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# Money Market Mutual Funds: Policy Concerns and Reform Options

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SUMMARY

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# Money Market Mutual Funds: Policy Concerns and Reform Options

A money market mutual fund (MMF) is a mutual fund that, under Securities and Exchange Commission (SEC) Rule 2a-7, can invest only in high-quality short-term securities. MMFs are considered safe investment options and common alternatives to bank deposits, although they are not federally insured like bank deposits. But this perceived-to-be-safe financial instrument triggered market disruptions in 2008 that accelerated the 2007-2009 financial crisis. At the time, the Treasury Department and the Federal Reserve developed multiple intervention tools to provide a backstop for the industry. Following the 2007-2009 crisis, the MMF industry underwent major regulatory reforms. During the 2020 coronavirus-induced market distress, however, some of the same MMF-related financial stability concerns recurred. The federal government once again took action to mitigate the related risks. These conditions have led to discussions about the effectiveness of previous MMF reforms and how policymakers could proceed with potential future reforms.

The MMF industry's assets increased while the number of funds declined in recent years. Government, prime (or corporate), and tax-exempt (or municipal) are the three main types of MMFs. These funds have different asset compositions and regulations. The MMF industry's net assets stood at $5.1 trillion as of July 2022. The industry's net assets increased, especially after the COVID-19 pandemic, led by increases in government MMFs and partially offset by decreases in prime and tax-exempt MMFs. Government MMFs held the most net assets ($4.1 trillion or 80% of the overall MMF industry assets), substantially more than prime MMFs ($917 billion or 18%) and tax-exempt MMFs ($104 billion or 2%). Over the past decade, the number of MMFs decreased by nearly half from 600 in October 2012 to 306 in July 2022. Multiple reasons, including reduced fee income and increased operating costs, might have contributed to the decline in the number of MMFs.

MMFs provide sources of financing for federal and local governments and private corporations, including financial intermediaries that facilitate funding for households. They also serve as investment and cash management tools for retail and institutional investors. The MMF industry offers short-term funding for businesses and government entities to help them pay for things such as operational expenses, schools, bridges, and other financial obligations. MMFs are significant holders of U.S. government securities, commercial paper (a type of short-term corporate debt), municipal debt, and certificates of deposits. For example, MMFs are especially important for the commercial paper market, an integral part of the short-term funding markets that facilitate financing for businesses and households. MMFs held around 20% of all U.S. commercial paper outstanding as of April 2022. Because of the strong connection between MMFs and the short-term funding markets, the health of MMF operations could affect related businesses, government entities, households, and investors through the costs and availability of funds.

At the center of the MMF-related financial stability concern is the instrument's susceptibility to run-like behavior. Run risk refers to the scenario where many investors withdraw their investments nearly simultaneously, triggering negative feedback loops and contagion effects for the broader financial system. MMFs are susceptible to runs because their shareholders have an incentive to redeem their shares before others do when there is a perception that the fund might experience a loss (i.e., the first-mover advantage). The SEC published an MMF reform proposed rule in December 2021 that includes multiple options. Other financial authorities have also come up with additional proposals that are not part of the SEC's proposed amendments to MMF regulation. These proposals include

- Rolling back some earlier reform provisions regarding *liquidity fees and redemption gates*.
- Addressing the first-mover advantages through *swing pricing* and *minimum balance at risk*.
- Increasing transparency through *additional disclosure requirements* and *floating NAV*.
- Addressing MMF liquidity needs through *increased liquidity requirements*.
- Reducing MMF portfolio risks through *sponsor support*, *capital buffers*, and *limits on eligible assets*.

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# Introduction

A money market mutual fund (MMF) is a mutual fund that, under Securities and Exchange Commission (SEC) Rule 2a-7,[1] can invest only in high-quality short-term investments (called money market instruments). MMFs are often treated as cash-equivalent or money-like, and they are commonly considered alternatives to bank deposits.

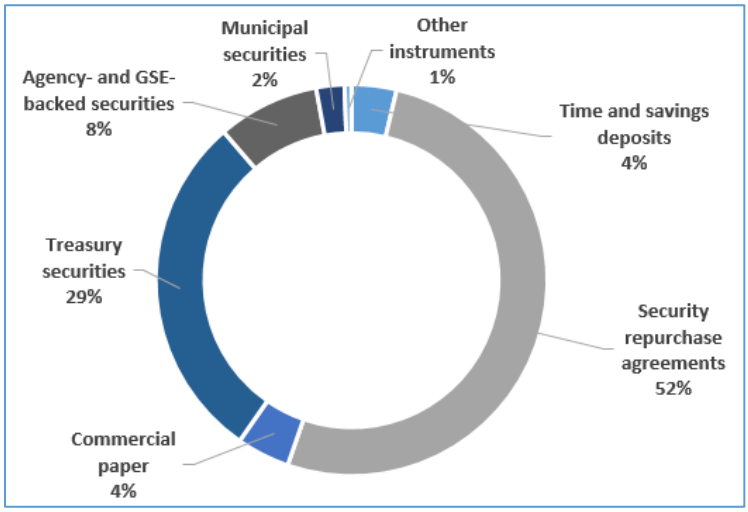
MMFs first appeared in the 1970s when inflation was at a historical high, and some money market instruments were paying higher rates of return than bank deposits, which were capped by regulatory restrictions.[2] The first MMF, called the Reserve Fund, started accepting investments in 1971.[3] The fund invested in money market instruments—such as U.S. Treasuries and commercial paper—with a relatively high degree of safety and paid investors market-based rates of return at levels generally above the interest payments from bank deposits.

The invention of MMFs addressed unmet investor needs with respect to bank deposits, and the industry has come a long way since its inception. At around $5 trillion in size (**Figure 3**), the MMF industry plays a significant role in the short-term funding markets and now has also repeatedly drawn financial stability concerns in recent years. This report provides background about MMFs and discusses their regulatory frameworks, policy concerns, and reform options.

## MMFs' Role in Financial Markets and the Economy

MMFs facilitate financing for federal and local governments as well as private corporations and households. They also serve as investment and cash management tools for retail and institutional investors.

**Figure 1. MMF Holdings Composition (As of Second Quarter 2022)**




**Source:** CRS using data from Federal Reserve Z.1 Financial Accounts of the United States.

[1] 17 C.F.R. §270.2a-7.

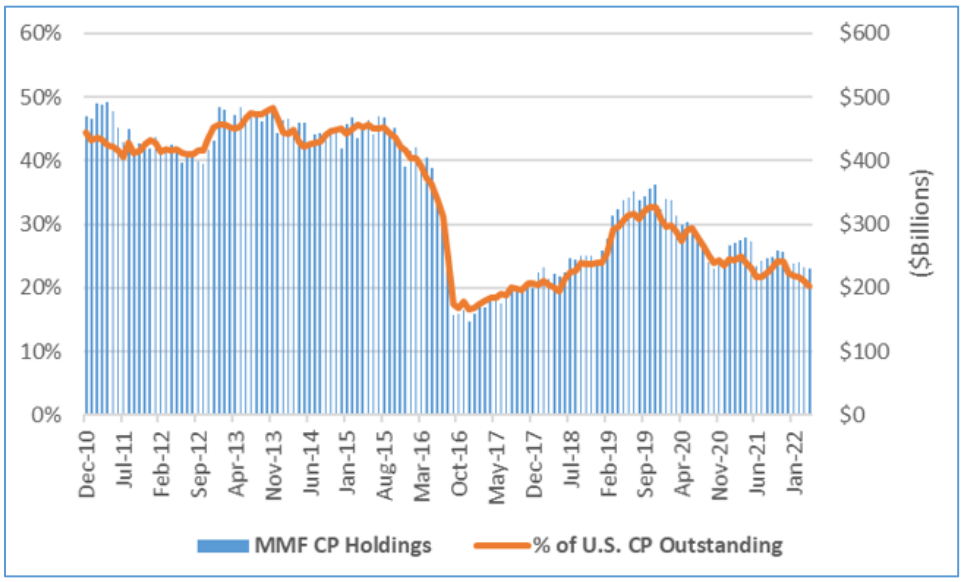
[2] The earlier versions of the Federal Reserve's Regulation Q in effect at the time restricted interest payments on deposit accounts.

[3] Investment Company Institute, *Report of the Money Market Working Group*, March 17, 2009, https://www.ici.org/doc-server/pdf%3Appr_09_mmwg.pdf.

**Notes:** GSE = government-sponsored enterprise. The vast majority of the security repurchase agreements (repos) are U.S. government security repos, but there are also other security repos.

