

# MONEY MARKET FUND REFORM VIEWED THROUGH A SYSTEMIC RISK LENS

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## I. INTRODUCTION

Money market funds (“MMFs”) were first developed in the 1970s, and since that time, they have become increasingly popular as an alternative to deposit accounts. Since the financial crisis of September 2008, there has been much discussion about the systemic risks posed by alternatives to commercial banking products. One of the key themes of this discussion is whether the systemic importance of these alternative banking products justifies the imposition of heightened regulation and supervision. This article takes the view, after a comparison of deposit accounts and MMFs, that MMFs are systemically important. It then goes on to consider, through the lens of systemic risk analysis, the reforms to MMF regulation that have been proposed since September 2008.

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## II. BACKGROUND ON THE PRODUCTS

### A. Deposit Accounts

Commercial banks play an important role in our society: they function as a place to keep money, provide credit and can be used as an instrument of monetary policy. Because of these characteristics, legislators, regulators and economists treat banks as “special.”<sup>1</sup> Commercial banks are authorized by law<sup>2</sup> to receive deposits from customers – they pay interest on the deposited funds to the depositors and lend the deposited funds to other customers at a higher interest rate. There is a fundamental instability in this classic bank business model, however, which is caused by the maturity mismatch between the funds on deposit (which can be withdrawn at will) and the loans, which are made on a longer-term basis and cannot be called in at will.<sup>3</sup> This inherent fragility of the bank business model and the “specialness” of banks provide the justification for increased regulatory scrutiny of banks, which involves ongoing supervision from the relevant regulator (especially with respect to the maintenance of regulatory capital) to ensure that the institution is “safe and sound.”<sup>4</sup>

Banks only have a fraction of the cash deposited with them on hand at any one time, which means that they would become insolvent if all depositors were to seek to get their money back at once.<sup>5</sup> This is what happens in a classic bank run: once depositors in a bank see other depositors withdrawing funds from that bank, they make a “prisoner’s dilemma”-type calculation and conclude that they need to withdraw their funds before all

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1. E. Gerald Corrigan, *Are Banks Special?* THE REGION (1982), available at <http://www.minneapolisfed.org/pubs/ar/ar1982a.cfm>.

2. 12 U.S.C. § 24 (2009). This provision of the US Code confers the power to accept deposits to nationally chartered banks with state chartered banks having equivalent powers.

3. Corrigan, *supra* note 1.

4. Banks and Banking Act, 12 U.S.C. §§ 21-522 (2010). Commercial banks are currently regulated by a patchwork quilt of regulators. They may be subject to the supervision of state regulators, the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency and/or the Office of Thrift Supervision, depending on whether they are chartered at a state or national level, and whether they are a member of the Federal Reserve or not. Pursuant to 12 U.S.C. § 1820(d) (2010), each FDIC-insured institution must undergo an on-site examination by the relevant regulator every year (or every 18 months for smaller, healthy banks). Each of the regulators uses the “CAMELS” rating system to evaluate a bank’s safety and soundness. The CAMELS system requires the relevant regulator to provide a bank with a rating from 1 to 5 (with 1 being the highest and 5 being the lowest) for each of Capital Adequacy, Management, Earnings, Liquidity and Sensitivity to market risk. The bank also receives a composite rating (also from 1 to 5) for its safety and soundness.

5. Corrigan, *supra* note 1.

the funds on hand have been withdrawn by others.<sup>6</sup> This type of panic is contagious and can jump from banking institution to banking institution. This happened recurrently in America in the late nineteenth and early twentieth centuries.<sup>7</sup> To avoid these types of runs, it is essential to maintain the confidence of depositors in their banks' ability to repay their deposits.

In furtherance of this aim, the Banking Act of 1933 created the Federal Deposit Insurance Corporation (the "FDIC"), to which banks can apply<sup>8</sup> to become an insured depository institution. If an insured depository institution fails, a depositor can recover 100 cents on each dollar deposited in that bank, up to a maximum amount of \$250,000<sup>9</sup> per category of legal ownership.<sup>10</sup> Despite the fact that, at the time the FDIC was created, it lacked any support from the President, bankers, or economists (the latter of whom opposed deposit insurance as a moral hazard),<sup>11</sup> there have been no widespread runs on traditional commercial banks since 1933. This absence of runs has been attributed to the presence of deposit insurance<sup>12</sup> - the theory being that if a depositor understands that his or her funds are protected by a government guarantee, he or she is much less likely to rush to withdraw his or her funds in the event that a bank, or indeed the entire banking industry, is faltering.

## B. Money Market Funds

A MMF is a type of open-end investment company, regulated by the SEC pursuant to the Investment Company Act of 1940 and Rule 2a-7<sup>13</sup> made pursuant thereto. MMFs have grown in popularity since they were first introduced in the 1970s, and now, according to the Investment Company Institute (the "ICI"),<sup>14</sup> MMFs currently have \$2.806 trillion under

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6. GARY GORTON, QUESTIONS AND ANSWERS ABOUT THE FINANCIAL CRISIS 2 (2010).

7. *Id.* There were bank panics in the United States in 1837, 1857, 1873, 1907 and 1929.

8. 12 U.S.C. § 1815 (2010).

9. GORTON, *supra* note 6. This ceiling was increased from \$100,000 to \$250,000 during the recent financial crisis, indicating the perceived importance of deposit insurance in maintaining confidence in the traditional banking system.

10. 12 U.S.C. § 1821(a). Categories of legal ownership include single accounts, joint accounts, trust accounts, and corporate accounts.

11. GORTON, *supra* note 6.

12. *Id.* Though it is impossible to prove empirically that the absence of runs since 1933 has been caused by the implementation of deposit insurance, the prevalence of bank runs prior to 1933 and the absence of commercial bank runs thereafter suggests that deposit insurance has been at least an important factor in quelling the panics that precipitate such runs.

13. 17 C.F.R. § 270.2a-7 (2010).

14. The industry association representing money market funds and other mutual funds.

management.<sup>15</sup> Although MMFs were developed in the 1970s as a way for retail investors to capitalize on high yields on Treasury bills, these yields have since shrunk and now it is the convenience of MMFs that makes them popular with investors (both retail and institutional). MMFs are usually offered by fund families as one of a range of investment products, as investments in a MMF can be moved easily to and from other investments (to the extent funds are not invested in other investments, they can remain in the MMF and earn interest). Justice Pollack has emphasized that “the flexibility available to an investor to swing from one form of investment to another, simply, efficiently . . . is of considerable advantage to the Fund shareholder.”<sup>16</sup> For institutional investors, MMFs provide a cash management tool that provides the investor with extra diversification and liquidity, while avoiding some of the personnel and settlement expenses the institutional investor would incur if it managed its own cash.<sup>17</sup>

When a customer invests in a MMF, that customer is buying a share in a mutual fund that typically invests in “short-term money market securities expected to pay the highest current income consistent with preservation of capital and maintenance of liquidity.”<sup>18</sup> Any income earned by the MMF is credited to a customer account in the form of dividend shares, which are declared daily. As MMFs are registered open-end mutual funds, shares in MMFs can be redeemed at any time<sup>19</sup> (which emulates the withdrawal-at-will feature of deposit accounts). Since the late 1970s, MMFs have tended to keep their net asset values (“NAVs”) stable at \$1 to satisfy customer appetites for an investment with a constant share value.<sup>20</sup>

MMFs are the only mutual funds that are entitled to maintain a stable NAV,<sup>21</sup> and this is done pursuant to Rule 2a-7(c) through the use of the amortized cost valuation method, which allows the assets of a fund to be

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15. *Money Market Mutual Fund Assets*, INV. CO. INST., [http://www.ici.org/research/stats/mmf/mm\\_06\\_24\\_10](http://www.ici.org/research/stats/mmf/mm_06_24_10) (last visited June 23, 2010).

