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Money Market Fund Regulation
Winners, Losers and Long-Term Consequences

New Money Market Fund regulations which went into effect October 14, 2016 were intended to prevent future bailouts and enhance market stability. Instead, they have disrupted financial markets, hurt business and municipal borrowers, and ***increased*** *U.S. taxpayer bailout exposure in future market stress events.*

While there are winners and losers with any regulatory change, the magnitude of the shifts in this case are massive. Private sector and municipal sector borrowers lost $1.2 trillion of available funding while the Federal government and its agencies reaped the gains.

These are not the outcomes Congress or the SEC intended. There was never an objective to advantage the Federal government at the expense of the private sector and municipal entities.

In retrospect, we can see which aspects of the new regulations caused the negative consequences and suggest corrections to address them.

In this paper, we examine the Money Market Fund (MMF) regulation changes and the $1.2+ trillion in fund flows that resulted from them since 2014. We look at the very negative impact they have had on U.S. private sector businesses and state and local governments, and highlight winners and losers:

Winners: $1.2 trillion

- U.S. Government MMFs which hold securities of government agencies such as Fannie Mae, Freddie Mac and the Federal Home Loan Bank – these funds ballooned by $1.075 trillion.
- U.S. Treasury MMFs which hold U.S. Treasury debt securities – more than $158 billion of investments went into U.S. Treasury Funds.

Losers: $1.2 trillion

- Prime MMFs which invest in the short-term debt of corporations and banks – more than $1.059 trillion of investments left these funds and are no longer available to borrowers.
- Tax Exempt MMFs which invest in the short-term debt of state and local governments, hospitals, universities and public works – investments in these funds fell by half. Over $137 billion is no longer available to fund public infrastructure.

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The bottom line is that the attempt to solve a perceived problem with regulation has decimated an entire swath of the financial markets, at a level far more onerous than even the original worse-case scenario. The new rules have essentially devastated the part of the market they tried to improve.

Longer-term Consequences

Considerable but reversible damage has already been done. The specter of additional damage looms over two major upcoming U.S. government initiatives.

- Repatriation of overseas corporate cash. Overseas corporate cash is estimated to be as high as $2.5 trillion. Through various incentives, the U.S. government hopes to attract hundreds of billions of dollars back onshore. The premise is that much of this cash will be reinvested in capital projects and stimulate the economy.

  As a typical corporate treasury practice, until companies ultimately complete their capital projects, this cash will be invested in short-term instruments, primarily money market funds. Unfortunately, because of these new MMF regulations, the cash will be stranded in government and treasury MMFs rather than employed in the private sector via Prime and Tax Exempt MMFs. The result is that **the economic impact of corporate cash repatriation initiatives will be both muted and delayed because of the new MMF regulations**.

- Investments in infrastructure. Government officials are contemplating several plans to invest substantially in U.S. infrastructure through direct public investment as well as public-private partnerships.

  Success in this area requires that state and local governments have ready access to working capital. The most efficient way for these entities to obtain short-term working capital is via Tax Exempt MMFs. Unfortunately, TEMMFs have been decimated by the new MMF regulations. The result is that **the most efficient mechanism for states and municipalities to secure working capital for infrastructure projects is no longer functioning**.

Conclusion

We conclude the paper with recommendations for the SEC and Congress to rollback several provisions of the new MMF regulations immediately.

The Death of Prime and Tax Exempt MMFs

In a fervor to right all wrongs that may have contributed to the 2008 financial crisis, Congress and the SEC were quick to demand MMF reforms.[1] The SEC instituted a series of reforms in 2010 that were considered very successful, as they added transparency around fund holdings and net asset values, and bolstered MMF liquidity.

Some regulators insisted that money funds needed still more controls, despite these successful changes. In the face of ample evidence to the contrary, they maintained that MMFs are subject to "runs" because the $1.00 constant net asset value (CNAV) causes MMF investors to be confused between MMFs and bank deposits.[2]

Under thinly veiled coercion from the FSOC, the SEC added more MMF regulations. These were far more draconian than the 2010 changes, and narrowly targeted. They singled out just one investor segment ("non-natural persons"[3]) and two types of MMFs: Prime MMFs and Tax Exempt MMFs. An especially onerous change prohibited use of a standard accounting method called amortized cost[4] for these targeted funds, which eliminated the constant net asset value (CNAV) feature for them.

These ill-conceived regulations created funds in which miniscule daily fluctuations generate myriad administrative, operating and compliance issues. This was clearly illustrated in recent testimony before the Senate Banking Committee[5]. Having lost the functional utility of CNAV, droves of investors exited this once thriving market. 73% of Prime MMF assets left; 50% of Tax Exempt MMF assets left. No business could survive the imposition of regulations that drove off half to three-quarters of its activity. Thus, these changes have eradicated a major portion of one of the world's deepest and most efficient markets for short-term capital. It might have been more efficient to simply outlaw these funds altogether, if the intention was to wipe them out.