MMFs channel short-term funding to businesses and government entities to help them cover activities such as paying for inventory, payroll, schools, bridges, and meeting other financial obligations. MMFs are significant holders of U.S. government securities, commercial paper (CP), municipal debt, and certificates of deposits. For example, MMFs are especially important for the CP market, an integral part of the financial system that facilitates short-term funding for businesses and households (**Figure 1**). CPs are generally short-term debt issued with minimum denominations of $100,000 and terms less than 270 days.[4] As of April, 2022, MMFs held $231 billion in CP, representing around 20% of all U.S. CP outstanding. In earlier years, MMFs held an even higher percentage of CP, reaching close to half of all CP outstanding (**Figure 2**). See the "Prime MMF Outflow and Short-Term Funding Market Distress" section of this report for more discussions on the interconnectedness of MMF and other parts of the short-term funding market.

**Figure 2. MMF CP Holdings and MMF Holdings as a Percentage of CP Outstanding**




**Source:** CRS using data from Federal Reserve Board and Securities and Exchange Commission form N-MFP filings.

**Notes:** CP = commercial paper. The bars represent the amount of MMF CP holdings in $billions. The line represents MMF CP holdings as a percentage of all U.S. CP outstanding. MMF CP holdings and U.S. CP outstanding are not seasonally adjusted.

Because of the strong connection between MMFs and the short-term funding markets, MMFs are important institutional investors and financial intermediaries in those markets. If investors withdraw their funding from MMFs, the businesses, government entities, and households that rely on the industry could face increases in costs and reductions in the availability of funding.

[4] For more background on the CP market, see Tobias Adrian, Karin Kimbrough, and Dina Marchioni, "The Federal Reserve's Commercial Paper Funding Facility," *FRBNY Economic Policy Review*, May 2011, https://www.newyorkfed.org/medialibrary/media/research/epr/11v17n1/1105adri.pdf.

## Operational Mechanics: Redemptions at Per Share Net Asset Value (NAV)

As pooled investment vehicles that collect money from investors and make investment decisions on their behalf, MMFs have operational features such as valuation and redemption processes. Share *redemption* allows MMF investors to exit their investment positions by selling their shares back to the funds on demand. Investors redeem MMF shares at per share NAV, meaning the value of a fund's assets minus liabilities. MMFs generally maintain a NAV of $1 per share (investors make returns through the fund paying dividends as their value increases), thus mimicking bank deposits—with the perception that investors are exposed to minimal risk of losses. Bank deposits achieve this with an explicit government guarantee via Federal Deposit Insurance Corporation insurance, while MMFs do so through investment in low-risk, short-term instruments and implicit guarantee from the funds' sponsors that they would manage to maintain the $1 per share NAV or cover losses in case the MMFs could not.[5]

Prior to 2014 regulatory reforms, all MMFs offered a *stable* $1 NAV, which means that MMFs were permitted (within the range of $0.995 to $1.005) to round the NAV to exactly $1, arguably reinforcing perceptions that MMF investors were not exposed to losses.[6] Market regulations at the time allowed an MMF to value its investments at amortized cost rather than market value. This type of measurement gave the fund a constant $1 value and thus further reinforced to investors that MMFs could serve as an alternative to checking and savings accounts. If the funds' stable NAV drops below $1, which rarely occurs, it is said that the MMF "broke the buck."

## Different Types of MMFs

There are three main types of MMFs:

1. **Government MMFs**, which invest in securities backed by the creditworthiness of the U.S. government. Government MMFs generally hold U.S. Treasury and federal agency debt instruments and repurchase agreements collateralized by government securities.
2. **Tax-exempt MMFs**, also referred to as municipal MMFs, which invest in municipal securities that are normally exempt from federal personal income taxes.
3. **Prime MMFs**, which generally invest in short-term obligations issued by corporations, governments, and banks, including asset-backed or unsecured CP and repurchase agreements.

The main types of MMFs are then further divided into those held by individual investors (retail) and those held by organizations (institutional).

## Market Size and Trends

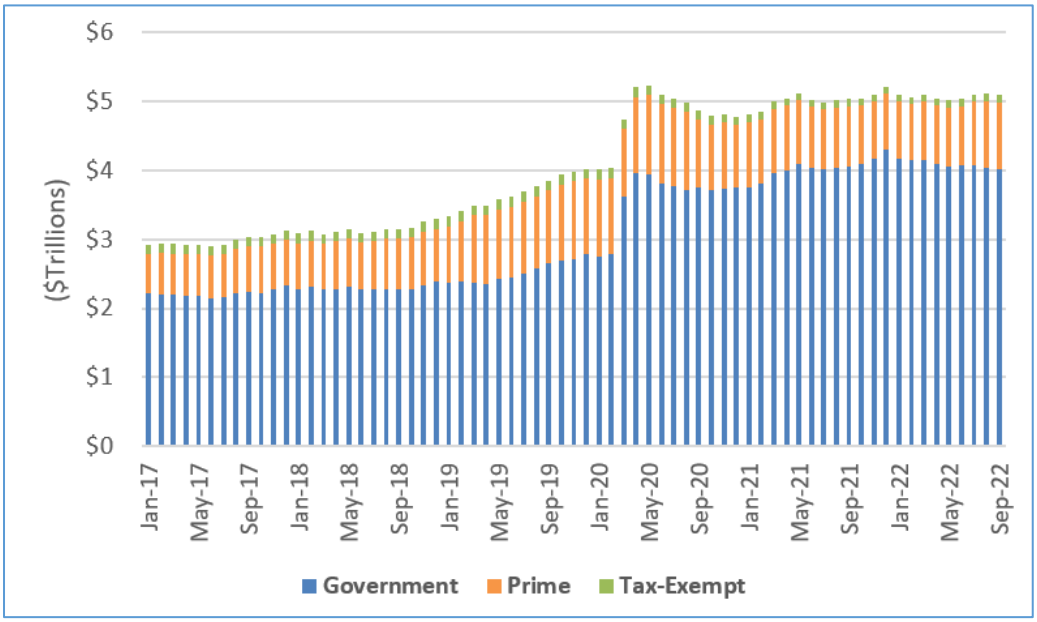
The MMF industry's assets increased while the number of funds declined in recent years. According to SEC form N-MFP filings, the MMF industry net assets stood at $5.1 trillion as of July 2022 (**Figure 3**). Government MMFs held the most net assets ($4.1 trillion or 80% of the

[5] See "Formalization of Sponsor Support" section of this report for more details on MMF sponsors.

[6] See "Portfolio Valuation: Floating or Stable NAV" section of this report for more details.

overall MMF industry assets), substantially more than prime MMFs ($917 billion or 18%) and tax-exempt MMFs ($104 billion or 2%).

**Figure 3. MMF Net Assets by Type**




**Source:** CRS using data from SEC form N-MFP filings.

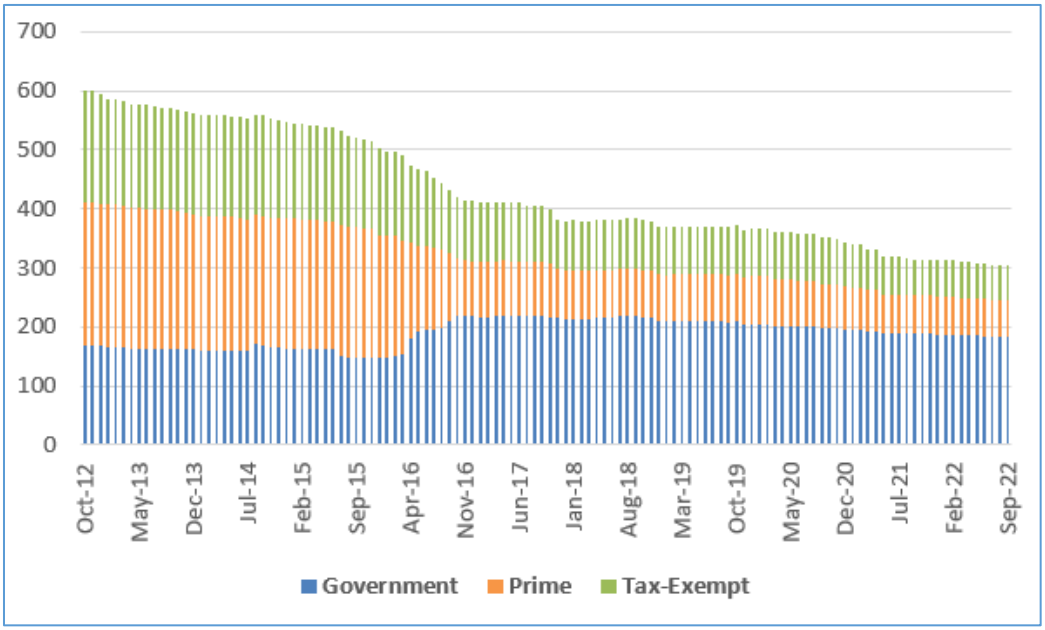
**Notes:** Because the SEC implemented a data reconfiguration starting in October 2016 that affected how the MMF net assets by type are recorded, the chart starts from 2017. Government MMFs includes government and Treasury MMFs.

