively be addressed.<sup>155</sup> It also is possible that a more functional approach to research,

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<sup>150</sup> Janet L. Yellon, Vice Chairman, Federal Reserve Board, *Interconnectedness and Systemic Risk: Lessons from the Financial Crisis and Policy Implications*, Speech delivered Jan. 4, 2013.

<sup>151</sup> See remarks of Arvind Krishnamurthy, Northwestern University, and Tobias Adrian, Federal Reserve Bank of New York, at the Office of Financial Research Annual Conference, *Assessing Financial Intermediation: Measurement and Analysis*, Dec. 6, 2012.

<sup>152</sup> Remarks of Arvind Krishnamurthy, *supra*, stating that a dearth of liquid assets relative to supervisory requirements is a "big" unintended consequence that needs to be better understood.

<sup>153</sup> Remarks of Tobias Adrian, *supra*.

<sup>154</sup> *Id.*

<sup>155</sup> See remarks of Tobias Adrian, Federal Reserve Bank of New York, at the Office of Financial Research Annual Conference, "Assessing Financial Intermediation: Measurement and

rather than an institutional focus, will better illuminate risk dynamics and lead to more targeted and effective regulatory responses.<sup>156</sup> Additional research also will help to avoid unintended consequences of regulatory changes that could harm the financial system. Imposing drastic changes on MMFs before these issues are clarified seems precipitous.

#### **E. Data and Risk Measurements Are Lacking**

Researchers studying the financial crisis have cited the lack of data as a major handicap in analyzing how the crisis occurred.<sup>157</sup> One of the tasks of the Office of Financial Research is to serve as a data-gathering arm of the FSOC. A recent conference sponsored by the OFR and FSOC highlighted data gaps and challenges in collecting and analyzing data on macroprudential risks in the financial system.<sup>158</sup>

Presenters at the OFR conference noted that data collection does not have a macroprudential focus yet and is not comprehensive, granular, or timely enough to be useful. It was noted that regulators and researchers just now are developing tools to quantify and locate systemic risk. A major problem cited was difficulty identifying entities within financial conglomerates and the opacity of consolidated reporting by bank holding companies that obscures distinctions between holding companies, their bank subsidiaries, and their nonbank affiliates. Other problems highlighted were how to translate the data being collected into macroprudential regulatory policies, how to know which entities to target for macroprudential regulation, how to measure whether the policies are working, and how to avoid unintended systemic consequences of flawed policies.

In the absence of a sound data basis for analyzing systemic risks, an empirical basis for the imposition of structural changes to MMFs is lacking. Congress has not identified MMFs as in need of any further structural reforms in the Dodd-Frank Act or elsewhere. The Council may be accused of rashness in

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Analysis,” Dec. 6, 2012, stating that the more researchers learn about the tri-party repo market, the more challenges they see.

<sup>156</sup> See remarks of Brian Reid, Investment Company Institute, at the Office of Financial Research Annual Conference, Assessing Financial Intermediation: Measurement and Analysis, Dec. 6, 2012.

<sup>157</sup> Stanford Graduate School of Business, The Role of ‘Repo’ in the Financial Crisis, March 8, 2012, <http://www.gsb.stanford.edu/news/research/nagel-paper-repo.html>. (“One reason academics and policy makers have had difficulty understanding how the meltdown occurred is the lack of detailed, usable records of financial transactions in the corners of the financial system that were most affected by the crisis.”).

<sup>158</sup> Office of Financial Research and the Financial Stability Oversight Council, Second Annual Conference, Assessing Financial Intermediation: Measurement and Analysis, Dec. 6, 2012.

proposing changes to an industry that did not cause the financial crisis when such changes are not supported by data or other empirical evidence.

## VIII. BANKING REFORMS NEED COMPLETION FIRST

The Council's MMF proposals seem particularly inappropriate when so many changes mandated by the Dodd-Frank Act to correct deficiencies in financial regulation remain unimplemented.<sup>159</sup>

Banking regulators have a substantial agenda of unfinished reforms needed to address structural weaknesses in the banking system. Many of these reforms target vulnerabilities that caused or contributed to the financial crisis and remain a potential threat. A number of these reforms, including what to do about "too-big-to-fail" banking organizations, must be completed before the parameters of systemic risk in the broader financial system can be appropriately analyzed.

Changes that make the banking system less vulnerable to systemic risk may go far toward addressing the perceived risk of runs by MMFs. In addition, reforms that perpetuate or lessen banking concentration are relevant in the cost-benefit analysis of broader reform concepts affecting MMFs.

### A. **Dodd-Frank Requires a Reorientation of Bank Regulation**

The Dodd-Frank Act fundamentally altered the focus and aims of banking regulation, requiring a new macroprudential focus.<sup>160</sup> As one banking regulator put it, "Dodd-Frank represents something of an about-face for financial regulation."<sup>161</sup> Banking regulators now are required to address the sources and level of risks of banking organizations to the financial system as a whole rather

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<sup>159</sup> A prominent law firm tracking regulatory changes reported that, as of December 3, 2012, regulators had missed 61 percent of the Act's deadlines for rulemakings. Only one-third of required rulemakings had been finalized. As many as one-third of required rulemakings had not even been proposed. Davis Polk, *Dodd-Frank Progress Report*, Dec. 3, 2012.

<sup>160</sup> Macroprudential regulation has been described as involving a balancing of risks against efficiency, access to credit, and financial innovation: "The goal of macroprudential regulation is to require firms to internalize the externalities they impose on the stability of the financial system as a whole. Thus, we need a way to incorporate systemic externalities into the models of firm and investor behavior that inform regulatory and supervisory policies. At the same time, we have to evaluate the costs associated with systemic events, which by their nature are relatively rare, in light of the basic goals of promoting productive efficiency, access to credit, and financial innovation." Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, *Industrial Organization and Systemic Risk: An Agenda for Further Research*, Speech at the Conference on the Regulation of Systemic Risk, Sept. 15, 2011.

<sup>161</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, *Financial Stability Regulation*, speech dated Oct. 10, 2012. Tarullo conceded that financial regulation "had largely neglected systemic concerns in the decades preceding the crisis."

than merely monitor the condition of individual banks. The Act requires a “reorientation” of financial regulation towards safeguarding financial stability through the containment of systemic risk.<sup>162</sup>

How well banking regulators will fulfill their new macroprudential mandate remains to be seen. Regulators still are in the process of developing policies and agendas to implement the new macroprudential focus.

The Dodd-Frank Act requires banking regulators to make substantial improvements in bank capital, liquidity, and risk-management to reduce systemic risks posed by banking organizations. In particular, large banking organizations with assets of \$50 billion or more are subject to enhanced prudential supervision and regulation. These large organizations were at the epicenter of the financial crisis, and the Dodd-Frank Act reforms are largely aimed at them.