16. *Gartenberg v. Merrill Lynch Asset Mgmt.*, 528 F. Supp. 1038, 1050 (S.D.N.Y. 1981).

17. See Andrew B. Lyon, *Money Market Funds and Shareholder Dilution*, 39(4) J. FIN. 1011, 1012 (1984); see Stevens, *infra* note 35. Deposit accounts may not be a viable alternative for institutional investors, given that banks may not want such large at-will deposits on their books. In any event, deposit account insurance is not attractive to institutional investors because the large amounts that such investors have to invest would exceed the \$250,000 cap.

18. *Gartenberg v. Merrill Lynch Asset Mgmt.*, 694 F.2d 923, 925 (2d Cir. 1982).

19. Investment Company Act of 1940, Pub. L. No. 76-768, § 22(e). However, a MMF can suspend the right of redemption for up to seven days.

20. MATTHEW P. FINK, *THE RISE OF MUTUAL FUNDS: AN INSIDER'S VIEW* 83-84 (2008).

21. See Lyon, *supra* note 17, at 1011 (noting the arbitrage opportunities inherent in having a stable NAV for a share that differs from the market value of that share - arbitrageurs “could increase their holdings of the MMF when it was undervalued and sell their shares when the MMF was overvalued”).

valued at their amortized cost value,<sup>22</sup> rather than at their market value (the SEC permits this type of valuation on the assumption that “high quality, short-term debt securities held until maturity will eventually return to their amortized cost value, regardless of any current disparity between the amortized cost value and market value, and would not ordinarily be expected to fluctuate significantly in value”).<sup>23</sup>

The requirements of Rule 2a-7 were supplemented by changes that came into effect on May 5, 2010 (which will be discussed below). As in force prior to May 5, 2010, Rule 2a-7(c) provided that a mutual fund could not use the amortized cost method, and Rule 2a-7(b) provided that a mutual fund could not hold itself out as a MMF, unless its portfolio met the standards for portfolio maturity, quality and diversification specified in Rule 2a-7(c)(2)-(4) (as then in force). The restrictions on portfolio maturity set out in Rule 2a-7(c)(2) required that a MMF not invest in an instrument with maturity greater than 397 days<sup>24</sup> and that the dollar-weighted average maturity for the whole portfolio not exceed 90 days. The restrictions on portfolio quality were set out in Rule 2a-7(c)(3): a MMF could only invest in rated securities if the MMF’s board had determined that the securities posed minimal investment risks and if the securities were in the credit rating agency’s top two short-term rating categories (if the securities were unrated, to be eligible investments they had to be comparable to securities in those top two short-term rating categories).<sup>25</sup> Securities that were (or were equivalent to securities that were) in a credit rating agency’s second top short-term rating category (“second tier securities”) could not comprise more than 5% of a MMF’s portfolio. Finally, the diversification requirements set out in Rule 2a-7(c)(4) prevented a MMF from investing more than 5% of its assets in securities issued by a single issuer (there are no concentration limits on holdings of government securities, like Treasury bills).<sup>26</sup> In addition, a MMF could not invest more than the greater of 1% of its assets and \$1 million in second tier securities issued by a single issuer. These restrictions were intended to reduce the risk of volatility in the NAV of a MMF share, by ensuring that the MMF held high-quality, short-term assets, and was not overly exposed to any one issuer.

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22. Meaning that the portfolio of securities held by the fund is assumed to increase in value until maturity, and thus is valued using the cost of those securities at the time they were acquired by the fund, as adjusted for amortization of premium or accretion of discount. When calculating the NAV of a share, the securities are not marked to market.

23. Money Market Fund Reform, Investment Company Act Release No. 29132 (Feb. 23, 2010).

24. 17 C.F.R. § 270.2a-7 (2010). This requirement remains in force in the amended Rule 2a-7.

25. *Id.* This component of Rule 2a-7(c)(3) remains in force.

26. *Id.* This diversification requirement also remains in force.

In addition to these portfolio quality, maturity, and diversification requirements, Rule 2a-7(c)(7)(ii)<sup>27</sup> provided that a MMF could only rely on the amortized cost valuation method if the fund's board tracked the actual market value of its assets (this process is known as "shadow pricing"). If the difference between the market value of a share in the MMF and the value of a share in the MMF valued using the amortized cost method is more than \$0.005, then the board of that MMF must decide whether the shares need to be repriced. If shares are repriced below \$1, then a fund is said to have "broken the buck."

### C. Comparison of the Products

Deposit accounts and MMFs are both seen by the investing public as products where cash can be kept safely, earn a steady return and be withdrawn at will. Despite that fact that an investment in a MMF is actually an investment in securities, a SEC Commissioner has acknowledged that "investors generally treat money market funds as cash investments."<sup>28</sup> The Second Circuit has also recognized that "the purchaser's investment in the Fund is more like a bank account than the traditional investment in securities."<sup>29</sup> However, despite the superficial similarities, the underlying structures of these products are very different and this has led to different regulatory treatment of these products.

As discussed above, because the liabilities of commercial banks are not easily liquidated, banking regulators supervise commercial banks on an ongoing basis to promote their safety and soundness in order to avoid runs (these commercial banks are also eligible to apply to the FDIC for insurance with respect to deposit accounts). Because funds (like MMFs) predominantly invest in securities rather than the comparatively illiquid loan assets held by commercial banks, funds have traditionally been viewed as being less likely to be subject to a run than commercial banks.<sup>30</sup> However, runs on funds are still possible, as described succinctly by Brunnermeier:

Equity-holders who withdraw their capital receive a share of the . . . fund's net asset value. In this case, an early-mover advantage arises to the extent that fund managers sell liquid assets first. To see this point, consider a fund that holds \$50 million in highly liquid cash and \$50 million in hard-to-sell illiquid securities

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27. *Id.* This provision of the rule was not changed by the amendments that became effective in May 2010, but was renumbered as Rule 2a-7(c)(8)(ii).

28. Luis Aguilar, Comm'r, Sec. & Exch. Comm'n, Investment Company Institute and Federal Bar Association Mutual Funds and Investment Management Conference (Mar. 15, 2010) (transcript available at <http://www.sec.gov/news/speech/2010/spch031510laa.htm>) (quoting Revisions to Rules Regulating Money Market Funds, 61 Fed. Reg. 13,955, 13,957 (Mar. 28, 1996)).

29. Gartenberg, 694 F.2d at 925.

30. KERN ALEXANDER, RAHUL DHUMALE & JOHN EATWELL, GLOBAL GOVERNANCE OF FINANCIAL SYSTEMS: THE INTERNATIONAL REGULATION OF SYSTEMIC RISK 56 (2006).

that at short notice can be sold for only \$30 million. If the fund services early withdrawals using its cash cushion, then early withdrawers receive their full share of the mark-to-market net asset value of \$100 million. But once the fund has to sell the illiquid assets under pressure to pay out the remaining investors, net asset value declines and late withdrawers receive only a percentage share of the sale price of the remaining assets, which is \$30 million, not \$50 million. In sum, a first-mover advantage can make financial institutions in general, not only banks, subject to runs.<sup>31</sup>

Instead of supervising MMFs on an ongoing basis,<sup>32</sup> the SEC seeks to limit runs through the prophylactic Rule 2a-7, which protects investors in MMFs by reducing the amount of hard-to-sell illiquid securities held by the fund. However, Rule 2a-7 does not address the possibility that market-wide panic can stymie the liquidity of MMF portfolios, leaving MMFs in a situation analogous to that of a commercial bank that cannot liquidate its assets.

