TREASURY STRATEGIES, INC.

DISSECTING THE FINANCIAL COLLAPSE OF 2007-2008

A Two-Year Flight to Quality

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MAY 2012

Considerable resources are being expended to develop new regulations to prevent a repeat of the 2008 financial crisis. It is vital these new regulations are appropriately focused to encourage liquid money markets during any future period of financial stress. In support of that aim, Treasury Strategies (TSI) has prepared this analysis of the money markets prior to, during, and following the financial crisis that peaked in mid-September 2008.

Much of the analysis of the financial crisis repeats the myth that a run on money market mutual funds (MMFs) was a proximate cause of the financial crisis. We believe this is incorrect and misdirects focus away from more significant causal factors. In fact, a $1.2 trillion run on *non*-MMF asset classes had already occurred during the 15 months preceding the chaos of mid-September 2008.

Close examination of asset flows for the week of September 15 shows the firestorm was not triggered by the failure of MMFs, as is being widely cited. The firestorm was actually triggered by the surprise, late-night $85 billion government rescue of AIG.

On the morning of September 15, Lehman Brothers declared bankruptcy. That evening, aware of AIG's Lehman exposure, all three major rating agencies nonetheless issued investment grade ratings on AIG. Thus the 9 p.m. September 16 surprise $85B rescue of AIG sent global markets into a tailspin. Investors were shocked, not only by the sudden collapse of AIG but also by the fact that all three rating agencies had been completely wrong, just 24 hours earlier. Hence, they assumed problems lurked around every corner.

That AIG rescue announcement panicked investors around the world, who then immediately fled all non-government guaranteed asset classes for the safety of government securities/government guarantees.

To further illustrate the distortions perpetuated by current conventional "wisdom," we note that the U.S. government guarantee of MMF holdings was capped at September 19, 2008 levels. Yet over the following weeks, investors poured $250 billion additional, non-guaranteed assets into MMFs, including $170 billion into prime funds. Thus, at a time the government was insuring virtually all corporate bank deposits, investors were choosing non-guaranteed prime MMFs instead![1]

Given the failures of various other asset classes, the widespread market chaos during this period, the flight to quality *into* MMFs, and the fact that 2010 MMF regulatory changes have already strengthened an already strong asset class, we must certainly question the fixation on pillorying MMFs and demanding they be further overhauled. In fact, MMFs have proved to be one of the most resilient asset classes throughout the financial breakdown.

BACKGROUND

The collapsed housing bubble triggered a tsunami that hit the shores of the general money markets in early 2007. From that time until markets were calmed by massive government intervention in late 2008, most money market asset classes experienced considerable stress. Investors sought progressively higher ground as problems escalated, with hundreds of billions of dollars fleeing riskier assets and moving to safer territory.

By the time the markets calmed at the end of 2008, several asset classes were decimated. The asset-backed commercial paper market experienced outflows of $487 billion, structured investment vehicles declined $400 billion, enhanced cash funds declined $225 billion, and financial commercial paper fell $49 billion. In addition, $330 billion was frozen in illiquid auction rate securities.

By December 2008, investors seeking the higher ground had moved $1.05 trillion into government and treasury MMFs, $170 billion into prime MMFs, $225 billion into insured bank demand deposits, and $176 billion into bank time deposits.

In evaluating how the crisis unfolded, it is helpful to dissect the collapse into three time periods, to consider significant market events and their impacts on money market instruments and asset movements.

- Phase 1: Pre-Crisis
  (June 2007 – early September 2008)
- Phase 2: Collapse
  (mid-September 2008 – mid-October 2008)
- Phase 3: Stabilization
  (late October 2008 – December 2008)

[1] In light of the flows into MMFs at this time, it is worth noting that MMF sponsors did not ask for or want the government guarantees. See ICI's commentary "MONEY MARKET FUNDS IN 2012," February 27, 2012.