Yet, more than two years after Dodd-Frank was enacted, regulators remain uncertain how best to use their new macroprudential bank regulatory tools. They have called upon the academic community to develop research to assist them.<sup>163</sup> For example, regulators still are trying to understand the benefits and costs of scope and scale in the banking sector. Regulators have noted the paucity of relevant research and remain uncertain about whether to limit the size of systemically large banking organizations:

[T]here is relatively little recent academic research on scale and scope economies in the financial sector and almost none pertinent to the operations of large financial

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<sup>162</sup> *Id.*

<sup>163</sup> *Id.* (“I have called on researchers to devote more attention to investigating economies of scale and scope in financial services. This conference provides the ideal occasion and audience for me to elaborate on that request and, indeed, to expand it by suggesting a broader range of topics on which the questions and perspectives of Industrial Organization (IO) may be relevant to financial economists probing the nature of systemic risk and the causes of financial crises. . . . I will discuss three topics from the IO literature that seem promising for systemic risk research: first, the need for a deeper understanding of scale and scope economies in the production of financial services; second, the ways in which patterns of competition and cooperation among large financial firms can affect systemic risk; and third, how market structure can affect firm incentives and thereby impose externalities on the financial system. . . . Well before the financial crisis and my arrival at the Federal Reserve, I had found that the relative dearth of empirical work on the nature of economies of scale and scope in large financial firms hindered the development and execution of optimal regulatory and supervisory policies. Some regulatory features added by the Dodd-Frank Act only increase the importance of more such work to fill out our understanding of the social utility of the largest, most complex financial firms. Ultimately, we want to understand what these scale or scope economies imply for the degree to which large size or functional reach across many types of financial activities is essential for the efficient allocation of capital and liquidity and for the international competitiveness of domestic firms.”).

conglomerates. . . . The paucity of empirical work means we can only hypothesize these scale and scope economies.<sup>164</sup>

It thus is unclear how the Dodd-Frank Act ultimately will affect the risks posed by large banking organizations and the overall level of systemic risk in the financial system. Many key Dodd-Frank Act reforms have not been implemented, or only partially so, including increased capital and liquidity standards for banks and reform of bank securitization activities—key areas of weakness implicated by the financial crisis.

Until the major banking reforms prescribed by the Dodd-Frank Act are in operation and capable of being assessed, it seems futile to consider structural changes to MMFs, especially changes that might cause their exit from the financial system, which might itself create new financial stability challenges for banking organizations and heighten systemic risks.

#### **B. The Future Structure of Banking Needs Clarity**

Policymakers need to decide on the future structure of banking before considering structural changes to MMFs. Until bank regulatory policy is clarified, the role of banks in the short-term credit markets will be uncertain and systemic risk dynamics will remain unclear. MMFs are a key factor in the tradeoff between systemic risk, the cost of credit intermediation, and ultimately economic growth, but an informed calculation cannot be made while questions concerning the future structure of banking remain unanswered.

Governor Tarullo recently noted that policymakers are considering three major proposals that will determine the future structure of the banking system:

[T]hree proposals currently being debated in policy circles: (1) breaking up large financial institutions by reinstating Glass-Steagall restrictions or by imposing other prohibitions on affiliations of commercial banks with certain business lines; (2) placing a cap on the nondeposit liabilities of financial institutions; and (3) requiring financial institutions above a specified size to hold minimum amounts of long-term debt available for

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<sup>164</sup> Daniel K. Tarullo, Governor, Board of Governors of the Federal Reserve System, “Industry Structure and Systemic Risk Regulation,” Speech before the Brookings Institute, Dec. 4, 2012.

conversion to equity to avoid or facilitate an orderly resolution of a troubled firm.<sup>165</sup>

These proposals could substantially affect the level of systemic risk in the financial system. At least one of the proposals—placing a cap on nondeposit liabilities of banking organizations—could substantially alter the short-term credit markets and the degree of reliance of large banking organizations on MMFs as a source of funding.

Nevertheless, banking regulators are reluctant to pursue these potential reforms without the benefit of additional research. With regard to reinstating the Glass-Steagall Act, Governor Tarullo complained about the lack of research to support such action:

With the present state of research, it is virtually impossible to quantify the social benefits of these economies. However, what seems the likelihood of nontrivial benefits from current affiliations is a good reason to be cautious about adopting this proposal.<sup>166</sup>

Governor Tarullo cited numerous difficulties with imposing a cap on nondeposit liabilities, even while acknowledging that many studies have shown that reliance on nondeposit funding by large banking organizations was at the root of the financial crisis.<sup>167</sup> Tarullo also noted that “nondeposit liabilities today are highly correlated with the systemic risk measures used at the Federal Reserve Board to measure interconnectedness and complexity for purposes of evaluating the financial stability effects of mergers.” Yet, regulators seem unable to move forward on capping nondeposit liabilities. Tarullo claims that additional research is needed to address the efficacy of liability caps and illuminate the most effective and efficient ways to deal with the short-term funding markets.<sup>168</sup>

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<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

<sup>167</sup> *Id.* (“Many studies of the financial crisis demonstrate that the reliance of large financial firms on nondeposit funding made them, and the financial system as a whole, susceptible to the dramatic runs that peaked in the fall of 2008.”).

<sup>168</sup> *Id.* (“Research might cast light on the extent to which various forms of a liability cap would affect market structure, the degree to which reduced activities by some firms would be taken up by others, and how such changes might affect the stability of the financial system. . . . [and] could contribute significantly to an elaboration and evaluation of this policy proposal. In the process, it could advance what I regard as the most important remaining task of financial regulatory reform--determining the most effective and efficient ways to deal with short-term funding markets, often characterized as the shadow banking system, that are inherently subject to runs.”).



Another area where regulators appear to be awaiting additional research is inter-linkages among large banking organizations. As Governor Tarullo noted:

Understanding the role of cooperation among financial conglomerates that are interconnected through counterparty relationships and correlated exposures may be challenging, but it could be quite important for effective macroprudential regulation. Cooperation among large firms can, in principle, buffer the impact of systemic events. On the other hand, the expectation of future cooperation from one's competitors can induce riskier behavior on the part of individual firms. And, perhaps more troubling, the sudden breakdown of cooperation during a systemic event can accelerate the transmission of adverse consequences throughout the financial system. . . . This is obviously a complex issue, with potentially different conclusions depending on the context of a specific regulatory system and industry structure. But pursuit of this line of inquiry might yield notable policy implications.<sup>169</sup>

What to do about too-big-to-fail banking organizations arguably is the most important issue facing banking regulators at present. Much of the Dodd-Frank Act aims at eliminating too-big-to-fail banking organizations. Yet, banking regulators apparently do not necessarily agree that large, highly correlated banking organizations are more susceptible to systemic risks despite numerous academic papers suggesting such is the case:

[N]umerous papers suggest that the very large balance sheets of very large financial firms tend to be highly correlated, such that a shock to certain asset classes is likely to reverberate quickly on the balance sheets of most large firms as fire sales and subsequent mark-to-market effects affect even stronger firms. If this conclusion is valid, then the apparent economies associated with very large balance sheets may be transitory or, more precisely, contingent on the absence of serious shocks to certain asset classes. \* \* \* \*

