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REGULATION ALMOST DESTROYED MONEY MARKET FUNDS,
But Cash Management Needs Kept Them Alive

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Regulation Almost Destroyed Money Market Funds, But Cash Management Needs Kept Them Alive

Extensive regulatory overhaul in October 2016 changed the money market fund (MMF) industry considerably, especially for institutional clients. Nonetheless, MMFs continue to be an important cash management tool for institutions even though their asset allocations are now much more restricted to preserve the feature of a constant share price.

Key regulatory changes were threefold. First, institutional prime MMFs must float their net asset value, abandoning their signature feature of a constant share price. Second, institutional prime MMFs must adopt a system of redemption gates and fees to ensure sufficient liquidity. Third, government and retail MMFs are exempt from the floating NAV requirement and from redemption fees and gates.

Following the October 2016 reforms, institutional investors made significant changes to their MMF investments. They faced a choice of shifting their investments to government MMFs (offering a stable share price), or remaining invested in higher yielding prime funds (now with a floating share price). Institutional depositors overwhelmingly favored retaining a constant share price even if returns were lower: institutional prime funds lost almost 74 percent of their net assets to government funds, and partly to retail prime funds. This reallocation shows that immediate liquidity at par dominates slightly higher returns when it comes to the needs of institutional investors' cash management.

As we show in this paper, regulatory changes to MMFs correctly remove unviable promises of immediate liquidity at a constant share price while holding asset portfolios with varying risk exposures. We emphasize the importance of allowing price signals to reveal the impact of changes in the risk environment on asset holdings. We also believe that quantitative restrictions (e.g., withdrawal fees and gates) are counterproductive for preventing runs: they do not aid price discovery, and incentivize investors to circumvent the restrictions to access to their otherwise liquid assets in times of heightened liquidity demand. More specifically:

- New MMF regulations acknowledge that shares in prime MMFs are subject to both market and credit risk. The rise in the rates offered by non-government MMFs helped stem the outflow of assets to government MMFs. At the same time, demand for U.S. Treasury bills (and U.S. Agency debt) that removed credit risk from government MMF portfolios increased greatly.
- More concerning is the impact of liquidity constraints, through fees and gates, and the prospect of extending them to mutual funds in general. These non-price mechanisms are designed to limit investors' access to their assets, particularly during periods of market turmoil.

In the remainder of the paper, we describe the asset shifting by MMFs as well as the resulting impact on different markets. The second portion of the paper outlines how the approximately $1 trillion that shifted from prime to government MMFs has affected commercial paper and deposits. Before concluding, we provide an overview of the asset reallocation into government funds.

Government MMFs Displaced Prime MMFs and Allowed Institutional Cash Management to Retain Redemptions at Par

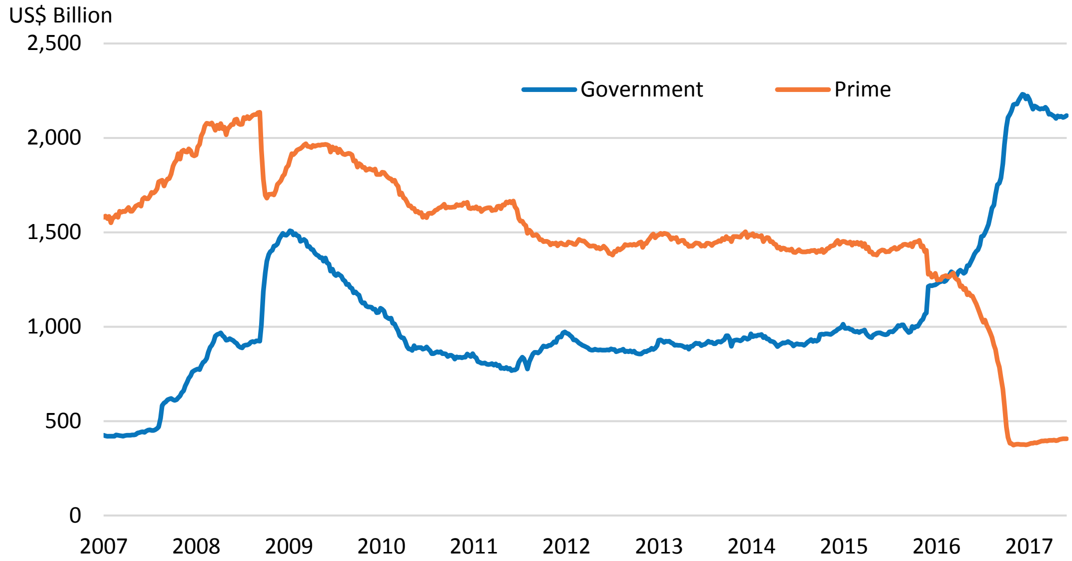
Immediate redemption at par (e.g., a constant share price) is a key characteristic required for cash management tools. Previously, MMFs provided stability by maintaining a constant share price as long as mark-to-market net asset values rounded to the nearest one percent would yield the same price—a key exemption authorized under rule 2a-7.[1]