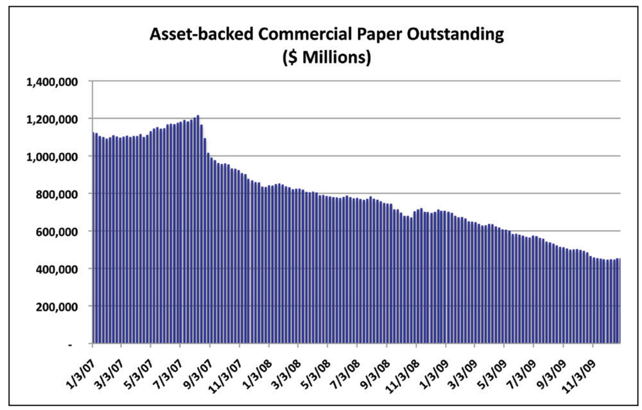
PHASE 1: PRE-CRISIS (JUNE 2007 – SEPTEMBER 2008)

This time period was bookended by stress in the asset-backed commercial paper (ABCP) market, which started in June 2007, and the failures of Fannie Mae and Freddie Mac in September 2008.

Aggressive lending practices and the collapse of the housing bubble began to manifest themselves in the general money markets during this period. Most of the defining events were well-telegraphed credit events. They played out in the form of prolonged runs from the impacted asset classes, which were primarily commercial paper and enhanced cash funds.[2] In addition, there was an unanticipated liquidity-driven freeze of the auction rate securities market.

Asset-Backed Commercial Paper

As the housing crisis spread, in June 2007 the ABCP market faltered and experienced a prolonged run. This market peaked at $1.2 trillion in assets on August 8, 2007. Following major asset downgrades, assets declined by $432 billion (-37%) during the first phase of the crisis.



Source: Federal Reserve

Structured Investment Vehicles (SIVs)

These complex debt instruments provided very high returns by making highly leveraged investments. Many SIVs ultimately defaulted, were repurchased by their sponsors, or simply unwound. According to the Financial Times,[3] total assets fell from a high of $400 billion in July 2007 to virtually zero (-100%) by early 2009.

[2] For a description of the three types and two durations of runs, see Appendix A. July 2009.

[3] Hughes, Jennifer. "Completion of SIV asset disposal near." *Financial Times*, 7 July 2009.

Enhanced Cash Funds

Enhanced cash funds (also called ultra-short bond funds) peaked at $250 billion in November 2007 and experienced a prolonged run down to $25 billion (-90%) during this first phase of the crisis. The run in this asset class was triggered when a GE-managed fund went from a fixed to floating NAV in November 2007 and then subsequently failed to maintain a $1 NAV.

Auction Rate Securities

Auction rate securities (ARS) gathered assets up to a peak of $330 billion in February 2008. Then, following several failed auctions, the entire $330 billion ARS market froze (-100%) and has been slowly liquidating since that time.

Other Events

Several market events contributed to the prolonged run on various money market categories in this timeframe.

- Failure of a Bear Stearns real estate hedge fund (6/2007)
- Countrywide Financial rescue (1/2008)
- Bear Stearns rescue (3/16/2008)
- Indy Mac Bank failure (7/13/2008)
- Fannie Mae and Freddie Mac failure (9/8/2008)

It is important to recognize that these failures developed over time, with their underlying credit difficulties having been clearly understood by the market. With the exception of the unanticipated ARS freeze, market participants were well aware of impending problems at Bear Stearns, Countrywide, Fannie Mae, etc.

Phase 1: Summary

	Assets as of 6/27/07 ($B)	Assets as of 9/10/08 ($B)	Change ($B)	% Change
Inst. MMFs				
Prime MMFs	1,705	2,153	447	26%
Treas/Gov MMFs	427	906	478	112%
Commercial Paper				
ABCP	1,173	742	(432)	(37%)
Bank/Finance CP	763	810	47	6%
Non-Financial CP	196	205	9	5%
Bank Deposits				
Demand Deposits	326	292	(34)	(10%)
Large Time Deposits	1,743	2,121	378	22%
Other Instruments				
Enhanced Cash	250	25	(225)	(90%)
Auction Rate Sec.	330	0*	(330)*	(100%)
SIVs	400	0	(400)	(100%)

*$330 billion in assets were frozen/illiquid.