One particularly promising area for inquiry is the relationship among industry structure, firm incentives to diversify risk, and systemic risk. In principle, larger firms

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<sup>169</sup> Daniel K. Tarullo, Speech at the Conference on the Regulation of Systemic Risk, Sept. 15, 2011, *supra*.

are better able to diversify their balance sheets and thereby insulate themselves from idiosyncratic risks. However, some researchers have argued that when the financial system is dominated by a few large firms, the result may be that these few large firms have balance sheets that are highly correlated, creating significant common risk exposures. In such instances, a common shock to a class of assets held by the large firms could be expected to have systemic effects through some combination of domino and fire-sale effects. There would be considerable value in further research that explored the potential tradeoffs between industry structures in which relatively smaller, less diversified firms are more prone to idiosyncratic failure versus industry structures in which very large, diversified firms are individually less vulnerable to idiosyncratic failure but collectively more likely to create systemic risk because of their common exposures.<sup>170</sup>

Governor Tarullo has discouraged the idea of breaking up “too-big-to-fail” banking organizations based on the absence of a “deep body” of research:

The second issue to which I would draw your attention is the absence of a deep body of analytic work on which to form judgments about the social utility of very large, complex financial institutions. This issue surfaced during the debates over financial reform in 2009 and early 2010, when some argued that the only way to counteract TBTF and its attendant risks for society was to break up these institutions. Advocates of this approach asserted that there was little or no academic support for the proposition that the largest firms needed to be their current size in order to provide whatever efficiencies were achievable. While this is true enough, it is obviously the case that the failure to find such efficiencies does not mean they do not exist. Given the surprisingly small number of studies on this issue, one might reasonably be reluctant to draw conclusions in either direction.<sup>171</sup>

Curiously, despite banking regulators’ hesitancy to pursue needed bank structural reforms without the benefit of further academic research, they seem

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<sup>170</sup> *Id.*

<sup>171</sup> Daniel K. Tarullo, Board of Governors of the Federal Reserve System, Regulating Systemic Risk, speech dated March 31, 2011.

convinced that major structural changes to MMFs are needed notwithstanding the lack of empirical research. Governor Tarullo has said that regulators “cannot and should not wait” for the conclusion of academic debates over the role of MMFs in the financial crisis or MMFs’ relative utility in the financial system before acting on MMF restructuring proposals, notwithstanding significant and ongoing policy disagreements.<sup>172</sup>

### C. Bank Capital Reform Is Not Final

Banking regulators have acknowledged that bank capital regulation was deficient in the years leading up to the financial crisis and allowed an excessive buildup of leverage in banking organizations.<sup>173</sup> The Dodd-Frank Act requires substantially increased capital standards for banks. Yet only recently have regulators proposed stronger capital rules to address capital deficiencies, and those rules appear far from being finalized and implemented.<sup>174</sup>

For large banking organizations, regulators have proposed enhanced risk-based capital standards, a capital surcharge, a supplementary leverage ratio, and a countercyclical capital buffer. The proposed amendments will require large, systemically important banking organizations to hold significantly higher levels

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<sup>172</sup> Daniel K. Tarullo, Regulatory Reform Since the Financial Crisis, speech dated May 2, 2012 (“As those who have been following the academic and policy debates know, there are significant, ongoing disagreements concerning the roles of various factors contributing to the rapid growth of the shadow banking system, the precise dynamics of the runs in 2007 and 2008, and the relative social utility of some elements of this system. Conclusions drawn from these debates will be important in eventually framing a broadly directed regulatory plan for the shadow banking system. However, as it is neither necessary nor wise to await such conclusions in order to begin implementing a regulatory response, I will follow my discussion of the vulnerabilities created by shadow banking with some suggestions for near- and medium-term reforms.”).

<sup>173</sup> See, e.g., Testimony of Michael S. Gibson, Director, Division of Banking Supervision and Regulation, on the Basel III Capital Proposal, before the Senate Committee on Banking, Housing, and Urban Affairs, Nov. 14, 2012 (“The recent financial crisis revealed that the amount of high-quality capital held by banking organizations in the United States was insufficient to absorb losses during periods of severe stress. The effects of having insufficient levels of capital were further magnified by the fact that some capital instruments did not absorb losses to the extent previously expected. . . .The June 2012 interagency proposal to amend the bank regulatory capital framework applies the lessons of the crisis, in part, by increasing the quantity and quality of capital held by banks.”). See also Testimony of George French, Deputy Director, Policy, Division of Risk Management Supervision, Federal Deposit Insurance Corporation before the Senate Committee on Banking, Housing, and Urban Affairs, Nov. 14, 2012.

<sup>174</sup> See 77 Fed. Reg. 52792 (Aug. 30, 2012) (proposal to implement Basel III capital framework); 77 Fed. Reg. 52888 (Aug. 30, 2012) (proposal to revise risk-based capital rules). See also Federal Reserve Board, Press Release dated June 7, 2012, inviting public comment on three proposed rules to help ensure banks maintain strong capital positions; Proposed Rulemakings for an Integrated Regulatory Capital Framework, Questions and Answers, June 7, 2012; Press Release dated Aug. 8, 2012, extending comment period until October 22, 2012, on three notices of proposed rulemaking to revise and replace current capital rules.

of capital. The Federal Reserve has testified to Congress that stronger capital standards will “significantly lower the probability of banking crises and their associated economic losses.”<sup>175</sup> The Office of the Comptroller of the Currency has testified that the proposed capital rules “address the risks that contributed to the recent financial crisis and aim to enhance the safety and soundness of the U.S. banking system [and] . . . reinforce the financial strength of the banking sector in the future and the stability of the U.S. financial system.”<sup>176</sup> Earlier this year, the banking regulators adopted improvements to their market risk capital rules to address weaknesses in the prior rules that “played an important role in fueling the financial crisis during its early stages.”<sup>177</sup>

The new capital standards are not fully effective and remain a subject of ongoing Congressional concern. Senate Banking Committee Chairman Johnson recently stated at hearings on the Basel III capital proposal: “While most agree the higher levels of capital are appropriate, the details of how to improve bank capital will have a broad impact and must be closely examined.”<sup>178</sup>

Given the expectation that the new capital rules will enhance the stability of banking organizations and the financial system as a whole, it would seem appropriate to wait for such rules to be finalized and fully implemented before assessing whether major regulatory changes to MMFs are needed. Improvements in bank capital should alleviate the risks that destabilized the financial system and make drastic regulatory changes to MMFs unnecessary.

