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Discussion of

Liability Structure and Risk-Taking Evidence from MMF Industry

by

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Context: Risk during the Crisis

HOT TOPICS ▶ FINANCIAL CRISIS

Reserve Primary Fund, How It Broke the Buck Causing a Money Market Run

Where Were You the Day the U.S. Economy Nearly Collapsed?

BY KIMBERLY AMADEO • Updated November 15, 2018

On Tuesday, September 16, 2008, the $62.6 billion Reserve Primary Fund "broke the buck." That meant the fund managers couldn't maintain its share price at the $1 value. Money market funds used that value as a benchmark.

Investors were panicking after Monday's bankruptcy of Lehman Brothers. They were taking out their money too fast. They worried that the Fund would go bankrupt due to its investments in Lehman Brothers. That bank had invested a large part of their holdings in mortgage-backed securities and other

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Context: Low Rates –> Low Yields

Money Fund Yields (%, 11/07-7/18)

4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00

01/31/08 03/31/08 05/31/08 07/31/08 09/30/08 11/30/08 1/31/09 3/31/09 5/31/09 7/31/09 9/30/09 11/30/09 1/31/10 3/31/10 5/31/10 7/31/10 9/30/10 11/30/10 1/31/11 3/31/11 5/31/11 7/31/11 9/30/11 11/30/11 1/31/12 3/31/12 5/31/12 7/31/12 9/30/12 11/30/12 1/31/13 3/31/13 5/31/13 7/31/13 9/30/13 11/30/13 1/31/14 3/31/14 5/31/14 7/31/14 9/30/14 11/30/14 1/31/15 3/31/15 5/31/15 7/31/15 9/30/15 11/30/15 1/31/16 4/30/16 6/30/16 8/31/16 10/31/16 12/31/16 2/28/17 4/30/17 6/30/17 8/31/17 10/31/17 12/31/17 2/28/18 4/30/18 6/30/18

CRANE MONEY FUND AVG
CRANE 100 MONEY FUND INDEX

Source: Crane Data

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Low Yields –> Drop in AUM

Source: iMoneyNet. As of May 31, 2018.

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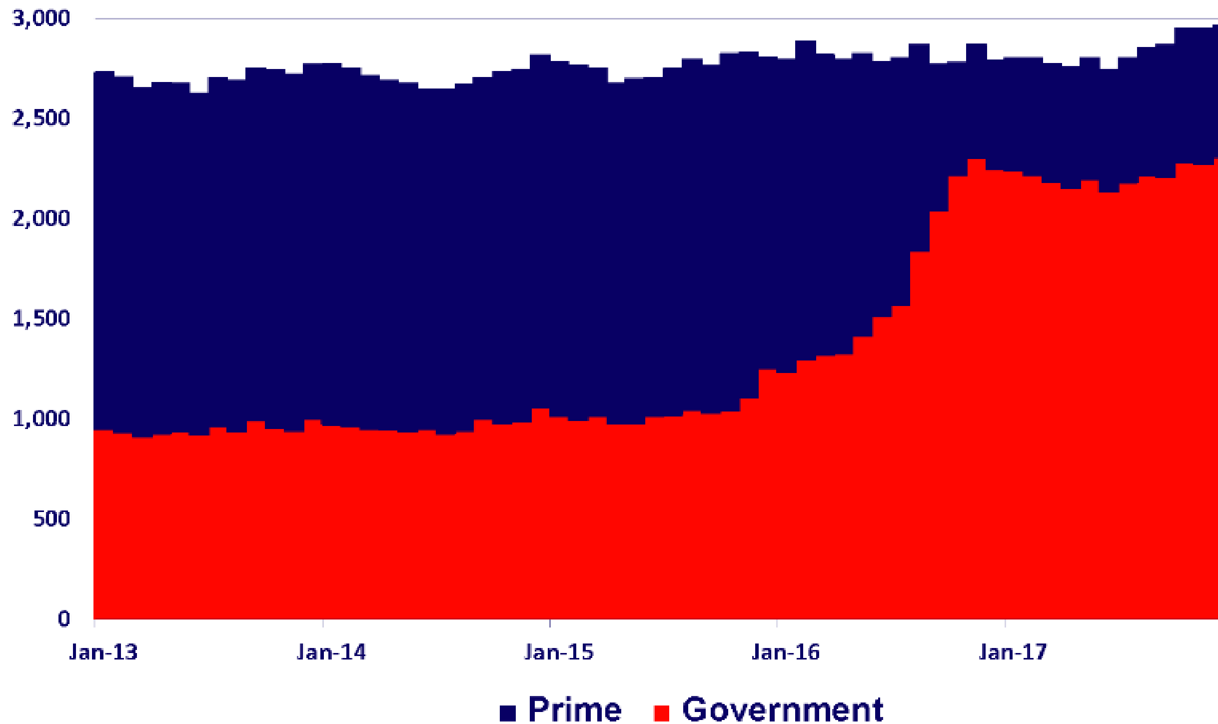
Context: Composition Changed