PHASE 2: COLLAPSE (SEPTEMBER 2008 – OCTOBER 2008)

The market events and failures of multiple asset classes during Phase 1 culminated in collapse during the week of September 15, 2008.

The prolonged run, already underway for some time, built and accelerated until it became a firestorm run across the whole financial system – a flight to quality. This continued until October 14, 2008 when the government intervened with an unlimited guarantee on all non-interest-bearing bank deposits.

Market Events Accelerate

One week following the bailout of Fannie and Freddie, rapid-fire shocks roiled the markets:

- Bank of America bailed out Merrill Lynch (9/14/2008)
- Lehman Brothers declared bankruptcy (9/15/2008)
- Federal Reserve lent JPMorgan $138 billion to assist Lehman (9/15/2008)
- Washington Mutual was downgraded and experienced a $16 billion run (9/15/2008)
- Reserve Fund lost $785 million on Lehman CP, broke the buck (9/15-16/2008)
- Unexpected Federal Reserve $85 billion bailout of AIG (9/16/2008, 9 p.m. EST)

Market Surprises and Flight to Quality

The first phase of the crisis was characterized by prolonged runs on asset classes that were experiencing widely known credit-quality distress. The market digested these difficulties with equanimity. However, this second phase was distinctly different, and far more dangerous, because it was essentially the result of two seismic surprises:

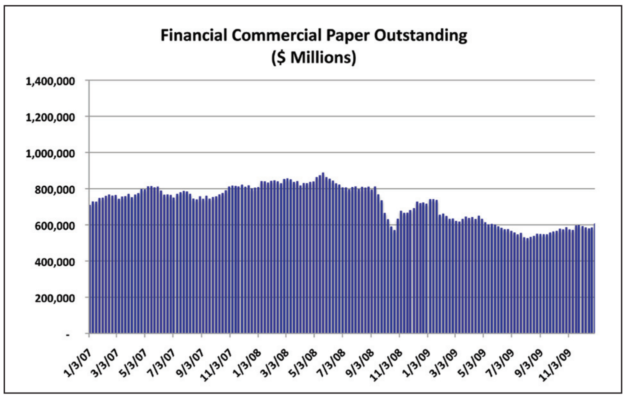
- The government's decision to **not** rescue Lehman Brothers
- The shocking late-night bailout of AIG at 9 p.m. EST Tuesday, which was not anticipated by the marketplace.

Indeed, the panic-fueled firestorm run out of virtually all non-government-insured asset classes and into insured deposits and securities reached a momentous stage on Wednesday, September 17, 2008.

The Federal Reserve's announcement of the $85 billion AIG bailout completely blindsided the market. Although there had been market rumors of AIG problems, on Monday evening Standard & Poor's issued an "A-" long-term rating and an "A2" short-term rating on AIG. On Tuesday evening, the Fed initiated the first of three AIG bailouts or restructurings. That bailout announcement shattered the markets, shaking investor confidence in virtually all investments. They continued their flight to quality by moving into government securities and government-guaranteed instruments.