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<sup>175</sup> Testimony of Michael S. Gibson, *supra* (“The Federal Reserve has assessed the impact of the changes proposed by this rulemaking on banking organizations and the broader financial system through domestic analyses and through its participation in cost-benefit analyses performed by the Basel Committee on Banking Supervision. The Macroeconomic Assessment Group, a working group of the Basel Committee, found that among internationally active banks, the stronger capital standards proposed under Basel III would significantly lower the probability of banking crises and their associated economic losses, while having only a modest negative effect on gross domestic product and the cost of credit. . . . The Federal Reserve believes that the benefits of the proposed changes, in terms of the reduction of risk to the U.S. financial system and to the broader economy, outweigh the compliance costs to the financial industry and any costs to the macroeconomy.”).

<sup>176</sup> Testimony of John D. Lyons, Senior Deputy Comptroller for Bank Supervision Policy and Chief National Bank Examiner, Office of the Comptroller of the Currency, before the Senate Committee on Banking, Housing and Urban Affairs, Nov. 14, 2012.

<sup>177</sup> Testimony of George French, *supra* (the new market risk rule “addresses important weaknesses of the current Market Risk Rule to reflect lessons learned in the financial crisis. Leading up to the crisis, low capital requirements under the current Market Risk Rule encouraged institutions to place illiquid, high-risk assets in their trading books. Large mark-to-market losses on these assets played an important role in fueling the financial crisis during its early stages.”)

<sup>178</sup> Statement by Tim Johnson, Chairman, Senate Committee on Banking, Housing and Urban Affairs at Oversight Hearing on Basel III International Bank Capital Rules, Nov. 14, 2012.

#### D. Securitization Reform Is Not Final

It is widely agreed that the securitization of financial assets was a leading cause of the financial crisis. Banking regulators have referred to securitization as “shadow banking” and mistakenly said that it dwells outside the regulated banking system.<sup>179</sup> A recent study by the Federal Reserve Bank of New York, however, shows that “banks are by far the predominant force in the securitization market” and have been for many years.<sup>180</sup>

The involvement of banking organizations in securitization without adequate capital was at the core of the financial crisis. Banking regulators, apparently unaware of the extent of bank securitization activities and the attendant risks, created regulatory exemptions that encouraged such activities without adequate capital requirements or risk-controls.<sup>181</sup>

In the wake of the crisis, regulators have become more aware of the risks of securitization and taken measures both to regulate and reduce bank involvement in such activities. Amendments to the capital rules now require banks to consolidate their ABCP conduits and, as a result, the issuance and guarantee of ABCP by banks has decreased substantially. The risks of securitization also are being addressed by proposed rules to implement a provision of the Dodd-Frank Act requiring securitizers to bear some of the risk of loss on securitized assets, and by further changes in the capital rules to help ensure that banks can meet their securitization obligations.

While possibly constricting credit availability, these reforms go to the heart of the causes of the financial crisis. They are designed to improve financial stability and, as such, avoid a repeat of the crisis. Regulators should focus on completing these reforms, which are mandated by the Dodd-Frank Act, before

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<sup>179</sup> See, e.g., Ben S. Bernanke, Chairman, Federal Reserve Board, speech before a conference co-sponsored by the Center for Economic Policy Studies and the Bendheim Center for Finance, Sept. 24, 2010.

<sup>180</sup> Nicola Cetorelli and Stavros Peristiani, *The Role of Banks in Asset Securitization*, Federal Reserve Bank of New York Economic Policy Review, July 2012, at 58. The report states that, “[a]lthough much of the securitization activity appears to have been done outside the regulatory boundaries of banking, we find strong evidence to the contrary.” *Id.* at 60. The study shows that during 1983-2008 banks were responsible for approximately 94 percent of all securitizations of credit card receivables, 40 percent of home mortgage securitizations, 67 percent of private label securitizations, 40 percent of collateralized debt obligations, 54 percent of commercial mortgage securitizations, and 54 percent of student loan securitizations. See also M. Fein, *Shooting the Messenger: The Fed and Money Market Funds*, available at SSRN.com, describing bank regulatory actions that facilitated the extensive involvement of banking organizations in shadow banking activities.

<sup>181</sup> See Viral V. Acharya, Philipp Schnabl, and Gustavo Suarez (senior economist, Federal Reserve Board), *Securitization Without Risk Transfer*, Aug. 8, 2011.

pursuing changes to MMFs that are neither mandated by the Act nor justified by empirical evidence.

### E. Liquidity Requirements Are Not Final

Liquidity management was not a major bank supervisory focus prior to the financial crisis but the lack thereof proved to be a major vulnerability for banking organizations during the crisis. The Dodd-Frank Act requires the Federal Reserve to impose stricter liquidity requirements on large banking organizations, but such requirements remain unfulfilled.

In proposing new liquidity standards in 2012,<sup>182</sup> the Federal Reserve recognized the link between liquidity management failures and the severe financial stresses that occurred during the financial crisis:

Given the direct link between liquidity risk management failures and the many strains on firms and the financial system experienced during the recent crisis, the Board believes that strong liquidity risk management is crucial to ensuring a company's resiliency during periods of financial market stress and that covered companies should be held to the highest liquidity standards.

. . . . The Board believes liquidity requirements are vitally important to the overall goals of [ ] the Dodd-Frank Act, to prevent or mitigate 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 financial companies.<sup>183</sup>

The Federal Reserve endorsed the liquidity framework established by the Basel Committee on Banking Supervision and committed to institute a new "liquidity regime" for large bank holding companies that would include a regulatory framework for strong liquidity risk management and specific quantitative liquidity requirements based on the Basel III liquidity ratios.<sup>184</sup>

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<sup>182</sup> 77 Fed. Reg. 594 (Jan. 5, 2012) (Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies, proposed rule).

<sup>183</sup> *Id.* at 604-605.

<sup>184</sup> *Id.* See Basel Committee on Bank Supervision, *Basel III: International Framework for Liquidity Risk Measurement, Standards, and Monitoring* (December 20, 2010), available at [www.bis.org/publ/bcbs188.htm](http://www.bis.org/publ/bcbs188.htm). The Basel Committee in 2008 published *Principles for Sound Liquidity Risk Management and Supervision* providing detailed guidance on the risk management and supervision of funding liquidity risk. The Federal Reserve stated that it intends

The Basel framework is designed to enhance the ability of banking organizations to absorb shocks and maintain their resiliency during periods of financial stress: “The objective of the reforms is to improve the banking sector’s ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy.”<sup>185</sup> The Basel framework establishes minimum requirements designed to promote the resilience of a banking organization’s liquidity risk profile through required liquidity ratios.<sup>186</sup> The Basel liquidity ratios are scheduled to be implemented by Basel Committee member countries, including the United States, by 2015 and 2018, respectively.

The adoption and implementation of these congressionally mandated reforms will go far toward making large banking organizations better able to withstand unexpected disruptions in their sources of short-term funding. Once these reforms are in place, it may become more apparent that regulatory changes to MMFs—designed to address a problem created by lax liquidity management at banks—are not needed.