Looking beyond regulation to function, deposit accounts and MMFs both play a key role in the economy. As discussed above, commercial banks are “special” because they take in deposits, provide credit, and can be used as an instrument of monetary policy.<sup>33</sup> Until the financial crisis of 2007-2008, regulators did not focus on the reality that financial products outside the highly-regulated commercial banking sphere (like MMFs) were also “special,” in that they provided both a place to keep money and a vital source of credit to the economy.<sup>34</sup> Many corporations raise short term funding through the issuance of unsecured commercial paper, and the ICI estimates that MMFs hold nearly half of all commercial paper issued in the United States.<sup>35</sup> The primary source of funding for many local governments is the issuance of municipal bonds, and the ICI estimates that MMFs hold nearly two-thirds of all municipal bonds issued in the United States.<sup>36</sup> MMFs are the dominant players in the highly concentrated tri-party repurchase market,<sup>37</sup> in which they purchase highly rated securities from institutions (often, prior to the financial crisis, investment banks) through a clearing house (either JPMorgan Chase or The Bank of New York Mellon)

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31. MARKUS K. BRUNNERMEIER, FINANCIAL CRISIS REPORT FOR FINANCIAL CRISIS INQUIRY COMMISSION (2010), *available at* <http://www.fcic.gov/hearings/pdfs/2010-0227-Brunnermeier.pdf>.

32. The SEC’s supervisory mandate is limited to periodic examinations of MMFs to ensure compliance with its rules.

33. Corrigan, *supra* note 1.

34. GORTON, *supra* note 6.

35. Paul Schott Stevens, President, Inv. Co. Inst., *Weathering the Worst: Making Money Market Funds Even Stronger* (Mar. 15, 2010) (transcript available at [http://www.ici.org/policy/current\\_issues/10\\_mfim\\_conf\\_pss\\_spch](http://www.ici.org/policy/current_issues/10_mfim_conf_pss_spch)).

36. *Id.*

37. GARY GORTON & ANDREW METRICK, NAT’L BUREAU OF ECON. RESEARCH, *REGULATING THE SHADOW BANKING SYSTEM* 13 (2010), *available at* [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1676947](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1676947). It is estimated that, in December 2008, MMFs held \$552 billion of repo.

with a promise to resell those securities to the original seller at the end of the term of the agreement (usually overnight).<sup>38</sup> During the financial crisis when MMFs were facing mass redemptions, MMFs stopped purchasing these securities and thus funding for all of the aforementioned issuers and holders of securities dried up. The experience of 2008 shows how integral MMFs are to the flow of credit in the United States. Obviously, given that MMFs hold nearly \$3 trillion in assets under management, they are a sizable holder of funds. In light of these factors, this article takes the position that MMFs are just as “special” as commercial banks and thus warrant special regulatory attention.

#### D. The Reserve Primary Fund

Prior to September 2008, only one money market fund had ever broken the buck,<sup>39</sup> and MMFs were seen to be (and marketed as) a very safe and stable investment. Indeed, once the economy started to sour in the summer of 2007, there was an increased rate of investment in MMFs as they were seen to be one of the safest places for money. The Reserve Primary Fund was a large MMF that had approximately \$62.5 billion in assets under management in September 2008, of which \$785 million was invested in debt securities issued by Lehman Bros. Holdings, Inc., (“LBHI”). Following LBHI’s announcement on September 14, 2008, that it would file for bankruptcy the next day, there was a run on the Reserve Primary Fund with institutional investors redeeming approximately \$40 billion of shares in two days (many of these redemptions were in the nature of arbitrage because the shares, dependent as they were on the value of LBHI securities, were overvalued at \$1). On September 16, 2008, the board of the Reserve Primary Fund determined that its holdings of LBHI securities were essentially worthless (these made up a larger portion of the Reserve Primary Fund than they had two days earlier, because many of the Fund’s better assets had been sold to meet the redemption requests of the arbitrageurs) and the NAV of shares in the Reserve Primary Fund fell to 97 cents, breaking the buck. The board of the fund suspended redemptions for one week to limit the run on the fund’s assets and voted on September 29, 2008 to liquidate the fund.<sup>40</sup>

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38. FED. RESERVE BANK OF N.Y., TRI-PARTY REPO INFRASTRUCTURE REFORM 6 (2010). The Federal Reserve Bank of New York has estimated that during the first quarter of 2010, “the value of securities financed by tri-party repos averaged 1.7 trillion.” While that number is huge and shows the systemic importance of tri-party repos, it is a significant drop from the estimated average of \$2.8 trillion in early 2008.

39. See FINK, *supra* note 20, at 179. This was in 1994, when Community Bankers U.S. Government Money Market Fund, a small money market fund with only institutional investors, had its NAV fall to 96 cents.

40. SEC v. Reserve Mgmt. Co. (In re the Reserve Fund Sec. & Derivative Litig.), 2010 WL 685013 (S.D.N.Y. Feb. 24, 2010).

When the Reserve Primary Fund broke the buck on September 16, 2008, it was a signal to the world that MMFs were not as stable an investment choice as everyone had previously thought. This caused panic in the financial markets. There was a fear that MMFs generally would not be able to pay all redemptions at \$1 per share. Thus, MMFs generally faced an increased level of redemptions from institutional investors – 14% of the assets held by taxable prime MMFs were withdrawn during the week of September 15, 2008.<sup>41</sup> Notwithstanding this, the funds were able to honor redemptions and the anticipated collapses of the funds did not materialize; however, it is not clear to what extent this was because fund advisers, or related companies, provided capital support to the MMFs to ensure that they did not break the buck<sup>42</sup> and to what extent redemption requests were curtailed by an increase in investor confidence resulting from the government intervention discussed below. In any event, MMFs did have to start liquidating some of their assets in order to satisfy increased redemption requests.

Selling was difficult because the liquidity of the assets held by MMFs had been compromised by the general market failure, and the volume in which securities were being sold drove down the price of those assets generally, affecting the financial system as a whole. Federal Reserve Chairman Bernanke explained the ripple effects of the Reserve Primary Fund breaking the buck as follows:

[It] triggered extensive withdrawals from a number of money market funds. Those funds responded to the surge in redemptions by attempting to reduce their holdings of commercial paper and large certificates of deposit issued by banks. Some firms that could not roll over maturing commercial paper drew on back-up lines of credit with banks just as the banks were finding it even more difficult to raise cash in the money markets.<sup>43</sup>

When MMFs reduced their holdings of commercial paper and limited their involvement in the tri-party repurchase market, that caused those markets to dry up and institutions that relied on commercial paper and repurchase agreements for short-term funding needs were left without a way of raising funds. Thus, the failure of LBHI precipitated several separate but interconnected runs: the first was the run on the Reserve Primary Fund by

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41. INV. CO. INST., REPORT OF THE MONEY MARKET WORKING GROUP 62 (2009), available at [http://www.ici.org/pdf/ppr\\_09\\_mmwg.pdf](http://www.ici.org/pdf/ppr_09_mmwg.pdf).