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[1] See *The Financial Meltdown of 2007-2008: A Multi-Vehicle Pile Up on an Icy Expressway*. Treasury Strategies, 2011

[2] This is simply ludicrous. These institutional investors are sophisticated financial professionals, corporate treasurers, institutional money managers, and managers in bank trust departments. There is absolutely no evidence they are confused between MMFs and bank deposits.

[3] The category "non-natural persons" includes anything other than individuals – for example, corporations, institutions, trust departments, financial advisors, etc.

[4] Amortized cost accounting is an accounting principal used by almost all banks, almost all corporations and most other investors including all Treasury MMFs and all Government MMFs for their own portfolios.

[5] Thomas C. Deas, Chairman of the National Association of Corporate Treasurers, before the United States Senate Committee on Banking, Housing, and Urban Affairs, March 28, 2017

Ironically, these latest regulations were laden with contradictions and inconsistency. By allowing “non-natural persons” to invest in Prime MMFs and Tax Exempt MMFs only if those funds abandoned CNAV and adopted a floating NAV, regulators were absurdly saying that sophisticated investors, corporate treasurers and bank trust departments are confused between MMFs and bank deposits (and that retail investors, who are permitted to continue using CNAV funds, understand the distinction clearly). The fact that after their purported study, the SEC chose not to include government and treasury funds under the regulation, is evidence that they concluded there is no confusion at all among these investors. Similarly, if the floating NAV was truly needed for increased transparency, it makes no sense that it should have been required for only institutional funds and not retail funds as well.

Money Market Fund Asset Shift

We examined asset levels and flows of all U.S. money market funds in detail to determine how all market participants have been impacted. We looked at MMF holdings by fund type, asset class and individual issuer on January 1, 2014, prior to the announcement of the regulations. The analysis continues through January 1, 2017, shortly after the full implementation. This provides an informative and clear view of the MMF marketplace.

As mentioned above, the 2016 MMF regulations resulted in massive outflows from Prime and Tax Exempt MMFs. Yet total MMF assets were virtually flat during the examination period ($2.604T in 2014 and $2.641T in 2017). This makes it clear that assets shifted across types of funds.

By eliminating CNAV and imposing FNAV, the new regulations substantially decreased the utility of Prime MMFs and Tax Exempt MMFs for “non-natural persons” such as institutional investors and corporate treasurers. But the regulations did not impose FNAV on Government MMFs – they were allowed to retain CNAV. Logically, investors moved out of Prime and Tax Exempt funds as the October 14, 2016 implementation date neared. Although some investors abandoned money funds entirely, most shifted their assets into Government MMFs. These funds invest in government agency securities, treasury securities and other securities directly or indirectly backed by the U.S. government.

Figure 1 shows that during the examination period, more than $1.2 trillion left Prime and Tax Exempt funds while assets in Government and Treasury funds grew by $1.2 trillion.

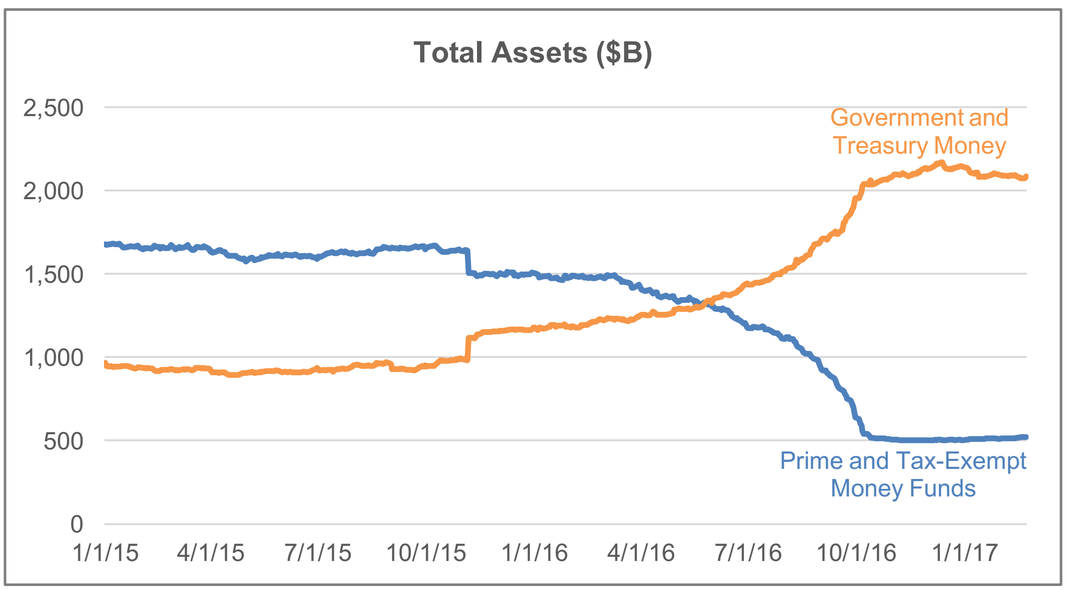
Figure 1. Assets by MMF Type

Total Assets by Money Market Fund Type ($B)			
Fund Type	**January 2014**	**January 2017**	**Change**
Treasury	456	615	158
Government	445	1,521	1,075
Prime	1,434	375	(1,059)
Tax Exempt	267	131	(137)
Total	**2,604**	**2,641**	**37**