## IX. ACADEMIC PAPERS DO NOT SUPPORT FSOC’S PROPOSALS

The Federal Register notice accompanying the Council’s proposals cites a number of academic papers as reflecting research and commentary on the “susceptibility of MMFs to destabilizing runs.”<sup>187</sup> A close look at these papers reveals scant evidence that MMFs are prone to runs. To the extent the papers view MMFs as susceptible to runs, this view is based on events during the week of September 15, 2008 when the entire financial system verged on collapse. None of the papers presents any other evidence of runs on MMFs.

The following papers were cited by the Council. For the reasons discussed below, these papers fail to empirically support either the Council’s assumption that MMFs are susceptible to runs or the Council’s proposals for restructuring MMFs. Some of the papers support contrary conclusions.

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to institute the new liquidity regime through a multi-stage process that would require a company to take a number of prudential steps to manage liquidity risk. Key elements of the Fed’s proposed liquidity regime are the following: cash flow projections, liquidity stress testing, liquidity buffers, contingency funding plans, and specific limits on potential sources of liquidity risks.

<sup>185</sup> *Id.* at 1.

<sup>186</sup> These minimum requirements are imposed through two ratios: (i) A liquidity coverage ratio (LCR), which is designed to promote the short-term resiliency of a banking organization’s liquidity risk profile by ensuring that it has sufficient high quality liquid resources to survive an acute stress scenario lasting for one month; and (ii) a net stable funding ratio (NSFR), which is designed to promote liquidity risk resilience over a longer time period and to create incentives for a banking organization to fund its activities with medium- and longer-term funding sources.

<sup>187</sup> 77 Fed. Reg. at 69460, n. 24.

**Naohiko Baba, Robert N. McCauley, and Strichander Ramaswamy,  
“U.S. dollar money market funds and non-U.S. banks,” BIS  
Quarterly Review (March 2008).**

This paper examines the impact of events in 2007 and 2008 when the creditworthiness of major banks in Europe and the United States deteriorated and interbank funding markets dried up. It describes how MMFs became an important source of dollar funding for foreign banks in the absence of foreign exchange transactions with U.S. banks. It further describes how this source of funding was disrupted in September of 2008 and was replaced by dollar swap transactions by the Federal Reserve with foreign central banks. The paper suggests that U.S. regulatory reforms that eliminate or diminish the role of MMFs could harm foreign bank access to an important source of U.S. dollar funding not otherwise available from U.S. banks.

The paper does not provide support for regulatory reforms that would impair the ability of MMFs to serve as a source of dollar funding to foreign banks.

The paper also analyzes the dynamics of the run on MMFs in September 2008 and the government’s response. Among other things, the paper notes that the run on prime MMFs in the U.S. actually ebbed before government support initiatives were put into place: “the institutional run on prime funds abated, as indeed it had already on Thursday 18 September, the day before the announcement, amid discussions of a guarantee.” Moreover, this paper notes that between September 16 and September 25, 2008, prime MMFs met redemptions of \$272 billion, compared to a much smaller amount of loans from the Federal Reserve to purchase asset-backed commercial paper:

As noted, the Federal Reserve began to make AMLF loans on Monday 22 September, but this was only confirmed and quantified (\$22 billion average for the week and \$73 billion outstanding on Wednesday) on Thursday 25 September. In the six working days between 16 September and this announcement, prime funds tracked by Crane (other than Reserve) had met redemptions of \$272 billion.<sup>188</sup>

The paper thus questions to what extent the Treasury’s temporary guarantee program or the Federal Reserve’s AMLF program ameliorated the run on MMFs.

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<sup>188</sup> *Id.* at 76.



**Gary Gorton and Andrew Metrick, “Regulating the Shadow Banking System,” Brookings Papers on Economic Activity (Fall 2010).**

In this paper, Gorton and Metrick recommend that MMFs be subjected to bank-like regulation. Their recommendation is supported by no empirical analysis but is based on an erroneous theory of MMF involvement in the financial crisis that has been proven wrong, and been admitted by them to be wrong.

In this paper, they repeat their incorrect but widely acclaimed hypothesis that the financial crisis was triggered by a run on repurchase agreements (“repos”) by lenders in the repo market, including MMFs.<sup>189</sup> Under their theory, repo lenders increased haircuts on repo collateral and thereby destabilized the repo market upon which commercial banks and investment banks depended for short-term funding.<sup>190</sup> Under the repo-run theory of the financial crisis, MMFs are culpable as large repo purchasers/lenders.

Gorton and Metrick’s theory has been widely cited and accepted as authoritative in the academic literature and elsewhere. As noted earlier, however, the analysis of Gorton and Metrick recently has been discredited by other academic research, and Gorton and Metrick themselves have disavowed their conclusions regarding the involvement of MMFs in the “run on repo”:

As it turns out, MMFs were not at all representative during the crisis, with repo assets actually increasing for MMFs by more than \$100 billion at the same time that overall repo liabilities were falling by \$1.3 trillion.<sup>191</sup>

It is unclear to what extent Gorton and Metrick have revised their views regarding the need for MMF reforms in light of their revised conclusions concerning the role of MMFs in the financial crisis.

Gorton and Metrick have argued, also erroneously, that MMFs should be regulated like banks because they are “implicitly guaranteed” by the

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<sup>189</sup> They state that “the core problem in the financial crisis was a run on repos.”

<sup>190</sup> See also Gary B. Gorton and Andrew Metrick, *Securitized Banking and the Run on Repo*, Yale ICF Working Paper No. 09-14 (Nov. 9, 2010).

<sup>191</sup> Gary Gorton and Andrew Metrick, “Who Ran Repo?” Oct. 4, 2012. Gorton and Metrick admitted that their data was flawed and their interpretation of the data misleading: “Our analysis demonstrates the danger of relying exclusively on official sources of data for repo markets. While it is tempting to focus where the data are strongest, such analyses can be misleading.”).

government.<sup>192</sup> In fact, MMFs are not implicitly guaranteed by the government. Every MMF prospectus states, as required by law, that MMFs are not insured or guaranteed by the FDIC or any other government agency and that it is possible to lose money by investing in them. Moreover, the Emergency Economic Stabilization Act of 2008 severely limits the Treasury Department's ability to guarantee MMFs.

**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).**

This paper begins by highlighting the benefits and safety record of MMFs:

Money market funds (MMFs or "money funds") have an impressive record of price stability. From the introduction of the rules specifically governing these funds in 1983 until the Lehman bankruptcy in September 2008, only one small MMF lost money for investors, and that loss, in 1994, had little broader impact on the industry. Although MMF prospectuses and advertisements must warn that "it is possible to lose money by investing in the Fund" . . . investors virtually never lost anything.

The paper examines sponsor support of MMFs during the financial crisis and concludes that sponsor support—particularly support by banking organizations of their affiliated MMFs—creates systemic risk.<sup>193</sup> The paper suggests that MMFs—particularly bank-sponsored MMFs—might not have needed sponsor support had stricter controls been imposed on sponsor support earlier.