42. See Investment Company Act of 1940, ch. 686, § 17a-9, 54 Stat. 789. Interestingly, in the absence of exemptive relief (which was readily granted by the SEC in 2008), the provision of support by a fund adviser or related company to a MMF would have been an affiliate transaction prohibited by Section 17(a) of the Investment Company Act of 1940. The SEC has addressed this going forward by relaxing Rule 17a-9 under the Investment Company Act of 1940 to allow for the provision of such support.

43. Ben Bernanke, Chairman, Bd. of Governors of Fed. Reserve Sys., Current Economic and Financial Conditions (Oct. 7, 2008) (transcript available at <http://www.federalreserve.gov/newsevents/speech/bernanke20081007a.htm>).

investors in that fund because of its exposure to LBHI (this article shall refer to this type of run as a “single-fund run”). This run led to the Reserve Primary Fund breaking the buck, which caused a panic that led to a run on MMFs generally (this article shall refer to this type of run as an “industry-wide run”). The run on MMFs caused MMFs to reduce their holdings of commercial paper and participation in the tri-party repurchase market, effectively causing a run on those markets (this article shall refer to this type of run as a “systemic run”).

### 1. *Regulatory Reform of Money Market Funds*

#### a. Rule 2a-7

In response to the 2008 financial crisis and the Reserve Primary Fund breaking the buck, the SEC recently revised Rule 2a-7. The key changes, which became effective in May 2010, include the imposition of new liquidity requirements under Rule 2a-7(c)(5), which will require that 10% of the MMF’s assets mature on any given day and 30% of the MMF’s assets mature within a week.<sup>44</sup> Funds also must adopt “know your investor” procedures to help them anticipate the potential for heavy redemptions and adjust their liquidity accordingly. In addition, the limit on the dollar-weighted average maturity of the portfolio will be reduced from 90 to 60 days.<sup>45</sup> There are more stringent requirements with regard to second tier securities, in that Rule 2a-7(c)(3) was tightened so that no more than 3% of a MMF’s investments can be in second tier securities<sup>46</sup> and a MMF cannot hold second tier securities with a maturity of greater than 45 days. Rule 2a-7(d)(i)(C) was tightened so that second tier securities from a single issuer cannot comprise more than 0.5% of a MMF’s portfolio. New stress testing, reporting and disclosure obligations have also been included in Rule 2a-7. In addition to the revisions to Rule 2a-7, the SEC has also revised Rule 22e-3 to permit a MMF that has broken the buck to suspend redemptions, so that

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44. 17 C.F.R. § 270.2a-7 (2010).

45. *Id.*

46. *Id.* The SEC has tried to avoid undue reliance on the credit rating agencies in their amendments to Rule 2a-7 by requiring MMF boards to designate four rating agencies that will be used in determining the eligibility of an investment by the MMF, and by requiring the boards to review the use of the selected rating agencies on an annual basis. By making such changes, the SEC is trying to make it clear that the credit rating agencies do not have the SEC’s imprimatur, but realistically the change does little to reduce reliance on the rating agencies as a method of evaluating investments. The recent financial crisis has to some extent discredited ratings from Standard & Poors, Moody’s, and Fitch, but there is no substitute available for these ratings. The question of what to substitute for these ratings and how to reduce reliance on the credit rating agencies is a difficult issue that is beyond the scope of this article.

the MMF can be liquidated in an orderly fashion and the type of arbitrage that occurred in the case of the Reserve Primary Fund can be minimized.

The revisions to 2a-7 aim to reduce a MMF's credit and interest rate risk by improving the quality, liquidity, and diversification of assets held by MMFs. These changes make it less likely that a MMF's actual NAV will fall below its \$1 amortized cost value.<sup>47</sup> Better assets are indeed likely to reduce the volatility of MMF NAVs, but it should be noted that the volatility cannot be reduced entirely: there is always the possibility that a seemingly-quality issuer of securities may turn bad very quickly (as LBHI did) – even with concentration limits, a group of similarly positioned issuers could all suffer the same fate very quickly, affecting a MMF's NAV. This is not a reason to tighten the standards of 2a-7 any further – increased restrictions on asset quality may further restrict the markets for commercial paper and municipal bonds, and further depress yields, which are already very low,<sup>48</sup> thus driving funds out of the market. It is, however, a reason to be mindful that, notwithstanding the changes to 2a-7, a MMF could still break the buck, and the potential consequences of such an eventuality (such as industry-wide and systemic runs) should be considered.

The changes to Rule 2a-7 also do not address this possibility of system-wide failure. As the financial crisis of 2008 has shown, when all players in a market are forced to sell their assets at the same time, the price of those assets is driven down even if those assets are of high quality and highly liquid.<sup>49</sup> This could occur, for example, if MMFs across the industry were facing increased redemptions and thus forced to sell fund assets at fire-sale prices: this would increase the volatility of the NAVs of shares in MMFs. If a market contraction were severe enough, there might not be any buyers at all, rendering the assets illiquid. A fear of exactly this type of system-wide failure was the impetus for intervention by the Federal Reserve and the Treasury Department in 2008-2009.

#### b. Temporary Regulatory Responses During the Financial Crisis

After the Reserve Primary Fund broke the buck and following the ensuing general run on MMFs in September 2008, the Federal Reserve and the Treasury Department took some extraordinary steps. The Federal

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47. MONEY MARKET FUND REFORM, INVESTMENT COMPANY ACT RELEASE NO. 29132 (Feb. 23, 2010). It is worth noting that the reduction in the amount of second tier securities in which a MMF can invest has significantly reduced the market for lower-rated, longer-term commercial paper, and thus reduced funding options for the issuers of that paper.

48. *MMFs Likely to Hold Elevated Level of Importance Says Moody's Report*, CRANE DATA, Mar. 26, 2010, <http://www.cranedata.com/archives/all-articles/2781/> (stating, with respect to the changes to Rule 2a-7, “[w]e believe that the rules are manageable, but incrementally, there will be higher costs to managing MMFs and yields will be constrained by the risk and liquidity limits”).

49. GORTON, *supra* note 6.

Reserve, acting under its emergency power in Section 13(3) of the Federal Reserve Act to make loans in “unusual and exigent circumstances,” put in place several programs intended to restore confidence in the MMF industry. A week after the Reserve Primary Fund broke the buck, the Federal Reserve created the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility,<sup>50</sup> under which the Federal Reserve made loans to banks to be used for purchasing high quality commercial paper from MMFs. A month later, in October 2008, the Federal Reserve created the Money Market Investor Funding Facility,<sup>51</sup> under which the Federal Reserve made loans to special purpose vehicles to facilitate the purchase of treasuries and highly rated commercial paper from MMFs. The intention of both of these programs was to create markets for securities held by MMFs, thus improving liquidity for MMFs and assisting them in meeting redemption requests. Indirectly, these programs were intended to improve conditions in the short term credit markets in which MMFs play a key role.<sup>52</sup> That the Federal Reserve felt compelled to take such extraordinary steps to ensure that MMFs continued to function throughout the financial crisis is illustrative of their importance as a market for short-term credit.

The Treasury Department created a temporary guaranty program for MMFs, which covered all investments in MMFs made on or before September 19, 2008. There was no cap on the amount of shares that could be guaranteed, and most MMFs elected to participate in the program<sup>53</sup> so as to be able to market themselves as “safe.” Funding for the guaranty program came from a participation fee of 1-1.5 basis points per share, paid by participants in the program, and the Exchange Stabilization Fund was available in the event a MMF was liquidated and Treasury needed to pay out.<sup>54</sup> The program expired in September, 2009, without Treasury having to

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50. Press Release, Bd. of Governors of the Fed. Reserve Sys., Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (Feb. 5, 2010) (on file with author), available at <http://www.federalreserve.gov/monetarypolicy/abcpmmmf.htm>. This program expired on Feb. 1, 2010.