Share price stability offered by prime MMFs conveyed a false sense that MMF shares are a risk-free asset. However, prime MMF held portfolios which can change so dramatically in value that the dollar parity under rule 2a-7 cannot hold. Before the reforms, corporate treasurers chose to deposit most of their funds into higher-yielding prime funds over more prudent government funds because both promised redemption at par without restrictions.[2]

These shortcomings became unsustainable during the financial crisis in 2008 when some prime funds were no longer able to maintain a constant share price. The U.S. Securities and Exchange Commission adopted amendments to reduce the risk of MMF runs that could cascade into a mass sectoral asset reallocation with systemic consequences.[3] These new regulations stripped away the constant share price characteristics of institutional prime MMFs and imposed redemption gates and fees. Institutional depositors reacted by shifting almost exclusively to government MMF to preserve redemption capabilities at a constant share price without other restrictions. Although the change in regulation was expected to cause a reallocation from prime to government funds, the magnitude of the change has caught many by surprise.[4] Approximately $1 trillion shifted from prime to government MMFs (Figure 1).[5]

[1] MMFs had to constantly calculate a shadow price using available market prices or fair value pricing.
[2] Prime MMFs primarily invest in corporate debt whereas government MMFs invest in government and agency debt (or repos of the respective securities).
[3] Rule 2a-7 Amendments by SEC in July 2014.
[4] Remarks by S. Potter, Executive Vice President of the Markets Group of the Federal Reserve Bank of New York, at UCLA, April 2017.
[5] The word "shift" should not be taken to mean a one-to-one movement of investment in prime funds to government funds, as such information is not available.

FIGURE 1. Money Market Fund—Regulatory Impact.



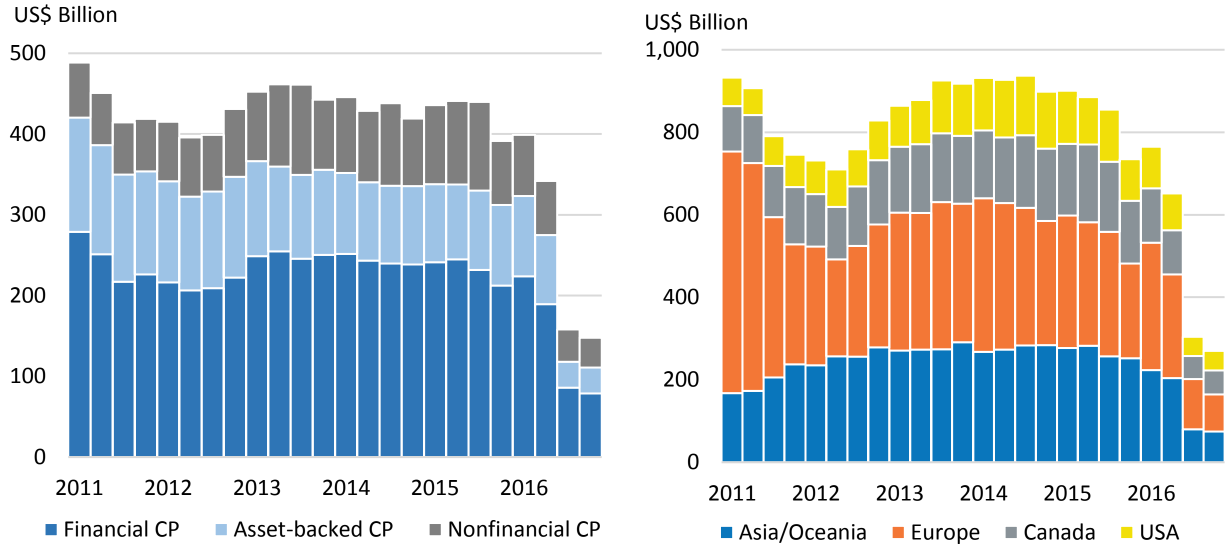
Source: U.S. Federal Reserve.