This paper does not provide evidence of runs on MMFs other than the one that occurred in September 2008. It notes that no run on MMFs occurred during the ABCP crisis in 2007.

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<sup>192</sup> Gary Gorton and Andrew Metrick, "Regulating the Shadow Banking System ("As long as MMMFs have implicit, cost-free government backing, they will have a cost advantage over insured deposits.").

<sup>193</sup> *Id.* at 2-3 ("The link between sponsor risk and holdings of distressed paper during the ABCP crisis indicates that the sponsor-support option may distort incentives for portfolio managers, and the role of sponsor risk in channeling concerns about financial institutions to their off-balance-sheet MMFs during the 2008 run suggests that expectations for such support may contribute to transmission of financial shocks. These concerns at least warrant greater attention to the systemic risks posed by the MMF industry's reliance on sponsor support.").

**Squam Lake Group, “Reforming Money Market Funds,” Letter to the Securities and Exchange Commission re: File No. 4-619; Release on Money Market Fund Reform (Jan. 14, 2011).**

It is interesting that the Council would single out this letter from among dozens—even hundreds—of other submissions to the SEC by MMFs, their investors, and others presenting cogent and credible reasons why structural changes to MMFs are misguided and unnecessary. The public record of submissions to the SEC overwhelmingly counsels against a floating NAV or capital requirements for MMFs.

The Squam Lake Group is comprised of 14 academic economists with no expertise in the regulation of MMFs. Their submission to the SEC is based on conclusory statements unsupported by empirical data or other evidence. They provide no cost-benefit analysis. Many of the Squam Lake economists have advisory or other affiliations with the Federal Reserve, which similarly has advocated MMF restructuring with little evidence of such a need.

Chief among the Squam Lake economists’ concerns is the potential for a government guarantee of MMFs to create systemic risk by encouraging fund managers to take greater risks, fund investors to overinvest, and fund sponsors to withhold support in the event a fund threatens to break the buck.<sup>194</sup> Yet, as noted above, the possibility of government support for MMFs in a crisis has been sharply curtailed by the Emergency Stabilization Act of 2008. The concerns of the Squam Lake economists are out of date and otherwise misplaced. They show no cognizance of the disclosures MMFs are required to make informing investors that MMFs are not guaranteed.

The Squam Lake economists provide no cost-benefit analysis to support their proposal to impose a floating NAV and/or capital buffer on MMFs. Extraordinarily, they argue that the burden of producing a cost-benefit analysis lies with the MMF industry rather than regulators proposing to destroy the industry.<sup>195</sup>

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<sup>194</sup> They argue, “If money market fund managers believe that such guarantees will be forthcoming in response to any systemic event, they will have incentives to take greater risks than is prudent from a systemic perspective. Moreover, if investors also believe that their money market fund investments are protected in a systemic event, they will overinvest in money market funds, thereby increasing the magnitude of the systemic risk. . . . Going forward, if sponsors believe that their funds will receive government support, their incentive to bail out their own funds may be substantially reduced, particularly given the squeeze on profitability associated with exceptionally low money-market interest rates.”

<sup>195</sup> They state, “The industry argues that investors derive significant operating, accounting, and tax management benefits from the ability to transact at a fixed price. In our view, the magnitude of these benefits—particularly from a social perspective—remains an important open

The Squam Lake economists provide no evidence of any MMF runs other than in September of 2008 and produce no evidence that would support the conclusion that MMFs are susceptible to runs. Their letter to the SEC provides no credible support for the Council's proposals.

**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).**

Mr. Rosengren's speech focuses on perceived credit risks posed by prime MMFs, alleging that "a number of money market funds took significant credit risk that ultimately led to them needing sponsor support in the period from 2007 to 2010." This paper ignores the MMF reforms adopted in 2010, relies on unreliable credit default swap data as a measure of risk, and criticizes MMFs for responding to elevated risk by reducing their holdings of foreign bank debt during the European sovereign debt crisis. In a later speech, Mr. Rosengren provides data showing that bank-affiliated MMFs were the primary recipients of sponsor support during the financial crisis and suggests that banks should be required to maintain increased capital to cover their implicit support of affiliated MMFs.<sup>196</sup> Mr. Rosengren's work does not lend credible support to the Council's proposals.<sup>197</sup>

**Martin Kacperczyk and Philipp Schnabl, "How Safe are Money Market Funds?" (April 2012).**

This paper studies the correlation between risk levels in MMF portfolios with capacity of the fund's sponsor to lend support to the fund. It concludes, looking at 2007, that MMFs that had sponsors with significant ability to provide such support took on more risk relative to fund sponsors with less ability to provide support. This paper suggests that sponsor support of MMFs creates

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question. We have not seen any analysis of the value of these benefits to money market fund investors relative to the cost to the public of the associated systemic risk. Another source of uncertainty comes from the potential impacts on other types of financial institutions. If investors strongly prefer stable-NAV type products, then requiring that all funds have a floating NAV might induce investors to shift their investments into bank deposits as a substitute for stable-NAV money market funds. Because the bank deposits of large institutional investors are uninsured, this could simply move the threat of runs from money market funds to the banking sector. Given that banks are less transparent than money market funds, the likelihood of a damaging run could theoretically increase as a result of this shift. Again, this possibility is difficult to assess empirically."

<sup>196</sup> Eric S. Rosengren, *Our Financial Structures—Are They Prepared for Financial Instability?* Speech delivered in Amsterdam, June 29, 2012.

<sup>197</sup> See letters dated April 18 and July 11, 2012, from Melanie L. Fein to Eric S. Rosengren, refuting his arguments concerning MMFs, on file with Securities and Exchange Commission at <http://www.sec.gov/comments/4-619/4-619.shtml>.

systemic risk. It does not provide evidence that MMFs are susceptible to runs or lend support to the Council’s proposals.

**Burcu Duygan-Bump, Patrick Parkinson, Eric Rosengren, Guastavo 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.**<sup>198</sup>

This paper describes in detail the Federal Reserve’s liquidity facility for asset-backed commercial paper (ABCP) established in September of 2008 following the withdrawal of MMFs from the market for bank-sponsored ABCP—the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility or “AMLF.” This paper perpetuates the myth that the AMLF was a bailout of MMFs rather than banks. It emphasizes the destabilizing role of ABCP in the financial crisis but incorrectly identifies the source of the instability.

The paper notes that banks were faced with “the prospect of taking onto their already strained balance sheets some of the ABCP that they had committed to support”<sup>199</sup> but fails to note that banks maintained insufficient capital to do so and would have become critically undercapitalized and failed had not the Federal Reserve instituted the AMLF. The paper makes no mention of the degree to which banks that had sponsored and guaranteed ABCP utilized the AMLF to purchase ABCP from their affiliated funds using non-recourse loans provided by the AMLF, relying on unprecedented exemptions granted by banking regulators from section 23A of the Federal Reserve Act and the bank capital rules.