Source: Treasury Strategies and Crane Data

Figure 2 highlights the shift over time. As you can see, the decrease in Prime and Tax Exempt funds happened in lock step with the increase in Government and Treasury funds. These charts also show that the massive flows ended in October 2016, which underscores their regulatory origins.

Figure 2. Time Series of MMF Asset Flows



Source: Treasury Strategies and Crane Data

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<u>Government May Be More on the Hook; Municipal and Private Sector Borrowers Lose</u>

Money market funds invest in high quality, short-term debt instruments of both private and public sector borrowers. Banks, corporations and the private sector have relied upon Prime MMF funding for decades; Tax Exempt MMFs have been a key source of funding for municipalities, universities and hospitals. The $1.2 trillion move of investments out of Prime and Tax Exempt MMFs has necessarily reduced funding sources for such entities. As the investments moved into Government MMFs, funding increased for the types of debt they hold.

This sets up a zero-sum game of winners and losers, which would be merely interesting if the magnitude of the flows were small. But dollar flows in the hundreds of billions have significant impact, and fundamentally alter markets over time.

Sector Winners

As investments flowed into Government and Treasury MMFs:

- The largest windfall – more than $317 billion – went to the U.S. Treasury.
- The Federal Reserve benefited by an extra $250 billion to fund its repo programs.
- The total funding for U.S. government agencies swelled by $263 billion, almost all of which went into the **housing and agricultural sectors**. See Figure 3.

In addition to massive new funding sources, these winners are also rewarded with lower borrowing costs, giving them incentive to borrow more and expand. Losers, on the other hand, are penalized with diminished access to capital, and further penalized with higher borrowing costs, creating an incentive to borrow less and contract.

Clearly the largest winner is the U.S. Treasury. As a result of the new MMF regulations, corporate treasurers and institutional investors who want MMFs have little choice but to purchase funds which buy large quantities of treasuries or repo. Nearly $600 billion has moved in this manner.

The other big winners are U.S. government agencies. These entities, created by the federal government, are intended to support various sectors of the U.S. economy. As Figure 4 shows, the biggest beneficiaries of increased MMF funding are the housing and agricultural sectors. Although Fannie Mae funding from MMFs has decreased, there is still a quarter trillion-dollar net positive transfer into housing and agriculture.

Figure 3. Major Flows into Housing and Agriculture

Total Assets Related To Housing and Agriculture ($B)			
Issuer	**January 2014**	**January 2017**	**Change**
Federal Home Loan Bank	236	483	247
Federal Farm Credit Bank	32	66	34
Freddie Mac	58	68	10
Fannie Mae	61	32	(29)
Source: Treasury Strategies and Crane Data			**262**

In crafting their latest MMF regulations, the SEC was motivated to ensure the government would never have to bail out a MMF to protect the economy. While never required to bail out Prime or Tax Exempt MMFs, it might have done so, for expediency's sake – a "quasi back-stop".

Now, however, with so much more MMF money invested in agency debt, the government's implied backing has risen by two-thirds. Agency debt is not explicitly backed by the full faith and credit, but it does have default risk, and there is a much stronger implication of a "quasi back-stop" for this than for Prime or Tax Exempt MMFs.

Sector Losers

As investments flowed out of Prime and Tax Exempt MMFs, hundreds of billions of dollars of potential financing for banks, corporations and state and local governments evaporated.

- Corporations which used MMFs as a source of short-term funds for payrolls and inventories had to replace billions in lost funding. Figure 4 lists 26 companies that depended on Prime MMFs funding to cover payroll, inventory and other day-to-day expenses, that lost access to $100 million or more in funding.
- State and local governments lost funding which had to be replaced at higher borrowing costs. At this margin, infrastructure projects for roads, schools and hospitals may have been delayed or cancelled. Figure 5 ranks the thirty states whose municipalities collectively lost $1 billion or more in funding.
- Commercial banks lost funding which could have otherwise supported U.S. business and consumer loans.

Losers in this regulation-induced game include the many companies that previously relied on Prime MMFs for short-term funding needs. While they may have found alternative funding sources, it is likely to have been on more expensive, less desirable terms.