MMF Investments Changed Short-Term Funding Options for Banks

Prime Funds—The Drawdown

The reallocation of $1 trillion from prime to government MMFs had a substantial impact on market demand for the underlying instruments. New roles of MMFs consequently changed the mix of instruments by which borrowers raised short-term funds. MMFs hold a variety of short-term instruments—government issued and backed securities, commercial paper, certificates of deposits, and repurchase agreements. Most prime funds invest largely in higher-yielding commercial paper and certificates of deposit (comprising around 60 percent of their total assets). From the issuer's perspective, almost 40 percent of total CP was held by MMFs. However, following the MMF reforms, this share has fallen to below 10 percent, or $150 billion as of December 2016 (Figure 3).

FIGURE 2. Prime Money Market Funds' Commercial Paper Holdings (left) and Deposits by Domicile (right)



Source: U.S. Federal Reserve.

Most commercial paper (CP) is issued by banks—and this accounted for most of the decline in MMFs' holdings following the reforms (Figure 3).[6] Foreign banks' ability to raise short-term funding was handicapped more than domestic banks. This is because domestic banks had alternative funding sources, such as advances from the Federal Home Loan Banks (FHLBs), and had already been gradually switching funding sources away from issuing CP for reasons unrelated to the 2016 reforms. FHLB advances became available at a lower price, and were extended for terms (lengths of time) which proved useful for meeting liquidity requirements under Basel III.[7] In contrast, foreign banks are not able to access FHLB advances and therefore had no alternative way to raise short-term funding other than through their CP issuance. Consequently, as prime funds withdrew from the CP market and also reduced their deposits (Figure 3), the reserves and overall balance sheets of foreign banks' U.S. branches contracted.

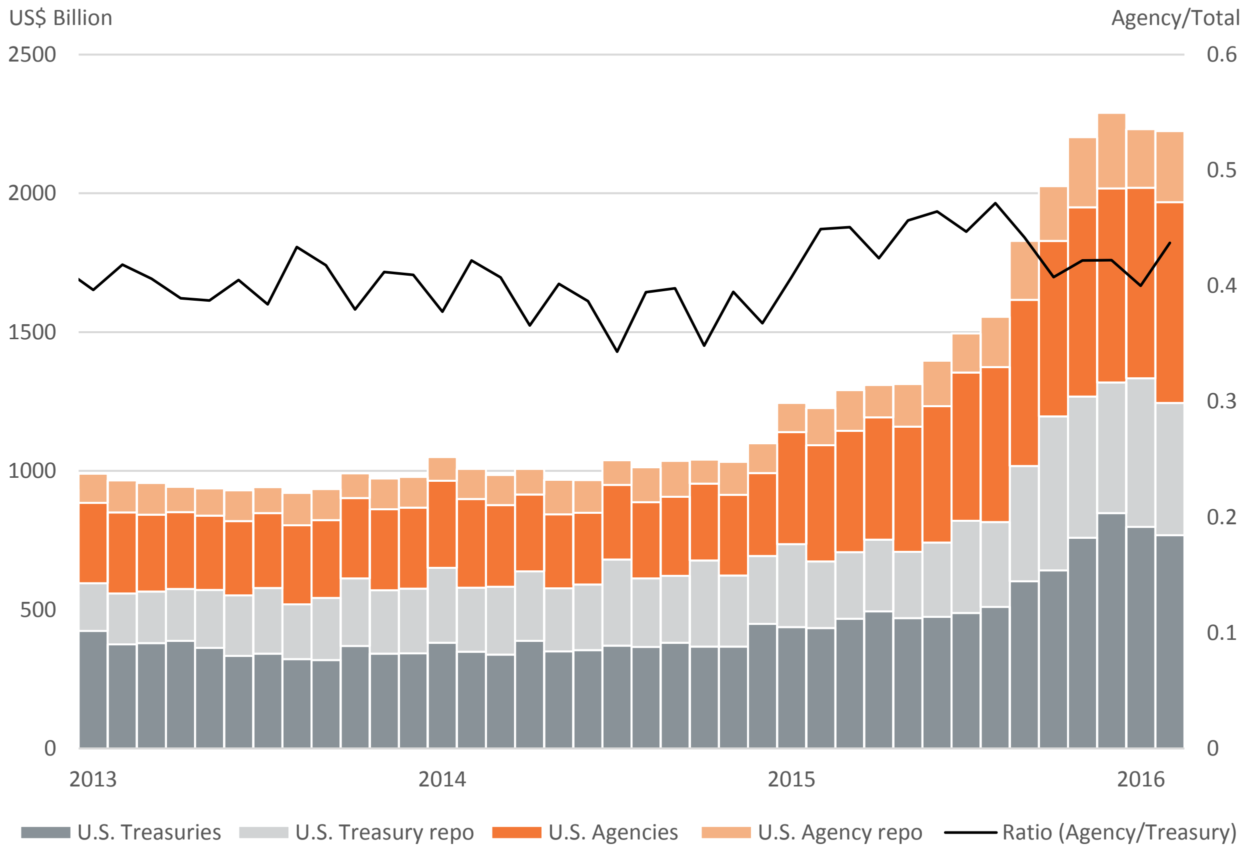
Government Funds—Asset Reallocation and FHLBs