51. Press Release, Bd. of Governors of the Fed. Reserve Sys., Money Market Investor Funding Facility (Feb. 5, 2010) (on file with author), available at <http://www.federalreserve.gov/monetarypolicy/mmiff.htm>. This program expired on Oct. 30, 2009. *Id.*

52. *Id.*; see also Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 21, 2008) (on file with author), available at <http://www.federalreserve.gov/newsevents/press/monetary/20081021a.htm>.

53. Jack Murphy et al., *Recent Developments Affecting Money Market Funds*, 126 BANKING L.J. 394, 395 (2009).

54. Press Release, U.S. Dept. of Treasury, Treasury Announces Guarantee Program for Money Market Funds (Sept. 29, 2008) (on file with author), available at <http://www.ustreas.gov/press/releases/hp1161.htm>.

make any payments.<sup>55</sup> This last program can be seen as a test case for a more permanent insurance facility for the MMF industry, which will be considered in more detail later in this article.

## 2. Potential Further Reforms

The threshold question with regard to potential further reforms for MMFs is whether any are necessary at all. The recent changes to Rule 2a-7 are intended to reduce the riskiness and volatility of MMF asset holdings, and thus, the chances that a MMF will break the buck. By strengthening individual MMFs, these changes go towards mitigating systemic risk issues; however, as discussed above, there is still potential for a MMF to break the buck, or for a system-wide liquidity crunch to prevent a MMF from honoring all redemption requests. To the extent that a MMF breaks the buck or is unable to satisfy redemption requests and there is ensuing panic that causes an industry-wide run on MMFs, this may cause an unloading of collateral which will be deleterious of the value of that collateral, affecting the market as a whole.<sup>56</sup> An industry-wide run on MMFs may also precipitate a systemic run because MMFs are a primary funding source for issuers of highly-rated municipal bonds and commercial paper, as well as for the counterparties that rely on repurchase agreements for short-term funding. The thesis of this article is that because experience has shown that a panic regarding a single MMF can spark industry-wide and systemic runs, a precautionary regulatory approach is appropriate,<sup>57</sup> and further reform addressing these eventualities should be considered.

The remainder of this article therefore discusses potential further reforms, remaining mindful, however, of the fact that regulatory reform of MMFs that is too costly or stringent might cause fund families to cease offering these products. Already, the changes to Rule 2a-7 have increased the regulatory burden on operators of MMFs, and the yield on Treasuries is almost zero at present. As SEC Commissioner Aguilar noted in a recent speech, “Persistent low yields and the out-flows of assets has resulted in various managers either quitting the business, or reducing the number of money market funds through mergers, liquidations or sales.”<sup>58</sup> The trend seems to be for the industry to consolidate, but the Moody’s Industry

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55. Press Release, U.S. Dept. of Treasury, Treasury Announces Expiration of Guarantee Program for Money Market Funds (Sept. 18, 2009) (on file with author), *available at* <http://www.ustreas.gov/press/releases/tg293.htm>.

56. BRUNNERMEIER, *supra* note 31.

57. Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 235 (2008). The author makes some interesting comparisons between cost/benefit analyses associated with financial regulation and cost/benefit analyses associated with other types of regulation, such as environmental and health regulation, where the regulator does not have decisive evidence of the regulated activity’s harm.

58. Aguilar, *supra* note 28.

Outlook report for the Asset Management Industry<sup>59</sup> notes that “the costs of managing these funds will continue to be challenging, even for scale players.” As discussed above, MMFs play an important role in the financial system, so the costs of any economic reform should not be such as to drive them completely out of the market: their absence from the market is likely to result in investors moving their investments to riskier, less regulated investment vehicles.<sup>60</sup>

a. Floating the Net Asset Value

There has been a concern that the stable \$1 NAV offered by MMFs creates a misleading impression that investments in MMFs are as stable as putting money in a guaranteed deposit account (i.e. if you put a dollar in, it is guaranteed that you can take a dollar out). To avoid this perception, the SEC, and others, are considering requiring that MMFs stop using the amortized cost method of valuation and move to a floating rate, marked-to-market NAV.<sup>61</sup> The theory behind this argument is that if the NAV floats it will be clear that an investment in a MMF is a fluctuating investment, and a change in the market NAV of a share in a MMF will not provide arbitrage opportunities or precipitate a fund-specific run. Also, breaking the buck will not have the stigma necessary to cause a panic sufficient to provoke an industry-wide run. Not everyone is convinced by this logic: the Investment Company Institute argues that floating the NAV will not reduce panic sufficient to stop industry-wide runs on MMFs. It uses as an example the floating rate ultra-short bond mutual fund market, which was damaged (losing half of its assets in the course of 2008) notwithstanding that the bonds were floating rate. The ICI also cites French floating-value MMFs, which lost about 40 percent of their assets in a three-month time span from July 2007 to September 2007.<sup>62</sup>

The ICI’s argument, however, does not address the arbitrage opportunities offered by a fixed NAV and how investors availing themselves of these opportunities could precipitate a fund-specific run (which could cause sufficient panic to contagion an industry-wide run). The argument also neglects the fact that, while a MMF fund breaking the buck is not the *only* trigger that could cause a run on MMFs, the panic after the Reserve Primary Fund broke the buck did indeed precipitate an industry-wide run on MMFs. The question becomes, then, whether having MMFs

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59. *MMFs Likely to Hold Elevated Level of Importance Says Moody’s Report*, *supra* note 48.

60. JAMES HAMILTON, CCH, THE OBAMA ADMINISTRATION’S PROPOSAL TO REFORM THE U.S. FINANCIAL REGULATORY SYSTEM 24 (2009), *available at* <http://business.cch.com/securitiesLaw/news/06-18-09a.pdf>; GORTON & METRICK, *supra* note 37, at 13.

61. Aguilar, *supra* note 28.

62. Stevens, *supra* note 35.

with a stable \$1 NAV is of such utility to the economy that the use of the amortized cost method of valuation should continue to be permitted, notwithstanding that this type of valuation is subject to abuse by sophisticated investors through arbitrage, and could give an impression of stability that is unwarranted.

Some of the benefits and costs of moving to a floating rate NAV were pithily summarized in the New York Times as follows:

[A] floating net asset value would underscore the prospect of losses, highlight fluctuations in value and provide more transparency. A floating value would also have tax implications and create more paperwork for investors who would have gains or losses that do not occur with a stable net asset value of \$1.<sup>63</sup>

The adverse effects of floating the NAV go beyond this, however: it is widely acknowledged that the ability to put a dollar into a money market fund and get a dollar out is one of the most important attractions to investors.<sup>64</sup> Lyon has argued that, notwithstanding the arbitrage opportunities associated with floating the NAV, “[i]t may still be rational for some investors to accept minimal dilution in return for possible accounting cost savings and the short-term stability amortized cost offers.”<sup>65</sup>

There is a real need in our financial system for a cash management product that offers a stable value investment in low-risk securities, which can be withdrawn at short notice to accommodate funding needs as they arise.<sup>66</sup> If MMFs do not have a stable NAV, investors are likely to move their funds to different products: to quote one institutional investor, “[i]f a money market fund is not dollar-in, dollar-out, you won’t have my dollar.”<sup>67</sup> Because of the important role MMFs play in the economy, proposals to float the NAV, which have the potential to kill the industry, should not be pursued.