The “Run” on Bank/ Financial Commercial Paper

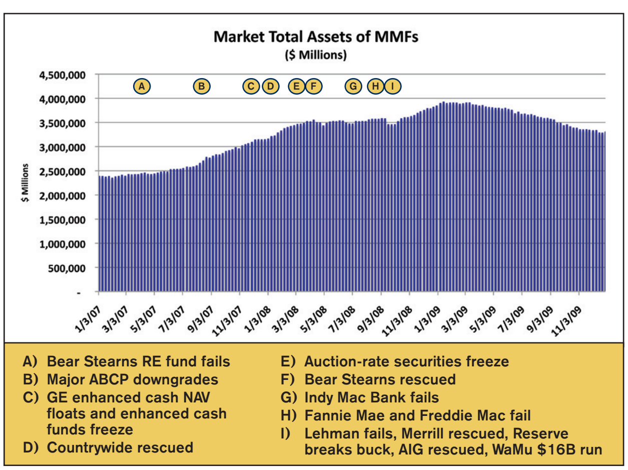
Events during this phase, such as the collapse of Merrill Lynch, Washington Mutual, Lehman Brothers and AIG, led to a run on financial commercial paper of $221 billion.



Source: Federal Reserve

The “Run” on MMFs

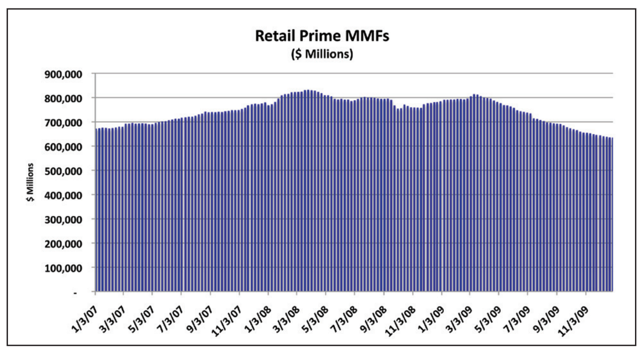
There has been much spirited debate on the role of MMFs in the crisis. Specifically, it has become conventional wisdom that MMFs are susceptible to runs as evidenced by their asset levels during this time period. However, the data tell a different story.



Source: The Investment Company Institute

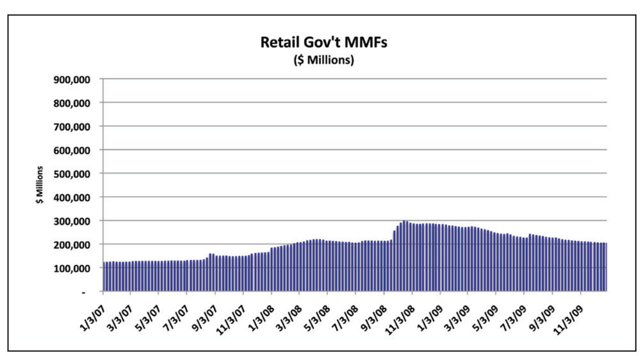
It is a challenge to find any widespread run occurring on the MMF asset class during any time period. That being said, there are different subclasses of MMFs for both retail and institutional investors, primarily prime MMFs and treasury/ government MMFs. Prime MMFs invest largely in short-term commercial paper and other instruments. Treasury/government MMFs invest solely in T-bills and government securities.

Of these subclasses, the data reflect the flight to quality that was underway within MMFs during this time period.



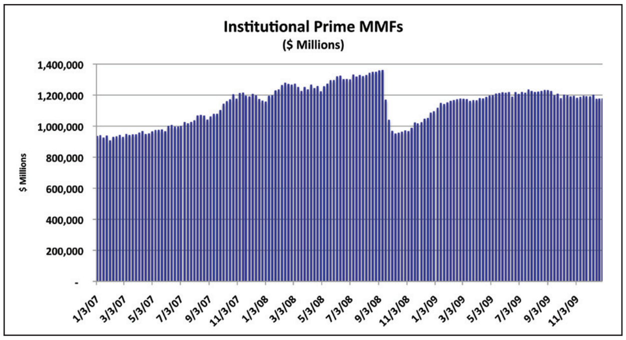
Source: The Investment Company Institute

As shown above, retail prime MMFs saw a slight 3 % reduction in assets during this time period. Meanwhile, retail government MMFs experienced the flight to quality and increased assets of 40 % during this same period.



