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Negative Impacts of New US Money Market Fund Regulations on Businesses and Municipalities

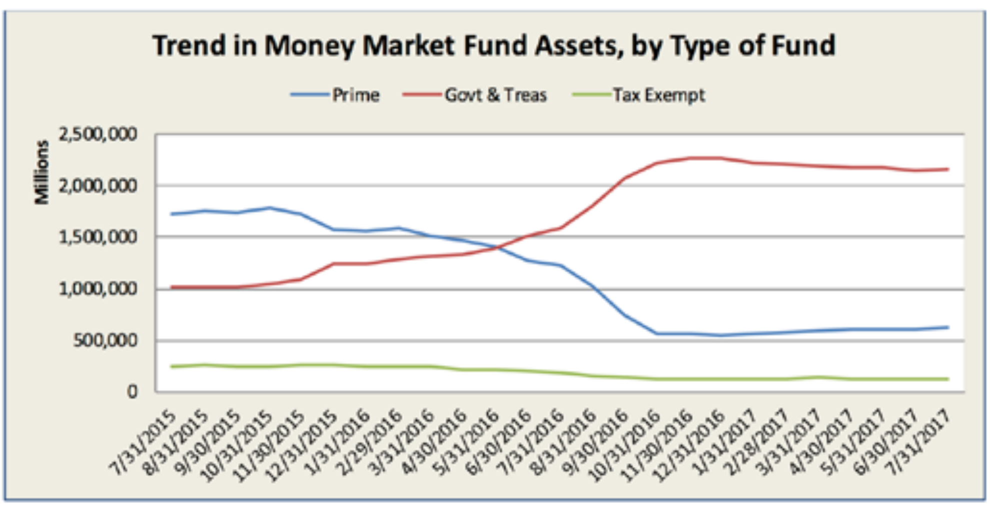
New Money Market Fund regulations which went into effect October 14, 2016 were intended to prevent future bailouts and enhance market stability. Instead, they have disrupted financial markets, hurt municipal and business borrowers, improved short term borrowing conditions for the U.S. government and agencies at the expense of investors and the private sector, and increased U.S. taxpayer bailout exposure in future market stress events.

Borrowers and investors have experienced significant consequences as short term markets adjust to these massive shifts. Municipal borrowers have been hit with higher borrowing rates; main street businesses have seen credit contraction, and investors are experiencing subpar returns.

The new regulations resulted in a massive $1.2 trillion flight out of Prime and Tax Exempt money funds. This directly impacted organizations that previously relied on those money funds as a source of short term borrowing.

- Prime funds, a key funding source for corporations and banks, fell from $1.73 trillion to $0.62 trillion.
- Tax exempt funds, a key funding source for municipalities, universities and hospitals, fell from $254 billion to $135 billion.
- In total, $1.22 trillion has exited Prime and Tax Exempt funds between July 2015 and July 2017 and is now no longer available to support business and municipal borrowing. This is all due to the new regulations.

The chart below shows the asset flow out of Prime and Tax Exempt funds.



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Winners and Losers in the Money Fund Rout

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.

<u>Biggest Winners</u> – the winners have been rewarded with significantly increased access to credit and lower borrowing costs by virtue of assets leaving Prime and Tax Exempt funds and moving to Government and Treasury funds. GSEs such as the Federal Home Loan Bank and Freddie Mac now account for an increased $263 billion of money market fund borrowings. The U.S. Treasury and Repo account for $567 billion more. In total, the US Government and Agencies are borrowing $1.2 trillion more from money market funds.

<u>Biggest Losers</u> – the losers have lost access to a major source of credit and now face higher borrowing costs as they try to replace it. Business borrowers lost $371 billion of credit access from money funds. Municipal borrowers lost $145 billion, and financial institution borrowers lost more than $700 billion. In total, business and municipal borrowers have lost $1.2 trillion of short term borrowing access from money market funds. Table 1 on the next page shows states whose municipalities have experienced dramatic declines in money market funding.

Large, highly rated corporate borrowers that have lost money market fund borrowing capacity seek credit elsewhere and find it at competitive rates. But Main Street business borrowers get crowded out by these large borrowers; they end up paying more to borrow, and encounter more credit limits. Municipalities maintain their credit access through other sources, but at a higher premium relative to their money market fund borrowing costs.