Figure 4. Companies Experiencing Diminished MMF Funding

Companies Experiencing Diminished Money Market Fund Funding ($B) January 2014 – January 2017			
Rank	**Company**	**US HQ**	**Change in MMF Funding**
1	General Electric	CT	(9,398,927,716)
2	Toyota	TX	(7,675,118,979)
3	Coca-Cola Co	GA	(5,301,411,344)
4	Exxon Mobil	TX	(1,721,496,466)
5	Wal-Mart Stores Inc	AR	(1,466,221,550)
6	Nestle	VA	(1,280,893,607)
7	Shell Intl Finance BV	-	(1,061,278,100)
8	PepsiCo Inc	NY	(1,000,576,802)
9	Ford	MI	(961,331,697)
10	Johnson & Johnson	NJ	(919,664,902)
11	Chevron Co	CA	(891,831,910)
12	Devon Energy Co	OK	(779,900,000)
13	Procter & Gamble Co	OH	(749,725,812)
14	GlaxoSmithKline	PA	(740,312,916)
15	BHP Billiton	-	(644,991,295)
16	Pfizer Inc	NY	(596,029,101)
17	Comcast Co	PA	(576,437,747)
18	Honda	OH	(550,085,158)
19	BMW	NJ	(475,743,839)
20	Siemens	DC	(429,964,965)
21	Dominion Resources Inc	VA	(330,684,727)
22	Northeast Utilities	MA	(252,994,048)
23	Google Inc	CA	(248,454,776)
24	IBM	NY	(236,598,140)
25	Caterpillar Inc	IL	(228,319,041)
26	Altria Group Inc	VA	(216,238,132)
25	Catholic Health Initiatives	CO	(212,948,155)
26	Deere & Co	IL	(209,240,368)
25	Merck	NJ	(160,988,657)
26	Abbott Laboratories	IL	(154,841,812)
25	EI Du Pont De Nemours	DE	(138,833,700)
26	Kimberly-Clark Co	TX	(137,979,774)
25	Army and Air Force Exch.	TX	(123,487,295)
26	Unilever	NJ	(111,589,638)
25	Walt Disney Co	CA	(100,478,020)
26	Medtronic Inc	MN	(100,000,000)

Source: Treasury Strategies and Crane Data

State and Local Governments rely on Tax Exempt MMFs and, to an extent, Prime MMFs for their short-term funding needs. As a result of the new MMF regulations, municipalities in 30 states lost over $1 billion of funding each. For many of these municipalities, substitute funding came at a higher cost. See Figure 5 for details.

Figure 5. States Whose Municipalities Lost More than $1 Billion Of Tax Exempt MMF Funding

States Whose Municipalities Collectively Lost Over $1B in Funding from Tax Exempt Money Market Funds		
Rank	**State**	**Change in Funding**
1	CA	(17,202,647,697)
2	TX	(13,990,172,568)
3	NY	(13,398,460,179)
4	IL	(5,507,365,891)
5	MA	(4,370,357,152)
6	NJ	(3,918,888,439)
7	OH	(3,822,490,622)
8	FL	(3,805,395,018)
9	PA	(3,485,409,956)
10	NC	(3,053,745,477)
11	IN	(2,921,762,474)
12	WI	(2,665,796,950)
13	MI	(2,182,836,426)
14	WA	(2,094,249,275)
15	GA	(2,034,489,393)
16	MD	(1,911,268,987)
17	CO	(1,779,366,954)
18	MN	(1,775,202,506)
19	CT	(1,557,701,345)
20	TN	(1,501,056,283)
21	KY	(1,474,179,464)
22	DC	(1,403,541,709)
23	AZ	(1,397,280,655)
24	VA	(1,383,868,448)
25	LA	(1,272,004,969)
26	OR	(1,152,823,509)
27	SC	(1,138,497,387)
28	UT	(1,053,796,415)
29	NV	(1,023,054,197)
30	NE	(1,009,883,937)

Source: Treasury Strategies and Crane Data

It was hardly the intention of the SEC to make new rules that would support the funding of housing and agriculture growth, at the expense of private sector companies, banks, and municipal entities. It was hardly their intent to make short-term funding more expensive or difficult for hundreds of municipal entities and private sector companies. Nor was it their intent to increase the government's implied MMF back stop exposure. Yet, the seismic investment dollar shifts resulting from new MMF regulations have had these results.

<u>Conclusion / Action</u>

The net result is the eradication of a significant part of one of the world's deepest and most efficient markets for short-term capital.

We believe it is still possible to turn back the clock to a significant degree, without harming the regulatory intent. This could be done by simply restoring the CNAV for all investors in all types of MMFs. Institutional investors, corporate treasurers and investment advisors would once again resume using Prime and Tax Exempt MMFs if the administrative hassles of FNAV were no longer operative.