#### b. An Insurance Scheme for Money Market Funds

One of the proposals under consideration is an insurance scheme for MMFs, intended to stop or at least mitigate single-fund runs on MMFs. Runs are understood to be caused by investors making “prisoner’s dilemma”-type calculations:<sup>68</sup> in a time of market crisis, the value of an investment in a MMF will be best protected if all the investors in that MMF

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63. Tara Siegel Bernard, *Rewriting Rules to Protect Money Funds*, N.Y. TIMES, June 24, 2009, at B1, available at <http://www.nytimes.com/2009/06/25/your-money/mutual-funds-and-etfs/25fund.html>.

64. Aguilar, *supra* note 28.

65. See Lyon, *supra* note 17, at 1020.

66. BRUNNERMEIER, *supra* note 31.

67. Stevens, *supra* note 35.

68. Patricia A. McCoy, *The Moral Hazard Implications of Deposit Insurance: Theory and Evidence*, CURRENT DEVELOPMENTS IN FINANCIAL AND MONETARY LAW 417, 421 (2008), available at

refrain from redeeming their investments (this prevents an MMF from having to liquidate its holdings and sell its assets into a distressed market in order to satisfy an increased volume of redemption requests). However, an investor cannot rely on other investors in the MMF not to redeem in the event of a panic, and if other investors redeem, the first investor will be in a worse position because the MMF will satisfy the early redemptions at \$1 per share and potentially use up its best and most liquid collateral in doing so. Thus, the first investor is incentivized to redeem his or her investment as early as possible because there may be insufficient liquid assets remaining in a MMF (or the value of a MMF's assets may have fallen because of system-wide fire sales of collateral) to satisfy later redemptions for \$1 per share. While the changes to Rule 22e-3 do go toward reassuring investors that they will all be treated equally in the event of a fund liquidation, an investor may still benefit from a discrepancy between the market price of a share and its \$1 NAV by redeeming before the board suspends redemptions (there will indeed be a perverse incentive to try to withdraw before the board makes such a determination, given that the share price after the fund is liquidated is likely to be less than \$1). Only an insurance scheme can provide an investor with comfort that he or she will receive \$1 per share, no matter when that investor seeks to redeem.

The obvious precedent for an insurance scheme for MMFs is the FDIC protection currently provided to holders of bank deposit accounts. There have been no systemic bank runs in the United States since federal deposit insurance was instituted in 1933 (and runs were endemic before such time),<sup>69</sup> and this suggests that the existence of the insurance scheme has been successful in stopping runs on banks (although this cannot be proven empirically, the circumstantial evidence is convincing). It cannot be stated with certainty that an insurance scheme for MMFs will be similarly successful in preventing runs on MMFs, but as both deposit accounts and MMFs are withdrawal-at-will products that are susceptible to runs occasioned by loss of confidence and “prisoner’s dilemma”-type calculations by investors, it is likely that a comparable insurance scheme will also limit runs on MMFs. As discussed above, many economists were resistant to implementing the FDIC deposit insurance scheme in the 1930s because of the moral hazard it created.<sup>70</sup> Similar moral hazard arguments can be made against an insurance scheme for MMFs, but the creation of a manageable level of moral hazard should not be used as a justification to veto an insurance scheme that is likely to be effective in maintaining investor confidence and promoting systemic stability. In any event, there is already a degree of moral hazard that applies to the MMF industry – by instituting its temporary guaranty in 2008, the U.S. Government has already

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69. GORTON, *supra* note 6.

70. GORTON & METRICK, *supra* note 37, at 13.

indicated its view that the industry is too important to fail,<sup>71</sup> which to some degree disincentivizes regulatory and investor supervision.<sup>72</sup> There is currently uncertainty as to whether and how the U.S. Government will act to protect MMFs in the future<sup>73</sup> and that uncertainty comes at a cost to systemic stability. Reacting to a crisis in market confidence after a panic has started may not be enough: “Ad hoc approaches do not always work. Sometimes they may be too late and the harm has been done or no longer can be prevented.”<sup>74</sup> The ideal would be to put in place an insurance scheme for MMFs that provides certainty in times of panic but is structured in such a way as to mitigate the moral hazard created by that certainty.

In the context of deposit insurance schemes, reference is usually made to two types of moral hazard: firstly, that (absent structural constraint) banks are encouraged by the presence of an insurance/guaranty scheme to take bigger risks, knowing that they will reap the profits of riskier investments but not be required to internalize the consequences of any drastic failures, which instead will be borne by the deposit insurance scheme. It is more difficult to make this moral hazard argument in the context of an insurance fund for MMFs, given that Rule 2a-7 already significantly curtails the risks fund managers can take with MMF investments.<sup>75</sup> The requirements for prudent investing set forth in Rule 2a-7 mute many of the moral hazard arguments against instituting an insurance scheme for MMFs, but notwithstanding the stringency of Rule 2a-7, there is always the risk that the existence of an insurance scheme might lead the SEC to become lax in supervising compliance with Rule 2a-7 standards, or even relax Rule 2a-7 itself, given that the consequences of MMF failure are less severe in the face of an insurance scheme.<sup>76</sup> For these reasons, it would

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71. GORTON & METRICK, *supra* note 37, at 7. The authors note that after implementing the temporary guaranty of MMFs in 2008, “it may not be credible for the government to commit to any other strategy in the future.” They also note that this implicit guaranty gives MMFs for free the type of government backing which insured deposit-taking institutions have to pay for.

72. See McCoy, *supra* note 68.

73. See generally Schwarcz, *supra* note 57 (“Uncertainty about government responses does have a benefit in that it goes some way towards mitigating the moral hazard created by the implicit government guaranty of MMFs: the more certain a bailout, the more reliance on that bailout is incentivized.”).

74. *Id.* at 231.

75. 12 U.S.C. § 84 (2010). While there are concentration limits that apply to loans by commercial banks, these are nowhere near as restrictive as the restrictions on investments set forth in Rule 2a-7. See *supra* pp. 4, 8-9 (explaining that banking regulators monitor the safety and soundness of the bank as a whole, rather than setting out strict limitations on the types of loans that banks can make).

76. See generally Gillian G. H. Garcia, *Deposit Insurance: A Survey of Actual & Best Practices 7* (Int’l Monetary Fund, Working Paper No. 99/54, 1999), available at <http://www.imf.org/external/pubs/ft/wp/1999/wp9954.pdf> (discussing the effect of moral hazard on regulatory supervisors).

make sense to require the SEC to consider the systemic risks posed by MMF failure before relaxing any rule-making regarding MMF investments.