Instead, the paper states that the main purpose of the AMLF was to enable MMFs to meet heavy redemption requests without breaking a buck. The paper gratuitously concludes that MMFs are susceptible to runs and a source of systemic risk.<sup>200</sup>

One of the paper’s authors, Eric Rosengren, has provided details showing that bank-affiliated sponsors of MMFs provided high levels of support to their funds during the financial crisis.<sup>201</sup> Another Federal Reserve paper has shown

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<sup>198</sup> This paper was originally published as Federal Reserve Bank of Boston Working Paper No. QAU10-3, 2010.

<sup>199</sup> *Id.* at 8.

<sup>200</sup> *Id.* at 23.

<sup>201</sup> Eric S. Rosengren, President, Federal Reserve Bank of Boston, “Our Financial Structures—Are They Prepared for Financial Instability?” speech delivered on June 29, 2012. Rosengren cites data showing that bank-affiliated sponsors were called upon to provide approximately three times as much aggregate support as sponsors of non-bank-affiliated funds.

that the reason for this support was due to higher levels of ABCP held by bank-affiliated funds.<sup>202</sup> The pivotal role of bank-sponsored ABCP in the financial crisis was highlighted in yet another paper by Federal Reserve Board economists documenting runs on ABCP as a causal factor in the financial crisis.<sup>203</sup> These papers suggest that the structure of the bank ABCP market—not the structure of MMFs—was the central source of systemic risk that destabilized the financial system, and not runs on MMFs.

**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).**

This paper outlines a proposal to protect retail investors who may be slow to redeem their shares in the unlikely event a MMF breaks a dollar in the future.<sup>204</sup> It would do so by imposing a penalty on investors who act quickly to redeem their shares.<sup>205</sup> The paper is self-doubting, expressing concern that disincentives to redemptions might “dampen market discipline” or have other negative consequences.<sup>206</sup>

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Moreover, more than three times as many sponsors of bank-affiliated funds needed to support their funds as sponsors of non-bank-affiliated funds.

<sup>202</sup> Patrick E. McCabe, Federal Reserve Board, Finance and Economics Discussion Series, The Cross Section of Money Market Fund Risks and Financial Crises, 2010-51.

<sup>203</sup> Daniel Covitz, Nellie Liang, and Gustavo Suarez, “The Anatomy of a Financial Crisis: The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market,” Finance and Economics Discussion Series, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, 2009-36.

<sup>204</sup> In its efforts to protect retail investors, the paper fails to recognize that many institutional investors who respond quickly to market information are acting on behalf of their retail clients—including retirees whose money is invested in MMFs through pension funds or omnibus retirement accounts, for example.

<sup>205</sup> Rather than rely on disclosures and other types of investor protections, this proposal would require that a fraction of each MMF investor’s recent balances, called the “minimum balance at risk” (MBR), be demarcated to absorb losses if the fund is liquidated. Redemptions of the MBR would be delayed for thirty days as a “disincentive” to redeem from a troubled MMF. The paper states that the MBR would diminish the benefits of redeeming when a fund is in trouble and thereby reduce the potential costs that others’ redemptions “impose” on non-redeeming shareholders. Thus, the MBR would be an effective deterrent to runs because, in the event a MMF breaks the buck, the MBR would ensure a “fairer allocation of losses” among investors (emphasis in original).

<sup>206</sup> The paper argues, on the other hand, that its proposal might strengthen incentives for “early market discipline,” but does not consider the possibility that such discipline would increase investor flightiness.

This paper states that the susceptibility of MMFs to runs is due to their fixed \$1.00 NAV.<sup>207</sup> This presumption is contradicted by the conclusions of another paper cited by the Council, authored by Gordon and Gandia, discussed *infra*. Gordon and Gandia provide empirical evidence showing that there was little or no difference in the run risks between variable and fixed NAV MMFs during the financial crisis.<sup>208</sup>

The paper by McCabe et al. notes significant drawbacks of imposing a floating NAV requirement on MMFs:

Because a floating NAV requirement would eliminate what appears to be a key attraction for many MMF investors, such a change might lead to a precipitous decline in MMF assets and in these funds' capacity to provide short-term funding. . . . [I]f institutional investors move cash to banks, the banking system might experience a large increase in uninsured, "hot money" deposits.<sup>209</sup> \* \* \* \*

[T]he floating NAV option as a *standalone* fix for the vulnerability of MMFs to runs has some important drawbacks, most notably the possibility that elimination of the "hallmark" feature of the funds would be tantamount to "eviscerating" them (ICI, 2009). Opponents of a floating NAV have cited a broad range of concerns about its potential impacts on MMF investors, including tax and accounting complications that might substantially diminish the appeal of the funds. If so, a floating NAV might lead to a steep decline in investor demand for MMF shares and a migration of assets to less regulated vehicles that continue to offer stable NAVs.<sup>210</sup>

The paper also notes drawbacks of imposing a capital buffer requirement on MMFs:

Capital buffers have drawbacks, however. A small buffer *on its own* would do little to mitigate systemic risks;

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<sup>207</sup> McCabe et al. at 4 ("The vulnerability of MMFs to runs can, in large measure, be traced back to their stable \$1. . . .").

<sup>208</sup> See 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).

<sup>209</sup> McCabe et al. at 6.

<sup>210</sup> *Id.* at 53-54.

investors would likely flee from MMFs in any crisis out of fear that losses would exceed the size of the buffer. Even so, capital might blunt MMF portfolio managers' incentives for prudent risk management and investors' incentives to monitor risks in their funds, since capital could absorb losses associated with small mistakes. Of course, a very large buffer could diminish these concerns, but raising sufficient capital to absorb the losses that might be associated with systemic events would be challenging, particularly in light of the very low yields that MMFs earn when short-term rates are low. Proponents of capital buffers have argued that capital might be raised directly from MMF shareholders by retaining income that would normally be distributed to them (e.g., Goebel, Dwyer, and Messman, 2011), from third-party investors in capital markets (e.g., McCabe, 2011 and BlackRock, 2011), or from MMF sponsors (e.g., BlackRock 2010). Each of these potential sources has its own complications.<sup>211</sup>

The paper similarly finds drawbacks to the imposition of restrictions or fees on MMF redemptions:

A disadvantage of redemption restrictions and fees is that they generally would only be feasible if imposed conditionally. A redemption fee that is charged in all circumstances would negate the principal stability that is critical for many MMF investors. Similarly, an unconditional delay of *every* redemption would undermine the liquidity of shares that is established in the Investment Company Act of 1940 for all mutual funds (not just MMFs). Either change, if applied at all times, would likely have impacts similar to the consequences of a floating NAV.<sup>212</sup>

Clearly, restrictions or fees on redemptions could be imposed conditionally. But applying them only in circumstances when a fund (or the entire MMF industry) is under strain, or when a spike in demand for liquidity boosts the cost of redemptions, would raise the risk of preemptive runs by investors who anticipate that restrictions or fees

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<sup>211</sup> McCabe et al. at 6-7.