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This Paper

- Key question:

<u>How the structure of liabilities impacts MMFs' asset holdings?</u>

- Setting:
  - New regulations, announced in July 2014, and effective in October 2016, aim to decrease the possibility of runs on MMFs by decreasing the liquidity of their liabilities.
  - Under the new regime, prime and tax-exempt MMFs can no longer guarantee the value of investor claims but have to trade at their actual net asset value if they are marketed to institutional investors.
  - In addition, all prime and tax-exempt MMFs, including those targeted at retail investors, can impose liquidity fees and redemption gates

The Reform

Investor Type	MMF Type	NAV	Redemption Fee	Redemption Gate
Institutional	Prime	Floating	Up to 2%	Up to 10 business days
Institutional	Municipal / Tax Exempt	Floating	Up to 2%	Up to 10 business days
Institutional / Retail	Government	Stable	None*	None*
Retail	Prime	Stable	Up to 2%	Up to 10 business days
Retail	Municipal / Tax Exempt	Stable	Up to 2%	Up to 10 business days

Practitioners

Blackrock Report:

- Some have called for a roll back of the MMF reforms due to concerns about rising borrowing costs for municipal issuers.
- In contrast, an October 2017 letter written by Securities and Exchange Commission (SEC) Chairman, Jay Clayton, stated: "I am concerned that making major changes at this time could be disruptive to the short-term funding markets."
- Notably, MMF reforms were initiated during a period of historically low interest rates (and hence, historically low borrowing costs) that was followed by several interest rate increases by the Federal Reserve and US tax reform.
- It is, therefore, not surprising that borrowing costs for all issuers have increased along with the Federal Reserve rate hikes, irrespective of MMF reform.

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Borrowing Costs Increase?

Exhibit 4: Fed Funds and SIFMA Index

December 2015 – May 2018

Rate (%)

2.5
2
1.5
1
0.5
0

1st Fed Rate Hike
MMF Reform Compliance Date
2nd Fed Rate Hike
3rd Fed Rate Hike
4th Fed Rate Hike
US Tax Reform Passed
5th Fed Rate Hike
6th Fed Rate Hike

Dec-2015 Jan-2016 Feb-2016 Mar-2016 Apr-2016 May-2016 Jun-2016 Jul-2016 Aug-2016 Sep-2016 Oct-2016 Nov-2016 Dec-2016 Jan-2017 Feb-2017 Mar-2017 Apr-2017 May-2017 Jun-2017 Jul-2017 Aug-2017 Sep-2017 Oct-2017 Nov-2017 Dec-2017 Jan-2018 Feb-2018 Mar-2018 Apr-2018 May-2018

Fed Funds Index
SIFMA Index

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Temporary Dislocations

- The months just before and just after MMF reform implementation represented a period of uncertainty.
- Since fund managers were unsure, at the time, as to the amount of assets that would flow out of prime and municipal MMFs, as the final compliance date for reforms approached, most institutional prime and municipal MMF managers increased the amounts of liquidity they were holding and shortened the maturity profiles of their portfolios.
- This dynamic appears to have contributed to a temporary rise in borrowing costs, as the demand for shorter-dated assets increased relative to supply.
- The dynamic was most noticeable in the spike in the LIBOR-OIS spread, as adjustments in commercial paper markets were similar to municipal markets. This dislocation was temporary in nature and reversed relatively quickly thereafter.

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Temporary Dislocations

Exhibit 6: LIBOR-OIS Spread

Price
2.4
1.9
1.4
0.9
0.4
-0.1

Spread
0.60
0.50
0.40
0.30
0.20
0.10
0.00

Dec-2015 Feb-2016 Apr-2016 Jun-2016 Aug-2016 Oct-2016 Dec-2016 Feb-2017 Apr-2017 Jun-2017 Aug-2017 Oct-2017 Dec-2017 Feb-2018 Apr-2018

—3-month LIBOR —3-month OIS —LIBOR-OIS (RHS)