The MMF industry's net assets increased, especially after the COVID-19 pandemic (**Figure 3**), led by increases in government MMFs and partially offset by decreases in prime and tax-exempt MMFs. The flight-to-safety behavior of investors, who were selling the higher-risk assets and purchasing safer investments such as Treasury securities and government MMFs during market distress, potentially contributed to the ramp-up of government MMFs and the decline in prime and tax-exempt MMFs in early 2020. For more details on the reasons for this change, see the "2020 Pandemic-Induced 'Dash for Cash'" section of this report.

Over the past decade, the number of MMFs decreased by nearly half from 600 in October 2012 to 306 in July 2022 (**Figure 4**). During this period, while the number of prime and tax-exempt MMFs significantly declined, the number of government MMFs increased. Prime and tax-exempt MMFs declined by 74% and 68% to reach 63 and 60 (from 243 and 189), respectively, while government MMFs increased 9% to reach 183 as of July 2022.

Multiple reasons, including reduced fee income and increased operating costs, might have contributed to the decline in the number of MMFs. The period of decline coincided with the time when MMF regulatory reforms affected the costs of compliance, reporting, and other requirements. For example, a major MMF reform in 2014, which most significantly affected prime MMFs, was fully implemented in 2016. Following the reform, the number of government MMFs increased, while prime MMFs decreased (**Figure 4**).

**Figure 4. Number of MMFs by Type**




**Source:** CRS using data from SEC form N-MFP filings.

**Notes:** Number of MMFs reporting to the SEC. Excluding feeder funds.

In addition, MMFs had faced operating pressure from a prolonged low-interest-rate environment in recent years.[7] The Federal Reserve (Fed) established the lower bound of the target range for the federal funds rate at 0% twice during the past 15 years. As a cash-like instrument, limited by regulatory requirements, an MMF cannot generate a high rate of return by taking more risks (and is thus unable to earn substantial returns for investors via a risk premium). When interest rates are close to zero, MMFs often waive fees to keep overall fund returns positive. MMF fees reportedly declined by around 75% over the past 25 years.[8] The average MMF fees reached a mere 12 basis points in 2021.[9] According to one data provider, around 91% of U.S. MMFs were waiving some portion of their fees (as of February 2022), making this one of the most challenging environments for MMFs to cover their operating costs.[10] However, so long as interest rates are not close to the near-zero territory, MMFs could have the opportunity to charge full fees again, providing some relief to operating pressure.

# Run Risk and Financial Stability Concerns

Run risk refers to the fact that financial institutions or funds that have some mismatch between their assets and their repayment or redemption obligations may fail to meet their obligations to their clients when faced with the possibility of a large number of investors withdrawing their investments simultaneously. Runs on such entities can, under certain circumstances, trigger negative feedback loops and contagion effects for the broader financial system. MMFs are

[7] For a chart on the history of the federal funds rate, see Federal Reserve Bank of St. Louis, *Federal Funds Effective Rate*, https://fred.stlouisfed.org/series/FEDFUNDS.

[8] Brooke Masters, "'The Return of Cash': Money Market Fund Sector Perks Up on Rising Rates," *Financial Times*, July 19, 2022, https://www.ft.com/content/7195fd47-b843-4025-9a5b-100b44f79b06.

[9] One basis point is 1/100 of a percent, or 0.01%.

[10] *Financial Times* reporting of iMoneyNet data. See Masters, "'The Return of Cash.'"

susceptible to runs because the shareholders expect to always be able to redeem their funds at a price of $1 per share, while the value of a fund's assets could fall below the value of outstanding shares. Thus, shareholders have an incentive to redeem their shares before others do when there is a perception that the fund might experience a loss—the first investors to get their money out are more likely to receive the full value, while by the time the later ones request their money, the fund's assets may have already been depleted. During market distress, a run on MMFs could involve heavy redemptions and attempts of many investors to try to get their money back at the same time. If a fund indeed suffers a loss (i.e., breaking the buck), investors who redeem their shares early in the run may get more money for their shares than do other investors who redeem their shares later.

## Attributes of MMF "Runs"

This section describes some common attributes that are associated with MMF runs. It also provides examples of policy proposals to address MMF run risk. More detailed policy proposal discussions are in the "Reform Options" section.

### Perception (or Misperception) of Absolute Safety and the Existence of Risk

As mentioned earlier, MMFs are relatively safe cash-like investment options, but risks do exist. For example, if a fund holds a large amount of CP issued by an institution that suddenly defaults on its debt, then the value of the fund's assets could unexpectedly drop. Meanwhile, investors generally view MMFs as comparable to bank deposits, expecting that the fund value will stay steady at $1 per share. However, this expectation of safety does not mean that the fund will not encounter losses. Unlike bank deposits that are largely backed by an explicit guarantee from the federal government in the form of deposit insurance, MMF investors can rely only on a fund's sponsors and management to maintain the value of the MMFs or cover any losses. Thus, if the ability of an MMF to maintain its stable share value comes into question, it could generate incentives for investors to quickly redeem shares before losses result in the share value falling.

For examples of policy proposals to address MMF risk and risk transparency, see the "Floating NAV," "Capital Buffer," "Sponsor Support," and "Limits on Eligible Assets" sections of this report.

### First-Mover Advantage and Dilution to Remaining Investors

In a crisis scenario, when faced with potential losses, each investor has an incentive to redeem his or her shares in full before the rest of the investors do. Whoever redeems shares last, after others have redeemed in full, may bear the loss of the whole portfolio. Research shows that institutional and retail MMF investors tend to redeem shares at different speeds. While institutional investors may have the resources and technology to detect and respond to losses quicker, retail investors may be slower to detect and respond to potential losses.[11]

For examples of policy proposals to address first-mover advantage, see the "Swing Pricing" and "Minimum Balance at Risk" sections of this report.

[11] Institutional investors consistently redeem faster than do retail investors during crisis situations. See Antoine Bouveret, Antoine Martin, and Patrick McCabe, *Money Market Fund Vulnerabilities: A Global Perspective*, March 8, 2022, https://www.federalreserve.gov/econres/feds/files/2022012pap.pdf.

### MMFs' Liquidity Needs and the Spillover Effects

MMFs have to prepare liquid assets (e.g., "cash in hand") in anticipation of redemption needs. This operation would normally be seamless, but for unexpected large redemptions, the funds could face challenges. For example, while MMFs are obligated to honor daily redemption for investors, it is possible that a fund may be unable to raise enough cash to meet all redemption requests at once. This may be because when the fund wants to liquidate the portfolio assets to meet redemption requests, the assets may not be sold at desired market price because the market is under distress or liquidity is tight. The liquidity needs in such situations can trigger fire sales and contagion effects through negative feedback loops, meaning that large quantities of portfolio asset sales would place further downward pressure on portfolio assets' pricing and, in turn, further stress the funds that are in need of the proceeds from asset sales to redeem investor shares. In such situations, MMFs would adversely affect entities relying on funding from short-term markets, potentially causing them to be unable to obtain working capital or roll over their maturing debt, increasing default risk and creating market fear and market halts that potentially dry up the money to businesses, municipalities, and households.

For an example of a policy proposal to address liquidity needs, see the "Increase Liquidity Requirements" section of the report.

# Market Disruptions and MMF Structural Vulnerabilities

Policymakers and regulators have repeatedly pushed for MMF reforms following two major market disruptions that demonstrated the MMF industry's structural vulnerabilities. Because the symptoms MMFs displayed during these stressed scenarios could help market observers diagnose the challenges and comprehend potential reform options, this section of the report aims to describe MMF market behavior during the financial crises, focusing on MMF market symptoms and related direct federal government interventions.

## 2007-2009 Great Recession

On September 15, 2008, Lehman Brothers Holdings, an investment bank, filed for bankruptcy. The next day, one prominent MMF—the Reserve Primary Fund—saw its per share price fall from $1.00 to $0.97 after writing off its Lehman debt. MMFs faced "run-like" behavior, because investors have an incentive to redeem shares before others do when there is a perception that the fund could suffer a loss.[12] Thus when the Reserve Primary Fund broke the buck, MMF investors elsewhere also rushed to exit their positions. This spillover effect illustrated that MMFs, and even the broader financial system, were vulnerable regardless of whether large actual losses occurred. The Reserve Primary Fund event triggered an array of market reactions, including investors' redemptions of more than $250 billion throughout the MMF industry within a few days of the Lehman bankruptcy filing.