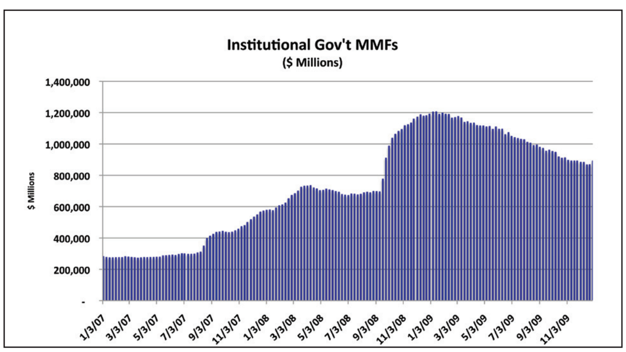
Source: The Investment Company Institute

The sophisticated investors within the institutional segment undertook a similar, albeit more pronounced, flight to quality.



Source: The Investment Company Institute

In the above graph, we see the Phase 1 *inflow* of assets followed by the pronounced reduction of assets as investors fled to quality during the week of September 15, 2008 fueled by the panic of the AIG bailout. This flight to quality is apparent in the graph below. Investors did not reject MMFs as an asset class, but rather sought the highest ground possible and moved into government MMFs.



Source: The Investment Company Institute

A detailed breakdown of the events of the week of September 15 provides further evidence that panic due to the *unexpected* bailout of AIG was the trigger for investors to flee to the highest quality instruments available (those instruments with implied or explicit government guarantee).

As the table on the next page clearly illustrates, on September 15 and 16, institutional prime MMFs had total outflows of just over $50 billion from the Reserve Fund and $50 billion from all other prime funds. This was a fairly well-contained, credit-driven event. Some prime funds experienced no net redemptions at all over these two days.

However, financial markets skidded into a total liquidity collapse after the surprise AIG failure. Over the next two days following the failure of AIG, prime MMFs saw more than $200 billion of outflows.

The climactic week of September 15 ended with the government instituting several measures to support the commercial paper market. It also instituted the Temporary Guarantee Program, temporarily insuring money fund investors at their September 19 investment levels. MMF investments beyond investors' September 19 levels were excluded from the guarantee program.[4]

[4] **Commercial paper support measures and the Temporary Guarantee Program had a single identical aim, according to M. L. Fein, which was not to shore up a "run" in MMFs. Fein argues, "The Fed's liquidity facilities and related regulatory actions that ostensibly benefited MMFs in reality were designed to support banks and the bank commercial paper market and that the bank commercial paper market was the source of systemic risk, not MMFs." See "SHOOTING THE MESSENGER: THE FED AND MONEY MARKET FUNDS," April 2, 2012.**

Institutional Prime MMF Assets

Dates (2008)	Change In Inst. Prime MMF Assets ($B)	Market Events
8/28 – 9/12	(1)	Fannie & Freddie fail – estimated cost $200B
9/15	(61)*	Merrill Lynch rescued Run on WaMu of $16.4B Lehman Brothers fails as Fed guarantees $138B Reserve Primary Fund halts redemptions S&P rates AIG "A-" long-term and "A2" short-term
9/16	(37)*	Reserve Primary Fund "officially" breaks the buck with $785M loss on Lehman After the market closes, AIG requires $85B bailout
9/17	(130)	
9/18	(94)	
9/19	(25)	Several government safety nets implemented include commercial paper support and a temporary, limited MMF guarantee program Goldman Sachs and Morgan Stanley apply to convert into bank holding companies
9/22 – 12/31	+ 132	Cash inflows above the guarantee level

*Includes approximately $54B in redemptions from investors in the Reserve Primary Fund.

Phase 2 Summary

Market events catapulted the prolonged run on the financial system to a firestorm run, as investors continued their flight to quality.