The second type of moral hazard issue that is usually considered with respect to deposit insurance schemes is the concern that depositors will rely on such insurance schemes instead of proactively monitoring the prudence of their bank's activities (and thus will not exert market pressure on the bank to manage investment risks appropriately).<sup>77</sup> This concern also plays out a little differently in the context of MMFs. Because the investment criteria set forth in Rule 2a-7 are so strict, there is actually very little risk that a MMF will fail except during a severe market disruption that adversely affects a substantial amount of high quality investments. Investor supervision of MMFs would therefore only be helpful if investors could accurately assess the risk to MMF investments in such circumstances. However, investors tend to find it difficult to estimate the risk associated with such rare and unpredictable tail events<sup>78</sup> and therefore may not be able to accurately monitor a MMF for such risk. Additionally, larger investors have little incentive to act to preserve the interests of other investors or the stability of the system,<sup>79</sup> unless their interests are perfectly aligned with those other investors and systemic stability.<sup>80</sup> In the context of MMFs, the interests of sophisticated, information-rich investors are often best served by exploiting the arbitrage opportunities inherent in the fixed \$1 NAV, often to the detriment of smaller investors and systemic stability. Increased oversight by large investors may thus be worse for systemic stability, whereas incentives to arbitrage are reduced by the presence of an insurance scheme for MMFs: even if a share in a MMF is overvalued at \$1 in terms of the assets backing that share, it will not be overvalued in terms of worth to the investor because there is a government guaranty in place that any investor redeeming a share in a MMF will get \$1 for such share.

When considering the moral hazards created by an MMF insurance scheme, it is also worth considering whether the creation of a government-backed insurance scheme provides an implicit government endorsement of reliance on MMFs to satisfy short-term funding needs.<sup>81</sup> Over-reliance on

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77. McCoy, *supra* note 68, at 422.

78. Schwarcz, *supra* note 57, at 233.

79. *Id.* at 248 (“[L]ike a tragedy of the commons, market participants have insufficient incentives, absent regulation, to limit risk-taking in order to reduce the systemic danger to others.”).

80. See McCoy, *supra* note 68. In the context of bank deposits, it is generally accepted that the interests of large and small depositors are aligned, and that the benefits of increased supervision and market pressure from large depositors accrue to the smaller depositors (who, because of collective action problems, cannot themselves exert the requisite market pressure on banks).

81. This issue here is whether investors will fail, because of the existence of a MMF insurance scheme, to adequately consider the risks associated with using MMFs in general (to be distinguished from the concern that investors will not adequately consider the risks

short-term funding can be problematic: in a recently released White Paper, the Federal Reserve Bank of New York considered the reliance the market places on the tri-party repurchase market (in which, as discussed above, MMFs are a major purchaser of securities and thus a provider of short-term funding)<sup>82</sup>. In the White Paper, the New York Fed noted that the reliance by the market generally, and by broker-dealers in particular, on intraday credit is a significant concern and has “left the market vulnerable to severe disruption.”<sup>83</sup> The problems with market reliance on short-term funding go far beyond broker/dealer reliance on MMFs as a funding source, however, and there is a much broader debate afoot about how market participants should structure their funding sources so as to minimize their vulnerability to exogenous shocks. It is the author’s view that any moral hazard caused by an implicit government endorsement of the short-term funding provided by MMFs is best addressed not by abandoning the concept of an insurance scheme for MMFs, as suppliers of short-term funding but as part of the larger debate about regulating broker-dealers and other market participants who are on the demand side of the funding equation.<sup>84</sup>

This analysis of moral hazard concerns suggests that they are not so overwhelming as to discourage the implementation of an insurance scheme for MMFs. The question then becomes, what form should such an insurance scheme take? The ICI is exploring setting up a private liquidity facility, which would be a bank created by the industry<sup>85</sup> to assist MMFs that are unable to liquidate their assets to meet redemptions. It will be interesting to see what proposal the ICI makes in this respect, but an industry-backed scheme, lacking the imprimatur of government regulation, may not give investors sufficient comfort to forgo redemptions in the event of a panic. Also, a liquidity facility is not the same as providing a direct guaranty to each investor that he or she will receive a dollar out for every dollar put in – the ICI’s proposed scheme would instead provide funding to a MMF that is having difficulty meeting redemption requests, to assist that MMF in fully satisfying those requests. The distinction between a liquidity facility and a guaranty is nuanced but one that is likely to be important to investors in the event of a financial panic.

This article thus advocates exploration of an insurance scheme that is backed by the government and regulated by a government agency, which would pay \$1 per share to each investor in a MMF in the event that such

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associated with, and thus not adequately monitor, a particular MMF). This issue is rarely discussed in the context of commercial banks, because governments want to encourage deposits with banks (rather than under mattresses) to ensure that money is used productively and can move around the system as a steady supply of credit.

82. FED. RESERVE BANK OF N.Y., *supra* note 38.

83. *Id.* at 6.

84. Questions about the appropriate form and content of such regulation raise interesting and complex issues that are beyond the scope of this article.

85. Stevens, *supra* note 35.

MMF became insolvent. Treasury's temporary guaranty of MMFs during the financial crisis of 2008 provides a partial template for such a program, but the scheme would need to be updated in several ways. Most obviously, the Treasury guaranty only applied to investments made before September 19, 2008, which would not be appropriate in an ongoing program. Also, the Treasury relied on the Exchange Stabilization Fund to backstop the guaranty, which is not feasible as a long-term measure.<sup>86</sup> The IMF's literature on deposit insurance schemes indicates that best practices for such schemes include de facto or de jure compulsory participation<sup>87</sup> and funding through payments of premia by industry participants.<sup>88</sup> In line with these best practices, MMFs should pay premia for the protection provided to their investors by the insurance scheme. What is open to more debate, however, is whether premia should be paid in advance or only after a crisis.<sup>89</sup> To some extent, an ex post funding mechanism alleviates moral hazard concerns because industry participants are not making investment decisions with the knowledge that there is a pot of money waiting to be spent in the event of a crisis (as is the case with ex ante funding schemes). For an ex post funding mechanism to work in the context of a MMF insurance scheme, however, there would need to be incentives for a MMF not to simply exit the market if and when payments become due: if an ex post funding mechanism were implemented, it would be worth exploring some form of licensing requirement for MMFs which would be forfeited if a MMF failed to pay insurance scheme premia that fell due after a crisis, which license would be considered to have an intrinsic value similar to that of a bank charter and thus not be something to abandon lightly.<sup>90</sup>

The alternative to an ex post funded scheme is an ex ante funding mechanism, which does pose some moral hazard issues but is nonetheless used by the bulk of countries with deposit insurance schemes.<sup>91</sup> The

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86. See DAVID WESSEL, IN FED WE TRUST: BEN BERNANKE'S WAR ON THE GREAT PANIC 2008-09 (2009). Congress has acted to forbid Treasury from using the Exchange Stabilization Fund in this way again. This Congressional act also might make it difficult for the existing implicit government guaranty of MMFs to be satisfied in the event of another financial crisis involving a run on MMFs.

87. Garcia, *supra* note 76, at 17. Participation does not necessarily need to be required by law – often market forces will compel broad participation in a voluntary insurance scheme, as occurred with the Treasury's temporary guaranty program in 2008. In the absence of organic broad participation, however, legislation requiring participation in the insurance scheme may be required.

88. *Id.* at 11. Industry funding reduces moral hazard (and is also more politically palatable than taxpayer funding). Nonetheless, the nature of a government guaranty means that, in the event that industry-funded premia cannot satisfy all guaranteed redemption requests, the government would have to provide back-up funding.

89. Garcia, *supra* note 76, at 19-20.

90. GORTON & METRICK, *supra* note 37, at 13.

91. Garcia, *supra* note 76, at 19. Ex ante funding is also more politically palatable as it reduces the risk that taxpayers will be called upon to pay for the guaranty.