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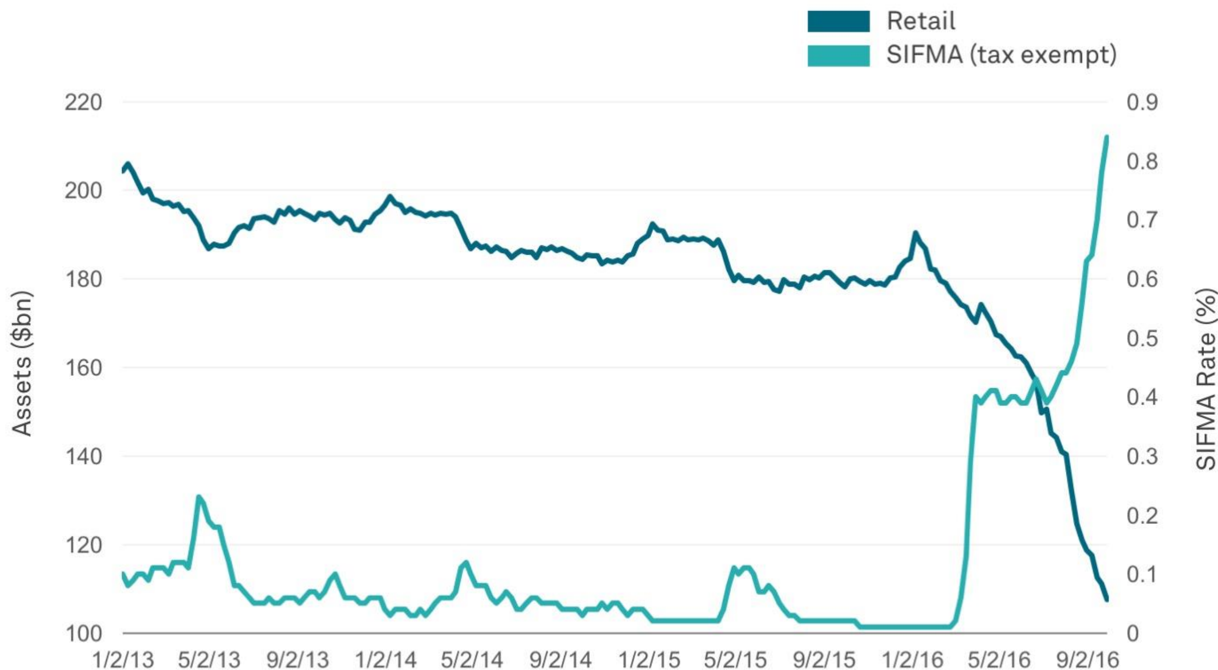
The effect of the Reform on AUM



Main Findings of the Paper

- Results:
  - Extensive margin: safer funds exit the industry
  - Composition: remaining funds increase the riskiness of their portfolios
  - Real effects: safer issuers have less access to funding from MMFs

Comment 1
Move Away from Time Series ID

- Most of the tests in the paper use just the time series variation: before and after the reform
- However, it is hard to quantify the effects of the policy and disentangle them from other contemporaneous changes to market conditions.
- Furthermore, how much of these effects are temporary? Only a post variable is estimated, but not the dynamics of the effects.

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Comment 2
Move Away from Time Series ID

- There is one test in which a Diff-in-Diff approach is used: compare institutional vs retail
- However, these two set of funds might be quite different to begin with since they cater to a completely different set of investors (that's the whole point of the reform)
- Can we be reassured that the trends would have been the same in absence of the reform?

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Comment 3: Channels

- What is the main driver of the results?
- The reform changes several things at once:
  - Is it the floating NAV or the possibility of redemption gates?
  - If both, how much is due to each channel?
- Would help in understanding whether we should expect more or less divergence now that rates are increasing.

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Comment 4: Contribution

- The paper has the hard task of contributing to a crowded literature
- We know that there has been an increase in risk-taking in general post crisis due to many factors (e.g. monetary policy).
- Furthermore, Cipriani and La Spada (2017) present very similar tests and estimate the premium investors are willing to pay to hold money-like assets.

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Implications from Hanson, et al.

- They examine the business model of traditional commercial banks when they compete with shadow banks.
- Traditional banks create money-like claims by holding illiquid fixed-income assets to maturity, and they rely on deposit insurance and costly equity capital to support this strategy. This strategy allows bank depositors to remain “sleepy”: they do not have to pay attention to transient fluctuations in the market value of bank assets.
- In contrast, shadow banks create money-like claims by giving their investors an early exit option requiring the rapid liquidation of assets.
- Thus, traditional banks have a stable source of funding, while shadow banks are subject to runs and fire-sale losses.
- In equilibrium, traditional banks have a comparative advantage at holding fixed-income assets that have only modest fundamental risk but are illiquid and have substantial transitory price volatility, whereas shadow banks tend to hold relatively liquid assets.

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Conclusion

- An important and widely discussed reform.
- Interesting paper.
- More precisely exploring the effects can make it more impactful.