The consequences of these actions were potentially so dire to U.S. financial stability that the government ultimately intervened. The Treasury Department provided explicit temporary

[12] *Run* is a term that was first made famous by banks when depositors simultaneously withdraw deposits, causing solvency risk concerns at banks. See the "Attributes of MMF "Runs" section of this report for more discussions on run-like behaviors.

guarantees to all MMF investors. Treasury announced this program without seeking specific congressional authorization. After the fact, Congress addressed the guarantee in the Emergency Economic Stabilization Act (), reimbursing the Exchange Stability Fund that backed the guarantee but also forbidding the future use of the fund to provide such a guarantee.[13] Over the life of the Treasury guarantee, no guaranteed funds failed.[14]

The Federal Reserve also established multiple emergency liquidity facilities under its statutory authority invoked by "unusual and exigent circumstances" in September and October 2008 to provide a backstop through funding to MMFs and CP as part of a broader crisis response.[15] These programs expired without loss between late 2009 and early 2010.[16]

## 2020 Pandemic-Induced "Dash for Cash"

In March 2020, the economic and financial uncertainties surrounding the COVID-19 pandemic induced a "dash for cash" that involved extensive market selloffs of assets across a wide spectrum, including stocks, bonds, and investment funds.[17] Faced with the pandemic-induced uncertainty, market participants allocated more assets toward cash and short-term instruments that receive federal government backing. As a result, government MMFs experienced substantial inflows (**Figure 3**), while prime and tax-exempt MMFs suffered sudden outflows (**Figure 5**). Rapid volume shifts like this also occurred in other short-term markets linked to MMFs, including the CP market and the short-term municipal securities market. Some observers believe that the structural vulnerabilities at MMFs might have led to the increased redemptions and potentially escalated the stress at the overall short-term funding markets.[18] The Fed took action again in March 2020 to address the MMF market disruption, including establishing emergency lending for MMF and CP markets.[19]

### Prime MMF Outflow and Short-Term Funding Market Distress

The distress in prime MMF and CP markets was severe during March 2020, when dash-for-cash conditions were the most pronounced. **Figure 5** illustrates the extent of the conditions. The spread on CP against overnight index swaps—a measure of the higher return CP investors are requiring to compensate for perceived risk—widened to historical highs. This increased risk and volatility in CP, in turn, contributed to prime MMFs' reduction in CP holdings, thus placing additional downward pressure on CP pricing, potentially escalating the overall market stress. However, MMFs were only one of many factors that affected the CP market conditions at the time (see

[13] For more on related Treasury Department actions, see CRS Report R43413, *Costs of Government Interventions in Response to the Financial Crisis: A Retrospective*, by Baird Webel and Marc Labonte.

[14] For more information on Federal Reserve liquidity facilities, see CRS Report R44185, *Federal Reserve: Emergency Lending*, by Marc Labonte.

[15] Michael Fleming, "Federal Reserve Liquidity Provision During the Financial Crisis of 2007-2009," *Federal Reserve Bank of New York Staff Reports*, July, 2012, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr563.pdf.

[16] For more on Fed emergency lending programs, see CRS Report R44185, *Federal Reserve: Emergency Lending*, by Marc Labonte.

[17] For more details, see CRS Report R46424, *Capital Markets Volatility and COVID-19: Background and Policy Responses*, by Eva Su.

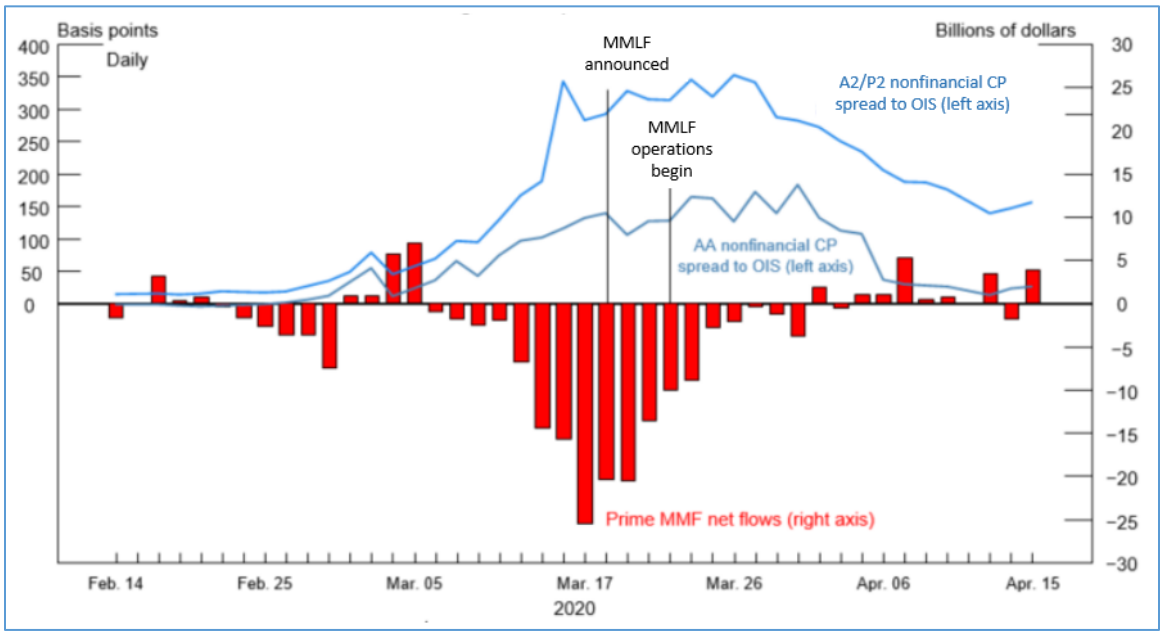
[18] Bouveret, Martin, and McCabe, *Money Market Fund Vulnerabilities*.

[19] For more details, see CRS Insight IN11340, *COVID-19: Selected Capital Markets Segments Supported by Federal Government Liquidity Interventions*, by Eva Su; and CRS Insight IN11327, *Federal Reserve: Emergency Lending in Response to COVID-19*, by Marc Labonte.

**Figure 2** for MMF CP holding as a percentage of total CP outstanding). Other intermediaries, such as CP dealers, might have also affected the short-term funding market conditions.

**Figure 5. Prime MMF Outflow and Short-Term Funding Market Distress During "Dash for Cash"**

Prime MMF Net Flows and One-Month Commercial Paper Spreads for Nonfinancial Firms




**Source:** President's Working Group on Financial Markets.

**Notes:** MMLF = Federal Reserve money market mutual fund liquidity facility. CP = commercial paper. OIS = overnight index swap.

Regarding prime MMF asset holdings, at the peak of the selloff, prime MMFs experienced abnormal outflow of around $25 billion per day in mid-March (**Figure 5**). But the conditions eased toward the end of the month following the Fed's announcement and implementation of the Money Market Mutual Funds Liquidity Facility (MMLF). On March 18, 2020, the Fed, with the approval of the Treasury Department, announced the MMLF to backstop the MMF market for the second time in history (the other being in 2008 in response to the financial crisis discussed above). The program was expanded and operationalized on March 23 to include domestic prime and tax-exempt MMFs as eligible funds.[20]

The federal government actions to assist the MMF industry in 2020 were similar to those of September 2008 in design and purpose.[21] Both programs made non-recourse loans to eligible banks to purchase certain assets from eligible MMFs (prime and tax-exempt MMFs), but the eligible collateral assets were broader for MMLF when compared to the 2008 actions.[22] The

[20] Federal Reserve, *Money Market Mutual Fund Liquidity Facility*, https://www.federalreserve.gov/monetarypolicy/mmlf.htm.

[21] For more information, see Federal Reserve, *Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility*, https://www.federalreserve.gov/monetarypolicy/abcpmmmf.htm.

[22] Non-recourse loans are generally loans secured by collateral only, not including further compensation from the borrowers. For more details, see Ken Clark, "Recourse vs. Non-Recourse Loan: What's the Difference?" *Investopedia*, August 24, 2022, https://www.investopedia.com/ask/answers/08/nonrecourse-loan-vs-recourse-loan.asp.