Treasury guaranty program required, and the FDIC insurance scheme continues to require, the ex ante payment of participation fees.<sup>92</sup> However, the FDIC scheme does not provide a perfect model for participation fees for a MMF insurance facility, for the FDIC guaranty is capped (currently at \$250,000 per deposit account) and participation fees are calculated accordingly. As discussed above, the volumes that institutional investors have invested in MMFs are far in excess of \$250,000, and ideally (as with the Treasury guaranty) a MMF insurance scheme would cover an unlimited number of shares in a MMF.<sup>93</sup> To date, no economic analysis that I am aware of has been done on the levels of premia that would be necessary to provide such an unlimited guaranty or even a limited guaranty.<sup>94</sup> It may be that caps of some kind, and/or some form of additional government funding for the insurance scheme, are necessary to keep premia from making the operation of MMFs too costly, eliminating returns to investors as well as incentives for fund managers to operate MMFs. However, as long as MMFs are not driven out of the market, the increased cost of such premia is justified because of the potential systemic cost of fund-specific an industry-wide runs on MMFs.

To the extent the proposed insurance scheme does create new incentives for riskier behavior, a risk-based premium structure might be useful in mitigating such incentives. Studies by the IMF on deposit insurance schemes suggest that even a small risk adjustment of premia can encourage banks to take more appropriate risks.<sup>95</sup> While quantifying risk poses a big challenge for calculating risk-based premia for deposit insurance schemes,<sup>96</sup> the level of discrepancy between the actual value of a share in a MMF and its \$1 NAV is easy to determine and is a good indicator of the risk that a MMF will break the buck (thus incentivizing arbitrage and runs). We can look to the Treasury guaranty program discussed above as an example of how risk-based premia might be implemented for MMFs: under that program there were two tiers of fees.<sup>97</sup> MMFs with an actual NAV greater than or equal to \$0.9975 per share<sup>98</sup> had to pay an upfront fee of 1 basis point per share, and MMFs with a NAV greater than \$0.995 but less

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92. 12 U.S.C. § 1815(d) (2010).

93. *See supra* p. 18. As discussed above, unlike in the context of large bank depositors, there is little to be gained by capping coverage limits to encourage large investors to monitor MMF investments more closely.

94. When completed, the ICI's investigation into the feasibility of an industry-based liquidity backstop for MMFs may be illuminating on this point. The President's Working Group on Financial Markets is also due to deliver a report on MMFs, which may touch on this point.

95. McCoy, *supra* note 68, at 429.

96. *Id.* at 429.

97. *See supra* p. 11.

98. As of the close of business on September 19, 2008.

than \$0.9975 had to pay an upfront fee of 1.5 basis points per share.<sup>99</sup> A permanent tiered program like this (with the NAV measured at set intervals on an ongoing basis)<sup>100</sup> would create incentives for MMFs to monitor their investment profiles closely and keep their actual NAVs closer to \$1.

Finally, a regulator would need to be selected to administer any MMF insurance scheme. MMFs are currently regulated by the SEC, but the SEC has traditionally limited itself to a disclosure and investor protection mandate, and the prudential supervision which would be required to administer an ongoing insurance program has not been part of its purview.<sup>101</sup> Further, the SEC does not have expertise in managing systemic risk,<sup>102</sup> which responsibility has generally fallen to the Federal Reserve. The banking regulators are more experienced with administering deposit insurance programs, but they do not have the SEC's familiarity with the MMF industry and its valuation procedures. Whichever entity administers the scheme would need to have the power to carry out the orderly liquidation of MMFs that are unable to meet redemption requests, similar to the power conferred on the FDIC by 12 USC s1821(c).

### c. Other Proposed Long Term Reforms

There are many other proposals for MMF reform that are currently being debated. These include requiring that large redemption requests be satisfied with securities instead of cash; real-time disclosure of the shadow price of a share; posting of MMF holdings on websites; and a possible two-tiered system of MMFs, with only "safer" MMFs being able to use the amortized cost method to maintain a stable NAV.<sup>103</sup> On the latter proposal, the SEC has received many comments that such a structure would not be practicable: essentially, the complaints are that drawing a line differentiating tiers of MMFs would be very difficult and such a line would

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99. MMFs with an NAV less than \$0.995 on September 19, 2008 were excluded from the program.

100. This indicator is subject to some limitations, however. It provides a snapshot of risk at the time of reporting, and as such an MMF could manipulate its risk rating by improving portfolio quality immediately prior to reporting dates, and reducing it immediately afterwards.

101. See generally H. DAVID KOTZ, OFFICE OF INSPECTOR GEN., U.S. SEC. AND EXCH. COMM'N, SEC'S OVERSIGHT OF BEAR STEARNS AND RELATED ENTITIES: THE CONSOLIDATED SUPERVISED ENTITY PROGRAM: REPORT NO. 446-A (2008), available at <http://www.sec.gov/about/oig/audit/2008/446-a.pdf>. The SEC's limited experience as a prudential regulator for Lehman Brothers, Bear Stearns, Morgan Stanley, Merrill Lynch and Goldman Sachs under the Consolidated Supervised Entity program (in place from 2004-2008) has been harshly criticized.

102. Troy A. Paredes, *On the Decision to Regulate Hedge Funds: The SEC's Regulatory Philosophy, Style, and Mission*, 2006 U. ILL. L. REV. 975 (2006).

103. Aguilar, *supra* note 28.

be ripe for abuse.<sup>104</sup> In any event, such a proposal would only reduce the likelihood of, but not prevent, a top-tier MMF breaking the buck and the potential for an ensuing industry-wide run. The bottom-tier MMFs that were dubbed “less safe” and required to float their NAVs would likely go out of business. Similarly, the proposal for mandatory redemptions-in-kind<sup>105</sup> would also deviate from the appeal of MMFs as a “dollar in, dollar out” investment and cause investors to remove their funds from the MMF industry to a different product. Finally, the proposals requiring increased disclosure regarding shadow prices and MMF portfolio holdings, while intended to increase transparency for investors, have the potential to increase arbitrage activity: sophisticated institutional investors will be better able than retail investors to utilize this data to determine when the \$1 NAV is more or less than the market value of the share. With the exception of the proposal for mandatory redemptions in kind (which would fundamentally alter the structure of MMFs such that they would lose their appeal to investors), none of these proposals address the potential for an industry-wide run on MMFs, with the attendant dumping of collateral into the market and the potential for systemic runs on the commercial paper and repo markets.

### III. CONCLUSION

MMFs play a key role in the financial system: they serve as both an important and convenient cash management tool for retail and institutional investors and as a primary market for issuers of commercial paper and municipal bonds and sellers in the tri-party repo market. Without a stable \$1 NAV, the investment has little appeal to retail and institutional investors, and any proposal to float the NAV should not be pursued because it would likely kill the market for this important product, with the result that the funds currently invested in MMFs will flow to other (potentially unregulated) products. However, further reform of the MMF industry is warranted, given that the experience with the Reserve Primary Fund has shown that one MMF breaking the buck can lead to industry-wide runs, which can precipitate runs in other areas of the financial system, as well as large-scale dumping of collateral that drives down asset prices throughout

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104. See MONEY MARKET FUND REFORM, INVESTMENT COMPANY ACT RELEASE NO. 29132 (Feb. 23, 2010). These issues were all raised by commentators on the proposed changes to Rule 2a-7.

105. This proposal is intended to address situations of market-wide illiquidity, allowing MMFs that cannot liquidate their portfolios to meet redemption requests to satisfy those redemption requests with securities. By extension, this proposal would also reduce the amount of securities MMFs sell into the markets, which sales have the potential to drive down asset prices system-wide when the MMF industry as a whole is facing increased redemption requests.

the financial system. To this end, there should be exploration of the feasibility of an insurance scheme for holders of shares in MMFs.