This reallocation of borrowing capacity represents a $1.2 trillion transfer of capital from the private sector to Federal Government and agencies. It necessarily increases borrowing costs for all non-Federal borrowers: large companies, Main Street companies, municipalities and financial institutions.

Investors are also big losers. As $1.2 trillion of their short-term investments leave what are now un-useable prime and tax exempt funds (see below), they realize 20bps – 30 bps lower returns on Government funds. This costs them $2.5 - $4 billion in lost investment income.

Figure 1. Loss of Funding to Tax-Exempt Money Fund issuers in States Losing Over $1B in Funding
Source: Cranedata.com, Treasury Strategies (August 2017)

State	Principal 1/1/16 (\$000,000)	Principal 8/1/17 (\$000,000)	Change in Funding (\$000,000)	Change in Funding %
NY	36,979	21,205	(15,774)	-43%
CA	32,389	17,951	(14,438)	-45%
TX	14,963	8,830	(6,133)	-41%
MA	9,605	4,056	(5,549)	-58%
IL	7,970	4,323	(3,647)	-46%
FL	7,808	4,492	(3,316)	-42%
IN	4,294	1,524	(2,771)	-65%
NJ	6,396	3,663	(2,733)	-43%
NC	3,967	1,449	(2,517)	-63%
PA	6,154	3,695	(2,459)	-40%
OH	4,305	1,915	(2,391)	-56%
MN	2,822	955	(1,866)	-66%
MI	3,977	2,416	(1,561)	-39%
CT	3,067	1,516	(1,551)	-51%
WI	2,860	1,336	(1,524)	-53%
CO	3,639	2,304	(1,335)	-37%
MO	2,445	1,197	(1,249)	-51%
VA	2,548	1,303	(1,244)	-49%
MD	2,569	1,399	(1,170)	-46%
GA	3,364	2,226	(1,138)	-34%
SC	1,577	445	(1,131)	-72%
MS	2,244	1,126	(1,119)	-50%
AK	1,448	357	(1,091)	-75%
LA	2,642	1,608	(1,033)	-39%
TN	2,752	1,752	(1,000)	-36%

Why Municipalities Pay Higher Rates

Tax Exempt MMFs assets fell from $254 billion to $135 billion between July 2015 and July 2017, shrinking the funding pool available to municipal borrowers.

The primary instruments used for municipal borrowing are variable rate demand notes (VRDNs), which are mainly held by Tax Exempt MMFs. Rates on these notes reset weekly or monthly based on the SIFMA index, even though they are long-term instruments.

As Tax Exempt money fund assets fell dramatically, there was a radical shift of the supply and demand dynamics surrounding VRDNs. The supply of funds to buy VRDNs fell more than half, yet the demand for such borrowings remained constant. This caused rates to rise.

Some municipalities still have Tax Exempt MMFs owning their VRDNs but now pay substantially higher borrowing rates. The remaining municipalities have had to resell their notes to other investors, at even higher rates. Municipalities unable to find other buyers have had to put their notes back to a commercial bank, at still higher rates.

The lowest municipal borrowing costs are up far more than would be attributable to Fed rate increases alone. The SIFMA index measures average short term rates for high-grade municipal borrowings. From July 2015 through July 2017, the SIFMA index moved from 1 to 91 bps - an increase of 90bps. Over the same period, Fed Funds rose from 50 to 125 bps - an after-tax increase equal of 45 bps.[1]

Thus, municipalities' fortunate enough to continue selling VRNDs to Tax Exempt MMFs saw borrowing costs skyrocket at double the Fed rate increase – 90 bps vs. 45 bps after tax. Other less fortunate municipalities would have to borrow from other investors or replace their VRDNs with bank loans at even higher rates.

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[1] A 75 bp increase at an assumed 40% tax rate. 60% of 75 bps = 45 bps.

How Main Street Borrowers Have Been Crowded Out

The two primary pools of short term capital for U.S. businesses are bank commercial and industrial (C&I) loans and Prime money market funds. From these two pools, the borrowers from Prime funds tend to be larger firms with top credit ratings. Small and medium businesses are much more likely to borrow from commercial banks.