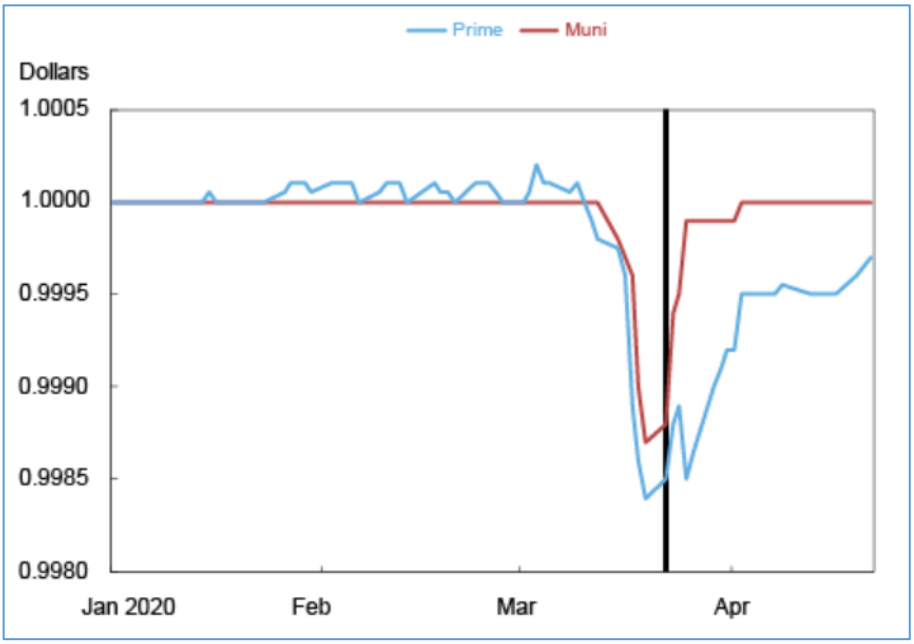
federal government actions seemed to have worked in stabilizing the short-term funding market conditions during the 2020 dash for cash (**Figure 5**).

## NAV and the "Breaking the Buck" Conditions

In addition to the fund outflow measures that indicate MMF market stress, observers could detect MMF market conditions through changes in NAV. **Figure 6** illustrates that at one point in March 2020, prime and tax-exempt MMFs' per share NAV, in aggregate, experienced sharp declines and then a recovery. The per share NAV dropped to below $0.999 and recovered after the implementation of the Fed's MMLF. Without the federal government backstop, the NAV performance at prime and tax-exempt MMFs would have been uncertain.

Notably, the term *breaking the buck* does not have an official, standardized definition. Some industry observers may consider situations depicted in **Figure 6**—a share price decline to $0.9985—as breaking the buck. Meanwhile, SEC Rule 2a-7 specifies the level of price deviation to be "1/2 of 1 percent" (i.e., falling below $0.995) before the fund's board would be mandated to address the deviation.[23] MMFs' NAV deviation during March 2020 did not reach the $0.995 threshold that triggers mandatory Rule 2a-7 MMF board actions.

**Figure 6. Prime and Tax-Exempt MMF Net Asset Value During "Dash for Cash"**




**Source:** Federal Reserve Bank of New York.

**Notes:** The vertical line indicates the implementation date of the Fed's MMF liquidity facility.

Some of the MMF market concepts and terminology highlighted in this section, such as fund outflow and NAV, will continue to provide context for the "Reform Options" section of the report. These technical measures revealed market symptoms and thus are built into some of the policy proposals covered in the "Reform Options" section.

[23] 17 C.F.R. §270.2a-7. The board actions could normally include suspending redemptions and repricing the fund.

# Current Regulatory Framework

MMFs are one type of *open-end* mutual fund, meaning they are funds that can issue unlimited number of shares and are brought or sold on demand.[24] Rule 2a-7, which governs MMFs, specifies a variety of MMF requirements, including eligible portfolio assets, valuation methods, liquidity requirements, fee and gate provisions, disclosure requirements, and others. Different types of MMFs may face different regulation (**Figure 7**). This section explains several key MMF regulatory requirements in detail.[25]

**Figure 7. Examples of Different Requirements for Different Type of MMFs**

| | | Prime | | Tax-Exempt | |
|---|---|---|---|---|---|
| **Requirements** | **Government** | **Retail** | **Institutional** | **Retail** | **Institutional** |
| Fees and Gates | Optional | Required | Required | Required | Required |
| Net Asset Value | Stable | Stable | Floating | Stable | Floating |
| Liquid Asset Measures | Daily and weekly | Daily and weekly | Daily and weekly | Weekly | Weekly |

**Source:** CRS.

**Notes:** The table presents selected examples of MMF regulatory requirements. For more details on the requirements, see text portion of the current report section.

## Eligible Assets and Maturity Limits

MMF regulation uses restrictions on eligible assets and maturity limits to control risks at MMF portfolio assets and ensure that the funds maintain short-term and high quality assets. MMF assets normally have a remaining maturity of 397 days or less. Government MMFs are required to invest in cash, government securities, or repurchase agreements that are collateralized solely by government securities or cash. Prime and tax-exempt MMFs can invest in the types of securities eligible for government MMFs but can also invest in other assets. When investing in other assets, prime and tax-exempt MMFs' boards must determine that the portfolio assets present minimal credit risks to the funds. As part of the risk assessment, the board has to consider factors such as the issuers' financial condition, source of liquidity, and ability to react to market events, among other factors. Prime and tax-exempt MMFs' boards must also conduct ongoing review of each security in the portfolio to make sure that the securities continue to present minimal credit risks, and they must retain written records of such reviews for three years.

Specific to maturity limits, at the portfolio level, MMFs are generally required to have a dollar-weighted average maturity of 60 days or less and weighted average life maturity of 120 days or less.

[24] Open-end funds stand in contrast to *closed-end* funds, which issue a fixed number of shares and are traded on national stock exchanges or in the over-the-counter market.

[25] For more information, see SEC, "Money Market Fund Reform; Amendments to Form PF Final Rule," 79 *Federal Register* 47735, August 14, 2014; SEC, "Money Market Fund Reforms Proposed Rule," 87 *Federal Register* 7248, February 8, 2022; and 17 C.F.R. §270.2a-7.

## Portfolio Valuation: Floating or Stable NAV

Institutional prime and institutional tax-exempt MMFs are required to float their NAVs to reflect the actual market value of the fund more closely. All government and retail MMFs may use a stable NAV.

The floating NAV method requires institutional prime and tax-exempt MMFs to price their shares based on the market value of the underlying portfolio assets at NAV rounded to the fourth decimal point. For example, a floating NAV fund might be priced at $1.0003 or $0.9995 instead of a stable $1 value.

In contrast, the stable NAV method allows the government and retail prime and tax-exempt MMFs to round the share price to exactly $1 per share as long as the portfolio assets do not fall below $0.995 or rise above $1.005.[26] The stable NAV MMFs have to calculate (using the amortized cost method) if the fund has broken the buck.[27] Stable value MMFs that see their per share value of portfolio assets drop below $0.995 could face board actions and be subject to the floating NAV regime. Examples of board actions could include liquidity fees and redemption gates.[28]

## Liquidity Requirements

Liquidity requirements aim to ensure that an MMF has sufficient cash in hand to meet redemption needs. Rule 2a-7 requires MMFs to hold sufficient liquidity securities to meet "reasonably foreseeable" redemptions and develop procedures to identify investors whose redemption requests may pose risks to the funds.

All MMFs have to maintain a minimum of 30% *weekly liquid assets* (WLA) and cannot exceed a maximum of 5% illiquid assets. WLA could include cash, Treasury securities, federal agency discount notes with remaining maturity of 60 days or less, and other short-term instruments payable or receivable within five business days. Illiquid securities include any security that cannot be sold within seven days at the perceived fair market value.

Government and prime MMFs also have to maintain *daily liquid assets* (DLA), while tax-exempt MMFs do not need to meet DLA requirements. At least 10% of non-tax-exempt MMFs' total assets must be in DLA that could include cash, Treasury securities, or securities maturing within one business day.

## Liquidity Fees and Redemption Gates

Nongovernment MMFs' boards may impose liquidation fees and redemption gates if certain conditions are met. Specifically, an MMF may impose a liquidity fee of up to 2%, or temporarily suspend redemptions for up to 10 business days in a 90-day period, if the MMF's WLA fall below 30% of its total assets and the fund's board determines that imposing the fees and gates are in the fund's best interests. If the WLA fall to below 10% of total assets, the fund could also impose a

[26] As measured by mark-to-market per share value of the fund's portfolio assets.

[27] *Amortized cost method of valuation* means the method of calculating an investment company's NAV whereby portfolio securities are valued at the fund's acquisition cost as adjusted for amortization of premium or accretion of discount rather than at its value based on current market factors. 17 C.F.R. §270.2a-7.

[28] See "Liquidity Fees and Redemption Gates" section of this report for more detail.

default liquidity fee of 1% unless the fund's board determines that a fee would not be in the best interests of the fund.[29]

These barriers to withdrawal were designed to discourage runs, as they could restrict or increase the costs of redemptions, although whether they met this design intention is a point of debate. For more on this policy debate, see the "Remove Threshold Effects of Liquidity Fees and Redemption Gates" section of this report.