<sup>212</sup> *Id.*



might soon be put in place. For example, news that one fund has imposed restrictions or fees could cause shareholders in *other* funds to redeem shares on concerns that their funds might do the same. Arguably, conditional fees or restrictions might *increase* the vulnerability of MMFs to runs.<sup>213</sup>

The paper presents no evidence of MMFs' vulnerability to runs other than the flight to quality by prime MMF investors in September of 2008. The paper refers to "heavy exposures of MMFs to European financial institutions" in 2011 but does not claim that these exposures resulted in a run.

Rather than support the Council's propositions concerning MMFs, this paper raises serious questions about their efficacy.

**David S. Scharfstein, "Perspectives on Money Market Mutual Fund Reforms," Testimony before U.S. Senate Committee on Banking, Housing, & Urban Affairs (June 21, 2012).**

Professor Scharfstein's testimony argues that MMFs should be restructured because "large banks depend on MMFs for short-term funding." MMFs are a "critical" source of short-term funding for large global banks, he claims, and institutional investors in MMFs "threaten the ability of MMFs to fund the activities of the banking sector."

These claims are much exaggerated. They overlook key facts regarding the multitude of diverse sources of funding and liquidity available to banks and ignore SEC rules making it impossible for MMFs to act as a source of guaranteed finance for the banking system. They also disregard complex economic, regulatory and other factors influencing credit availability.<sup>214</sup>

Moreover, Scharfstein's testimony conflicts with his own published research on the financial crisis. Scharfstein has pointed out that banks gained deposits during the financial crisis—and thus lending capacity—as investors moved money from the commercial paper market and MMFs:

[A]s concerns about general credit quality rose during the crisis, investors pulled their money from uninsured money market funds and the commercial paper market, and redeployed their funds to banks in the form of insured

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<sup>213</sup> *Id.* at 7.

<sup>214</sup> See M. Fein, "The Latest Fallacy About Money Market Funds," available at SSRN.com, challenging these claims.

deposits. Therefore, banks that were in a better position to attract deposits, were likely less credit-constrained and thus in a better position to lend than banks without a strong deposit base. . . . [I]nvestors will withdraw from money market funds that invest in commercial paper, and instead place their money in insured deposits.<sup>215</sup>

Funds that would otherwise have been invested in commercial paper and money market funds moved over to insured deposits with concerns about credit quality in those markets.<sup>216</sup>

Scharfstein has documented as a cause of reduced bank lending capacity during the financial crisis an increase in precautionary draw downs by corporate borrowers on pre-existing credit lines, as reflected in an increase of approximately \$100 billion in commercial and industrial loans reported by U.S. banks from September to October of 2008.<sup>217</sup> Just as “topping off” at the pump may aggravate a gasoline shortage, these draw downs reduced the ability of banks to supply credit to the economy and are likened by Scharfstein to a “run” on the banking system.<sup>218</sup> Scharfstein noted that syndicated lending by banks started to fall in mid-2007 (i.e., before the run on MMFs during Lehman week), with the decline accelerating during September 2008.<sup>219</sup>

Scharfstein also has published research noting that two major causes of the reduction in bank lending during the financial crisis were shocks to borrowers’ collateral and shocks to bank capital:

Cyclicalities in the supply of business credit has been the focus of a considerable amount of research. This cyclicalities can stem from shocks to borrowers’ collateral, which affect firms’ ability to raise capital if agency and information problems are significant (Ben S. Bernanke and Mark Gertler, 1989). Or it can stem from shocks to bank capital, which affects the supply of bank loans if agency and information problems limit the ability of banks to raise

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<sup>215</sup> David S. Scharfstein and Victoria Ivashina, “Bank Lending During the Financial Crisis of 2008,” Dec. 15, 2008, at 3.

<sup>216</sup> *Id.* at 12.

<sup>217</sup> David S. Scharfstein and Victoria Ivashina, “Bank Lending During the Financial Crisis of 2008,” *Journal of Financial Economics* 97 (2010) at 319–338.

<sup>218</sup> *Id.* (“These credit-line draw downs were part of the “run” on banks that occurred at the height of the crisis.”).

<sup>219</sup> *Id.* at 320.

additional capital (Bernanke, 1983). Both of these channels may have been at work during the financial crisis that started in 2007. Ran Duchin, Oguzhan Ozbas and Berk A. Sensoy (2010) show that firms with more collateral were better able to withstand the contraction in credit, and Victoria Ivashina and David Scharfstein (2010) show that reductions in bank capital had an adverse effect on lending.<sup>220</sup>

Thus, Professor Scharfstein's testimony and research does not support the Council's MMF proposals.

**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 SSRN.com.**

A major conclusion of this paper is that a floating NAV for MMFs will not ameliorate the supposed run risk of MMFs. The paper compares MMFs with a fixed NAV in the United States with MMFs in Europe with a variable NAV during the week of September 15, 2008 and finds no difference in run risk between the two. The paper provides empirical research showing that the Council's proposal to require MMFs to abandon the fixed \$1.00 NAV is misguided.

## X. CONCLUSION

The Council's MMF proposals are flawed by the lack of empirical support for the Council's underlying premise that MMFs are susceptible to runs such that drastic changes are needed in their structure. Similarly, empirical support is lacking for the Council's proposed determination that MMFs spread systemic risk. Indeed, the evidence points to the contrary—the Council's proposals raise a significant danger of actually increasing systemic risk.

This paper has shown that "systemic risk" and "financial stability" are developing concepts not completely understood by either regulators or academic economists. It suggests that regulators should wait for the results of ongoing research before proceeding with MMF changes in the name of "systemic risk" when such changes could harm investors, damage the short-term credit markets, and have other unintended consequences for financial stability.

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<sup>220</sup> David S. Scharfstein and Victoria Ivashina, "Loan Syndication and Credit Cycles," Jan. 2010 at 1.

The implementation of unfinished banking reforms mandated by Congress in the Dodd-Frank Act is expected to greatly improve the stability of the banking system and correct deficiencies in banking supervision that allowed the financial crisis to develop so severely. MMFs did not cause the financial crisis. Congress has not found that MMFs create systemic risks or threaten financial stability, and has not mandated any substantive regulatory changes to MMFs.

The Council cannot meaningfully consider the role of MMFs in the financial system until the role of banking organizations is clarified through reforms that remain unimplemented. Some banking reforms will affect how well banking organizations manage their utilization of short-term credit to fund their activities. Increased capital and liquidity standards will address financial stability concerns arising from excessive short-term funding and undercapitalized risk-taking by banks through securitization and related activities.

Notwithstanding the Dodd-Frank Act mandates, banking regulators have hesitated to move forward with major structural changes to the banking system without the support of additional empirical research. The Council should be even more hesitant to move forward with structural changes to MMFs—where Congress has mandated no substantive reforms—without strong empirical backing, which currently is lacking.