In July 2015, combined capital available from these two sources was $2.35 trillion - $1.89 trillion provided by bank C&I loans, and $460 billion provided by Prime MMF borrowings.

By July 2017, that combined capital pool had shrunk by $161 billion to $2.19 trillion. This was the direct result of investors leaving Prime MMFs. Bank C&I loans did in fact grow – to $2.1 trillion, an increase of $210 billion. But Prime MMF funding for businesses shrank – to $88 billion, a drop of $371 billion.

Main Street businesses were much more severely impacted by this $161 billion shortfall than their large corporate counterparts. Large, highly rated borrowers could easily replace their Prime MMF debt with bank borrowings. The shortfall burden fell on the shoulders of Main Street businesses. They have been crowded out of bank lending sources by the larger companies. Some now main street firms now pay higher rates to alternative lenders; others may be simply unable to borrow at any competitive rate.

For each $1 billon of Prime MMF debt that a large company replaces with bank borrowing, 10,000 Main Street businesses lose access to $100,000 in funding.

Table 2 on the next page shows large corporate borrowers that have experienced major declines in money market funding. As these firms replace this funding with bank borrowing, they crowd out Main Street borrowers, as described above.

Figure 2: Companies Losing Money Market Fund Funding ($)
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)

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How New MMF Operating Features Made Prime and Tax Exempt Funds Un-useable for Corporate Investors

Corporate investors have essentially been forced to abandon Prime and Tax Exempt funds, due to operating features imposed by the new regulations. This is what caused most of the $1.2 trillion flight away from these funds. Some of these unworkable features are described below.

- Sweep Accounts were rendered inoperable by the fluctuating NAV. These popular operating accounts simply cannot work without a constant net asset value.

- Fees, gates and fluctuating NAVs are not permitted under many corporate investment policies. Such policies are black and white; investments which have unpermitted characteristics may not be used under any circumstances.

- Fees, gates and fluctuating NAVs are not permitted by most state and local government investment policies.

- Fees, gates and fluctuating NAVs are not permitted by many loan covenants and bond indentures. In the past, loan and bond proceeds which were not immediately required were invested in prime money market funds. This would no longer be a permitted investment with the new MMF operating features.

- Tax and recordkeeping requirements raise operational costs to investors in Prime and Tax Exempt funds.

Some industry observers believe the money that fled from Prime and Tax Exempt funds will likely return, once investment spreads widen sufficiently between them and Government funds. But these barriers are structural, not preferential. They will prevent much money from ever returning, no matter how wide Prime vs. Government fund spreads, nor how attractive Prime and Tax Exempt rates.

To underscore this point, current Prime vs. Government spreads recently hit 30 bps – which is double the historic average (according to cranedata.com). Yet only a few billion of the $1.2 trillion exodus has trickled back.

Tax Exempt MMFs exceeded $500 billion prior to interest rates falling to zero after the financial crisis. Absent the regulations, assets in Tax Exempt MMFs today would likely be much greater than before rates started to rise.

How Bailout Exposure May Have Actually Increased

As a result of the new regulations, $1.2 trillion of investments have flowed out of Prime and Tax Exempt MMFs and into Treasury and Government MMFs, funding increased for the types of debt they hold.

U.S. government agencies have benefitted greatly from this. These entities, created by the federal government, are intended to support various sectors of the U.S. economy. As Figure 3 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 MMF 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. Even though MMF regulations *never required that the government would bail out* Prime or Tax Exempt MMFs, it might have done so, for expediency's sake. This created the implication of a "quasi back-stop" for MMFs.

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

Conclusion

It was hardly the intention of the SEC to craft new rules that made short-term funding more expensive or difficult for hundreds of municipal entities and private sector companies. It was not their intent to support the funding of housing and agriculture growth, at the expense of private sector companies, banks, and municipal entities. 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.

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 of the SEC's MMF rules. This could be done by simply allowing MMFs the option of restoring the CNAV for 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, allowing funding dollars to flow back into the private and municipal sectors and restoring the borrowing cost balance that served our economy well.

About Treasury Strategies

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