## Disclosure Requirements

The MMF disclosure requirements make the funds' composition and potential risks known to investors and regulators. MMFs have to clearly warn investors in their outreach materials and prospectuses of the fact that the funds have the potential of losing money, using language such as "although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so."[30]

In addition, all MMFs have to provide disclosures through Form N-MFP, Form N-CR, Statement of Additional Information (SIA), and daily website disclosure. Form N-MFP includes monthly information on NAV per share, liquidity levels, and shareholder flows.[31] Form N-CR includes immediate disclosure of special events such as a material decline in fund value and sponsor supports or the board's actions in imposing fees and gates.[32] SIA disclosure for government MMFs would include the reporting of any occasion within the past 10 years that the MMFs received sponsor support. For nongovernment MMFs, the SIA report must also include the occasions when the funds' WLA were less than 10% and the occasions when the funds imposed liquidity fees and redemption gates. MMF daily website disclosures include the funds' DLA, WLA, and net shareholder flows and the fund's "shadow price," a price that reflects market conditions.[33]

## Stress Testing

Stress testing generally refers to a forward-looking quantitative evaluation of the projected impact of stressful economic and financial market conditions. MMFs are required to test their abilities to maintain WLA of at least 10% and to minimize principal volatility in response to several SEC-defined hypothetical stress scenarios, including (1) increases in the level of short-term interest rates, (2) the downgrade or default of particular portfolio security positions, and (3) the widening of spreads in various sectors. MMFs must also periodically test and report to their boards the test results, assumptions, and related assessments of the funds' ability to withstand the events.[34]

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[29] SEC, "Money Market Fund Reform; Amendments to Form PF Final Rule," 79 *Federal Register* 47735, August 14, 2014.

[30] SEC, "Money Market Fund Reform; Amendments to Form PF Final Rule."

[31] SEC Form N-MFP, https://www.sec.gov/files/formn-mfp.pdf.

[32] SEC Form N-CR, https://www.sec.gov/files/formn-cr.PDF.

[33] For an example of daily website disclosure, see Fidelity prime MMF disclosure of "Fidelity Investments Money Market—Money Market Portfolio—Class I," https://fundresearch.fidelity.com/mutual-funds/summary/316175207.

[34] See SEC final rule, "Money Market Fund Reform; Amendments to Form PF," July 23, 2014, p. 553, https://www.sec.gov/rules/final/2014/33-9616.pdf; and "SEC Adopts Money Market Fund Reform Rules," press release, July 23, 2014, https://www.sec.gov/news/press-release/2014-143. For examples of applying the scenarios, see Jeremy Berkowitz, "Money Market Mutual Funds: Stress Testing and New Regulatory Requirements," National Economics Research Associates, July 14, 2015, https://corpgov.law.harvard.edu/2015/07/14/money-market-mutual-funds-stress-testing-new-regulatory-requirements.

# Reform Options

As previously mentioned, the existing MMF regulatory framework has incorporated multiple iterations of reforms. The most recent large-scale reform happened in 2014, with the major changes implemented by 2016. However, the reformed regulatory framework did not prevent MMFs' run-like behaviors during the dash for cash in March 2020. That has led policymakers to question what more could be done to address MMF-related risks, including the run-risk-related financial stability concerns. It has also led to a re-examination of certain newer regulatory features adopted since 2014 that appear not to have led to the intended outcome. Observers suggest that some previous reform initiatives, although designed to discourage runs, achieved the contrary. This section discusses current reform options, including new ideas and proposals to roll back certain previously implemented provisions. **Figure 8** provides examples of MMF reform proposals. Some of the proposals are currently part of the SEC's MMF proposed rule published in December 2021 while others are not. The reform options would

- Roll back some earlier reform provisions regarding *liquidity fees and redemption gates*.
- Address the first-mover advantages through *swing pricing* and *minimum balance at risk*.
- Increase transparency through additional *disclosure requirements* and *floating NAV*.
- Address MMF liquidity needs through *increased liquidity requirements*.
- Reduce MMF portfolio risks through *sponsor support*, a *capital buffer*, and *limits on eligible assets*.

**Figure 8. Examples of MMF Reform Proposals**

| | Proposed by SEC | Not Proposed by SEC |
|---|---|---|
| Remove liquidity fees and redemption gates | x | |
| Swing pricing | x | |
| Additional liquidity requirements | x | |
| Additional disclosure reporting requirements | x | |
| Floating NAV* | x | |
| Sponsor support | | x |
| Limits on eligible assets | | x |
| Minimum balance at risk | | x |
| Capital buffer | | x |

**Source:** CRS.

**Notes:** The SEC expanded floating NAV under certain unique market conditions. Its proposal does not recommend rolling back the existing practice or creating significant expansions of the floating NAV.

Opponents of increased MMF regulation worry about the implementation costs of some of the reforms as well as potential operational delays. They also point to the volume decline of the affected MMFs in response to earlier reforms and how a shrinking MMF market may raise working capital costs for certain business operations and municipalities (**Figure 4**). More opponent discussions specific to individual proposals are included in the related segments below.

## Proposals by the SEC

The SEC proposed amendments to MMF rules on December 15, 2021.[35] The proposed amendments would increase liquidity requirements, require additional disclosures, roll back some of the earlier reform provisions, and reduce MMF investors' incentives to run. Here is a list of proposals that the SEC suggested for adoption in the agency's MMF reform proposed rule.

### Remove Threshold Effects of Liquidity Fees and Redemption Gates

The threshold effect, also called the cliff effect, refers to investors' pre-emptive actions to avoid consequences of funds crossing certain thresholds. As discussed in earlier sections of the report, MMFs' boards may impose liquidation fees and redemption gates for nongovernment MMFs if a fund's WLA falls below 30% of its total assets and the fund's board of directors determines that imposing a fee or gate is in the fund's best interests. In cases where a prime MMF begins to approach the threshold, investors may increase their redemptions to avoid doing so after a fee or gate is imposed. Some policy proposals suggest decoupling of the regulatory thresholds from the consequences of such fees and gates.

The fees and gates were first implemented to reduce incentives to run. Some market participants believe that these types of restrictions could allow funds' investors to share the potential losses more evenly at the time of sudden crisis, thus reducing the first-mover advantages in a run.[36] In addition, giving the fund boards control over the temporary fees and redemption gates could provide a cooling-off period for fund investors during a time of distress and allow the investors to go through a more orderly process if the worst-case scenario of a fund liquidation does occur. Some compare the functionalities and goals of MMF fees and gates with the "circuit breaker," the SEC's existing policy tool to manage market volatility by placing temporary market halts to provide breathing room for the market conditions to calm down.[37] In addition, the SEC and others cited examples they viewed as successful by certain non-MMF cash management pools to stem redemptions during times of stress before the SEC implemented the related MMF rules.[38]

During the dash for cash in 2020, no MMF imposed a fee or gate, but the possibility of such imposition may have created a threshold effect for investors, as discussed above. From the MMFs' perspective, unexpected increases in redemptions from the threshold effects could further decrease the level of WLA. The liquidity assets that form the WLA were used to pay out redemptions during distress, thus creating a market run tied to the threshold instead of the breaking-the-buck scenarios.

Some research from the SEC, the Fed, and the industry points to the existence of the threshold effect. The research shows that the fees and gates that link to the WLA threshold froze substantial

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[35] SEC, "SEC Proposes Amendments to Money Market Fund Rules," press release, December 15, 2021, https://www.sec.gov/news/press-release/2021-258.

[36] See, for example, Institutional Money Market Funds Association, *IMMFA Recommendations for Redemption Gates and Liquidity Fees*, January 2014, https://www.immfa.org/assets/files/publications/Paper%20IMMFA%20Position%20Papers%20on%20MMF%20Reform%20-%20Liquidity%20Fees%20and%20Gate%20FINAL%20-%20January%202014.pdf; and Investment Company Institute, *Temporary Gates, Liquidity Fees, and Enhanced Disclosure Offer Promising Tools to Make Prime Money Market Funds More Resilient*, January 2013, https://www.ici.org/doc-server/pdf%3A13_mmf_liquidity_fee_gates.pdf.

[37] For more on the circuit breaker and the related policy context, see CRS Report R46424, *Capital Markets Volatility and COVID-19: Background and Policy Responses*, by Eva Su.

[38] SEC, "Money Market Fund Reform; Amendments to Form PF Final Rule," 79 *Federal Register* 47735, August 14, 2014, p. 42.

amounts of MMF liquidity, reducing the capacity for redemptions and potentially increasing the risk of runs. A Federal Reserve Bank of New York staff paper in 2014 highlights the fees and gates' potential unintended effects on preemptive runs.[39] Another Federal Reserve Board staff paper (last revised in June 2021) concludes that while the fees and gates were designed to improve financial stability, they exacerbated the run on prime MMFs during the dash for cash.[40]

Some industry studies also indicate that institutional prime MMFs with a WLA approaching the 30% threshold had larger outflows than other prime MMFs did, despite these funds' capabilities to meet substantial redemptions.[41] They concur that the threshold effect made MMFs more susceptible to financial market stress in 2020 and could continue to do so during future crises.[42]

As a point of reference, previous European MMF reforms created two kinds of prime MMFs, one with fees and gates and the other without. Research shows that prime MMFs with gates and fees suffered heavier outflows during the dash for cash.[43]

### *The SEC's Proposal*

In the December 2021 MMF reform proposed rule, the SEC recommends the removal from Rule 2a-7 of the provisions that would allow or require MMF boards to impose liquidity fees or redemption gates.