The bulk of outflows from prime funds went into government funds, which accommodated the inflows by increasing purchases of Agency and Treasury debt, and using repurchase agreements through the Federal Reserve's overnight reverse repo facility. As government money market funds' portfolios grew on aggregate, the proportion of their investment allocated to Agency debt and Agency-backed repos stayed persistently high, accounting for 44 percent of their assets as of January, 2017 (Figure 4).

[6] Banks are generally prohibited from issuing CP themselves, but can raise funds through asset-backed CP issued by conduits, or financial CP issued by bank-related finance companies held by the parent bank holding company (Kacperczyk and Schnabl, 2010).
[7] Federal Housing Agency Office of Inspector General (2014).

As MMFs' demand for Agency debt grew and their demand for CP fell, domestic banks adjusted their funding structures accordingly. Banks increased their borrowings—called advances—from FHLBs, as a ready substitute for raising funds by issuing CP. FHLBs' issuance has increased, particularly of their short-term, floating rate obligations which are eligible to MMFs—outstanding floaters increased from $80 billion at the end of 2015 to $295 billion by June, 2017.[8]

FIGURE 3. Government MMFs' Holdings



Source: U.S. Federal Reserve.

[8] FHLBanks Office of Finance Monthly Issuance Data Reports. "Short-term," here, refers to 397 days or less to maturity.

Conclusion

Price stability is an essential characteristic of a cash management tool. However, price stability may induce investor complacency by introducing the incorrect notion that underlying assets held by a money market fund are risk-free. This distortion can induce destabilizing runs in times of extreme financial stress. By allowing the share price of MMFs to vary, new regulations have highlighted the fact that shares in prime MMFs are not risk-free. This change in regulation led to a $1 trillion reallocation from prime to government funds, thereby reducing the risk of runs caused by the false sense of security of a guaranteed fixed share price when market conditions become volatile.

Fees and gates, the second pillar of the new MMF regulations, may stem runs temporarily. However, they may induce attempts to circumvent the restrictions and could make a liquidity crunch worse by cutting off investors from accessing their liquid assets just when liquidity is scarce. Only institutional prime MMFs remain subject to the rules on gates and fees. However, regulators may extend these quantitative restrictions on withdrawals to mutual funds more broadly. Such a regulatory shift might create preemptive runs, as the option to suspend convertibility introduces potential restrictions on investors' access to their assets in times of stress. In other words, investors might withdraw their investments if the likelihood of redemption restrictions increases substantially. The almost-disappearance of institutional prime funds is an indication of the importance investors place on having reliable access to their assets.

These shifts in the money market and related channels of short-term financing should act as a reminder that regulatory pressure on one part of financial markets has repercussions throughout the entire financial system—leading to unexpected adaptation by market participants. To cite U.S. Federal Reserve vice chair Stanley Fischer, "[w]hile the current configuration of money markets reveals a reduced financial stability risk […] this configuration may not yet represent the final equilibrium."[9]

[9] Stanley Fisher (2017).

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