## Floating NAV

The 2014 MMF reform established floating NAV requirements for institutional prime and tax-exempt MMFs.[44] Policy discussions focus on whether the MMFs' NAV should be floating or stable. Many proponents of floating NAV believe it could (1) reduce the investors' incentive to runs in distressed markets because it may reduce the differences between the stable value and the actual market value, (2) allow investors to better understand a fund's price movements and market fluctuations, and (3) remove the implicit guarantee of zero investor losses through the stable value that could lead to unrealistic expectations of investor safety. Opponents believe that floating NAV does not solve the issue of investors' incentive to run. For example, one academic research article concluded that European MMFs that offered similar structures to floating NAV did not experience significant reduction in run propensity during market distress compared with stable NAV.[45] In addition, providing floating NAV requires calculation time and business model

[39] Marco Cipriani et al., "Fees, Gates, and Preemptive Runs," *Federal Reserve Bank of New York Staff Reports*, April 2014, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr670.pdf.

[40] Lei Li et al., *Liquidity Restrictions, Runs, and Central Bank Interventions: Evidence from Money Market Funds*, May 24, 2021, https://ssrn.com/abstract=3607593.

[41] Investment Company Institute, *Comment Letter for Money Market Fund Reforms*, April 11, 2022, p. 10, https://www.sec.gov/comments/s7-22-21/s72221-20123254-279522.pdf.

[42] Investment Company Institute, *Comment Letter for Money Market Fund Reforms*.

[43] Marco Cipriani and Gabriele La Spada, "Preemptive Runs and the Offshore U.S. Dollar Money Market Funds Industry," *Federal Reserve Bank of New York*, November 22, 2021, https://libertystreeteconomics.newyorkfed.org/2021/11/preemptive-runs-and-the-offshore-u-s-dollar-money-market-funds-industry.

[44] SEC, "Money Market Fund Reform; Amendments to Form PF Final Rule," 79 *Federal Register* 47735, August 14, 2014.

[45] Jeffrey Gordon and Christopher Gandia, *Money Market Funds Run Risk: Will Floating Net Asset Value Fix the Problem?*, July 25, 2014, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2134995. For additional arguments, see Jeffrey Gordon, *Letter to the SEC*, February 26, 2021, https://www.sec.gov/comments/s7-01-21/s70121-8426020-229603.pdf.

changes that could raise costs and slow market operations. Another challenge is that converting existing floating NAV back to stable NAV may also incur costs.

### *The SEC's Proposal*

In the 2021 MMF reform proposal, the SEC does not recommend rolling back the part of the 2014 reform that mandates floating NAV for institutional prime and institutional tax-exempt MMFs. Rather, the SEC recommends that stable NAV MMFs be converted to floating share price when a negative interest rate environment occurs,[46] during which time MMFs may face difficulties generating sufficient operating income to support stable share price. See the last paragraph of the "Market Size and Trends" section of this report for background on low interest rate environments and MMF fees.

## Swing Pricing

Swing pricing is a pricing method aimed at reducing incentives to run. As mentioned earlier, the existing regulatory framework and MMF practice may allow first-mover advantage during a crisis, when certain costs would be borne by the remaining fund investors, not the investors who redeemed in full before others did. Swing pricing allows funds to adjust their NAV so that the transaction price would pass on the costs from MMF redemptions more evenly to all investors, including those who rush to redeem their shares before others do. With this approach of cost sharing and a reduction in the first-mover advantage, investors would face much reduced financial incentives to run.

The SEC finalized a rule in 2016 that permits certain mutual funds, except for MMFs, to use swing pricing in some circumstances.[47] Although the method has not met widespread adoption in the United States, it has been a common liquidity management tool for European asset managers for 20 years.[48] One academic study on existing swing pricing practice at certain U.K. funds shows that the method eliminated the funds' first-mover advantage and reduced outflows during market stress.[49] The experience from the dash for cash in 2020 also demonstrated the effectiveness of swing pricing. The frequency and magnitude of swing pricing increased significantly during the most turbulent weeks of the dash for cash at some mutual funds with swing pricing capability.[50] Some observers view this increased use as an investor protection mechanism that protected remaining investors of funds from bearing the increased transaction costs of selling assets to meet outflows.

Some observers argue that European MMF practices cannot be easily duplicated for MMFs in the United States, because the European funds' operating environment is better configured for data

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[46] A negative interest rate environment exists when nominal interest rates drop to below zero, meaning depositors would have to pay banks to keep their cash. For more details, see Vikram Haksar and Emauel Kopphow, "How Can Interest Rates Be Negative?," International Monetary Fund, March 2020, https://www.imf.org/en/Publications/fandd/issues/2020/03/what-are-negative-interest-rates-basics.

[47] SEC, "Investment Company Swing Pricing," 81 *Federal Register* 82084, November 11, 2016.

[48] Swing pricing was introduced in the early 2000s in Luxembourg, Ireland, and the U.K. in response to market timing cases. For more details, see BlackRock, *Lessons from COVID-19: Liquidity Risk Management Is Central to Open-Ended Funds*, November 2020, p. 19, https://www.blackrock.com/corporate/literature/whitepaper/viewpoint-lessons-from-covid-19-liquidity-risk-management-central-open-ended-funds-november-2020.pdf.

[49] Dunhong Jin et al., "Swing Pricing and Fragility in Open-End Mutual Funds," *Review of Financial Studies*, March 8, 2021, https://doi.org/10.1093/rfs/hhab022.

[50] BlackRock, *Swing Pricing – Raising the Bar*, September 2021, p. 16, https://www.blackrock.com/corporate/literature/whitepaper/spotlight-swing-pricing-raising-the-bar-september-2021.pdf.

and estimates that allow the funds to more accurately implement the swing pricing terms.[51] The implementation of swing pricing may impose costs and operational challenges at MMFs and their intermediaries such as broker-dealers and banks. In anticipation of swing pricing, large institutional investors may refrain from providing advance notice of redemptions or game the system by staggering their transactions to avoid unfavorable swings of the NAV. In addition, calculating liquidity costs of investor redemptions during market distress could be difficult. This lack of precision in estimating the transaction costs could pose challenges for swing pricing design and implementation.

### *The SEC's Proposal*

The December 2021 SEC proposal recommends swing pricing for institutional prime and institutional tax-exempt MMFs. These MMFs would be required to adjust their current NAV per share using a swing factor whenever the funds encounter net redemptions that meet a certain threshold. In deciding the swing factor, the SEC suggests the funds take into consideration the transaction costs of selling a portion of the fund's portfolio and an estimate of market impact costs. Some of the SEC's MMF swing price design leveraged off the existing swing pricing rule applicable to other non-MMF mutual funds.[52]

## Increased Liquidity Requirements

MMF liquidity requirements create cash buffers for the funds to meet redemption requirements. The more liquidity assets MMFs hold, the better equipped they are to meet unexpected redemptions and avoid fire sales.[53]

Some proposals suggest expanding liquidity requirements. The SEC calculated various probabilities of an MMF to breach the daily and weekly liquidity requirements, taking into account irregular market conditions as seen in March 2020. The analysis estimates that at current liquidity requirement of 10% DLA and 30% WLA, a fund would have a 32% chance of exhausting its available liquidity and needing to sell less-liquid assets on at least one day during a five-day period during such market conditions. However, if DLA and WLA levels were to be increased to 25% and 50%, respectively, the chance of running out of liquid assets would be reduced to 9% for the same period.[54]

On the other hand, the more liquid and cash-like portfolio assets MMFs include in their portfolios, the lower the expected portfolio returns. As the MMFs are facing proportionately more liquidity requirements, they would have to commit a reduced share of their portfolios to higher risk and return assets. This reallocation of the types of portfolio assets could affect the level of investment returns MMFs could generate for their investors.

### *The SEC's Proposal*

The SEC recommends the increase of the DLA and WLA requirements to 25% and 50% from the current 10% and 30%, respectively.

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[51] Investment Company Institute, *Evaluating Swing Pricing: Operational Considerations*, November 2016, https://www.ici.org/doc-server/pdf%3Appr_16_evaluating_swing_pricing.pdf.

[52] 17 C.F.R. §270.22c-1(a)(3)(i)(C).

[53] Fire sales often happen during financial market turbulence. These actions involve sales of assets at far below market value to meet cash needs.

[54] SEC, "Money Market Fund Reforms Proposed Rule," 87 *Federal Register* 7248, February 8, 2022; and 17 C.F.R. §270.2a-7.

### Additional Disclosure Requirements

Some observers argue that more information regarding the MMFs could help regulators and market participants monitor and understand market conditions and potentially better mitigate or price risks. Specifically, mandatory disclosure may encompass new information related to MMF activities, shareholders, and when the funds could be approaching higher risk positions. With increased transparency, investors and regulators could act on the information for investment, regulation, and systemic risk prevention purposes. However, the increased disclosure generally raises compliance costs, including direct commitment of financial resources and potential requirements to reconfigure the existing business infrastructure to capture the information.

#### *The SEC's Proposal*

The SEC proposes amendments to the Form N-CR and Form N-MFP reporting requirements, including adding Form N-CR reporting when an MMF falls below a specified liquidity threshold and increasing the amount of information N-MFP would collect on MMFs' shareholders and the selling of non-maturing portfolio assets.

## Proposals Not Part of the SEC's Recommendations

This section discusses some additional proposals that are considered by other financial authorities—such as the President's Working Group on Financial Markets and the Financial Stability Board—but are not part of the SEC's recommended approach in its proposed rule (**Error! Reference source not found.** column 3).[55] The general description of these options and s ome pros and cons are below.

### Formalization of Sponsor Support

Rule 17a-9 under the Investment Company Act of 1940 permits MMF sponsors to provide certain support for MMFs, but the sponsors have to publicly disclose financial support to increase transparency.[56] Some observers propose a more formalized sponsor support practice governed by enhanced regulatory frameworks. This section discusses the magnitude of sponsor support during past crises and the benefits and concerns associated with formalizing MMF sponsor support.

MMF sponsors can be important sources of stabilization for fund investors during crises. The sponsors could provide support to MMFs in many ways, including cash injection, asset purchases, and fee waivers.[57] One research paper states that MMF sponsors have voluntarily stepped in more than 200 times since the 1980s to provide support and absorb MMF losses.[58]

MMF sponsors have assets and operations that are separated from the assets of the funds, which is very different from banks that generally do not segregate assets. This is a fundamental

[55] President's Working Group on Financial Markets, *Overview of Recent Events and Potential Reform Options for Money Market Funds*, December 2020, https://home.treasury.gov/system/files/136/PWG-MMF-report-final-Dec-2020.pdf; and Financial Stability Board, *Policy Proposals to Enhance Money Market Fund Resilience Final Report*, October 11, 2021, https://www.fsb.org/wp-content/uploads/P111021-2.pdf.

[56] 17 C.F.R. §270.17a-9.

[57] Jill Fisch, *The Broken Buck Stops Here: Embracing Sponsor Support in Money Market Fund Reform*, 2015, https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2324&context=faculty_scholarship.

[58] Bouveret, Martin, and McCabe, *Money Market Fund Vulnerabilities*.

difference that causes some industry observers to argue that policymakers should encourage private resources from MMF sponsors to provide financial stability for the MMF industry.[59]

In addition, because a formalized commitment to risk mitigation could provide more "skin in the game" for MMF sponsors, these sponsors are likely to be more motivated to reduce MMF risk taking. Under a more formalized sponsorship regime, the actions sponsors could take to mitigate MMF risks may include reducing a fund's risky assets, screening for large investor concentration and transaction patterns, and proactively seeking pre-emptive steps to minimize potential losses during a run.

Some observers are concerned that during crisis situations, certain risks supposedly borne by MMF investors were borne by MMF sponsors and taxpayers (who are ultimately supporting the federal government programs that provided a backstop for the industry). As such, these arrangements lead to concerns regarding fairness in risk sharing and moral hazard. Opponents to sponsor support argue that MMF investors are the appropriate parties to assume market and credit risks.

Uncertainty regarding the voluntary nature of the sponsor support could also pose a concern, and this is a concern that formalization is trying to address. Because sponsor support is discretionary and not fully transparent, some observers worry that the failure of sponsor support during a crisis could accelerate the run for the industry. Thus, some proposals call for explicit support and reporting requirements to increase transparency and mandate sponsor support.[60] But the increased costs of sponsor support would also likely be borne by investors and the industry through reduced investment returns.

Similar to one of the concerns for capital buffer proposals (discussed below), formalizing sponsor support could favor bank-sponsored funds and increase industry concentration. The increased concentration could result from the market discipline that causes investors to seek out funds with stronger sponsor support, thus leaving the funds with less support in a weaker competitive position.

With regard to bank-sponsored MMFs, some observers argue that sponsoring bank holding companies could extend "shadow insurance" to MMFs under distress.[61] Shadow insurance refers to the perceived extension of government safety nets available to the bank holding companies to their affiliated MMFs through sponsorship. Because such sponsorship generally does not increase costs to banks (e.g., not facing increased capital requirements or paying federal insurance fees), some observers consider this a form of regulatory arbitrage.[62] As such, in addition to market competition concerns, the "shadow insurance" measures may reference the unintended consequences of risk transferring, circling back to the earlier question of whether non-MMF investors should bear MMF risks.

## Limits on Eligible Assets

Some observers suggest placing further limits on eligible assets and, in turn, potentially reducing the size of the MMF industry. This option would confine MMF operations to certain safer assets (e.g., short-term government securities) and thus reduce the impact of redemptions.

[59] Fisch, *The Broken Buck Stops Here*.

[60] Fisch, *The Broken Buck Stops Here*.

[61] Stefan Jacewitz and Haluk Unal, "Shadow Insurance? Money Market Fund Investors and Bank Sponsorship," *FDIC Working Paper Series*, June 2020, https://www.fdic.gov/analysis/cfr/working-papers/2020/cfr-wp2020-03.pdf.

[62] Jacewitz and Unal, "Shadow Insurance?"

Opponents argue that reforms limiting and substantially altering MMFs may lead to growth in MMF alternatives, such as banks and other financial entities that provide cash management services similar to investment funds. The measures may draw charges of government interference with the free market by appearing to pick winners and losers.

## Minimum Balance at Risk

Minimum balance at risk (MBR) is a loss absorption mechanism that would also reduce first-mover advantages.[63] With the use of MBR, a small portion of each investor's share would be redeemed with a time delay. Any investor's redemption portion exceeding the MBR shares would be redeemed without delay. The MBR shares serve to absorb potential losses more evenly across all fund investors and ensure that investors who redeem the funds earlier would still share the losses with other investors. MBR could protect investors, including retail investors, who tend to act slower than institutional investors do during crises to redeem their shares.

MBR presents operational challenges for the related funds and liquidity concerns for their investors. The ongoing computation of MBR may require system reconfigurations that involve funds, investors, and related intermediaries to keep track of unrestricted and restricted MBR shares, among other complexities for recording and transaction processing. These operational challenges may increase costs and delays that adversely affect market efficiency. In addition, the portion of the MBR shares that are not immediately accessible could generate liquidity issues for investors who lack alternative sources of cash.

## Capital Buffer

A capital buffer is a common banking regulation tool that requires bank funding to be structured to allow the banks' own capital to absorb losses before other stakeholders (e.g., depositors and credit investors) do so. Such a buffer for MMFs would increase the MMF industry's resilience against crises and reduce its reliance on federal government actions during runs. The capital commitment could also incentivize capital owners to mitigate portfolio risks to preserve capital. In practice, in order to maintain the capital buffer that protects the fund's NAV, the buffer would be held in an escrow account financed by fund managers or outside investors, who would be compensated for doing so.

On the other hand, capital buffers could be costly to construct. One study concludes that because capital providers would demand compensation for bearing the risks, the return to investors after removing the compensation would reduce the returns to be comparable to risk-free securities, essentially making investing in MMFs uneconomical.[64] The reduced utility of investing in MMFs may adversely affect the availability of short-term funding through MMFs. In addition, capital buffers could increase MMF industry concentration, because it may favor bank-sponsored funds, potentially causing smaller asset managers to exit the market.[65]

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[63] Patrick McCabe et al., "The Minimum Balance at Risk: A Proposal to Mitigate the Systemic Risks Posed by Money Market Funds," *Federal Reserve Bank of New York Staff Reports*, July 2012, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr564.pdf.

[64] Craig Lewis, "Money Market Fund Capital Buffers," *Vanderbilt Owen Graduate School of Management Research Paper No. 2388676*, April 6, 2015, https://ssrn.com/abstract=2388676.

[65] President's Working Group on Financial Markets, *Overview of Recent Events and Potential Reform Options for Money Market Funds*, December 2020, https://home.treasury.gov/system/files/136/PWG-MMF-report-final-Dec-2020.pdf.

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