	Assets as of 9/10/08 ($B)	Assets as of 10/15/08 ($B)	Change ($B)	% Change
Inst. MMFs				
Prime MMFs	2,153	1,725	(428)	(20%)
Treas/Gov MMFs	906	1,359	454	50%
Commercial Paper				
ABCP	742	677	(65)	(9%)
Bank/Finance CP	810	588	(221)	(27%)
Non-Financial CP	205	188	(18)	(8%)
Bank Deposits				
Demand Deposits	292	321	30	10%
Large Time Deposits	2,121	2,066	(55)	(3%)
Other Instruments				
Enhanced Cash	25	25	—	0%
Auction Rate Sec.	*0	*0	—	0%
SIVs	0	0	—	0%

*$330 billion in assets were frozen/illiquid.

PHASE 3: STABILIZATION (OCTOBER 2008 – DECEMBER 2008)

The depth of the Phase 2 panic is underscored by the number of ways the government actively intervened in the markets. Some of the many programs instituted in the fall of 2008 include:[5]

- Fed lends JPMorgan $138 billion to assist with Lehman Brothers debt (September 15)
- Fed rescues AIG with $85 billion loan (September 16)
- Fed increases swap lines with other central banks by $180 billion (September 18)
- Fed establishes ALMF program to support money fund purchases of asset-backed commercial paper (September 19)
- Washington Mutual closed, assets acquired by JPMorgan (September 25)
- Treasury institutes TGP which guaranteed investor holdings of MMFs at September 19 levels (September 19)
- Goldman Sachs and Morgan Stanley convert to bank holding companies with discount window access (September 21)
- Fed doubles currency swap lines to $620 billion (September 29)
- SEC eases accounting mark-to-market rules for banks (October 3)
- TAF, the collateralized lending program, expanded to $900 billion (October 6)
- Fed begins CPFF for CP (October 7)
- IRS declares a cash repatriation tax holiday (October 7)
- Federal Reserve begins paying banks interest on their reserve balances (October 8)
- Second AIG bailout $37.8 billion (October 8)
- Wells Fargo purchases Wachovia (October 12)
- Fed removes all caps and provides unlimited currency swap lines to the Bank of England, the ECB and the Swiss National Bank (October 13)
- FDIC guarantees all demand deposits, without limitation (October 14)
- Fed removes all caps and provides unlimited currency swap lines to the Bank of Japan (October 14)
- Initial $250 billion of the $700 billion TARP program rolled out (October 14)
- FDIC guarantees all senior debt of U.S. banks and bank holding companies (October 14)
- MMIFF established for direct purchase of up to $540 billion of commercial paper and bank CDs to prop up those markets. This amount greatly exceeds total withdrawals from commercial paper-based money market funds (October 19)
- New York Fed lends $50B to two foreign banks, Irish-German Depfa Bank and Belgium's Dexia Bank (November 4)
- Third AIG bailout, an additional $40 billion (November 10)

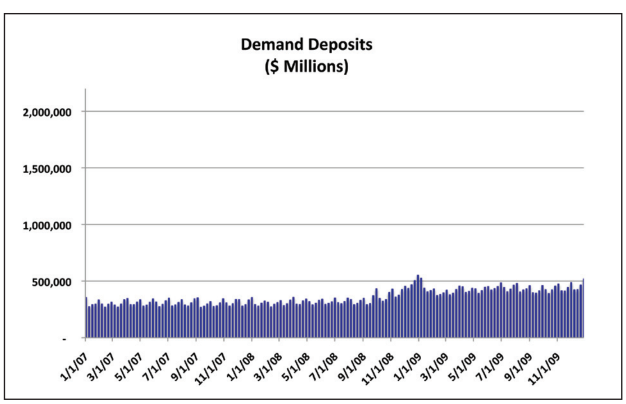
[5] See Appendix B for acronym definitions.

- Second round of Citigroup support at $20 billion (November 24)
- TALF provides $200 billion to support retail and small business asset-backed commercial paper (November 25). Increased to $1,000 billion on February 10, 2009
- Fed announces program to purchase direct obligations of housing-related GSEs (November 25)
- General Motors and Chrysler bailouts announced (December 19)

During this period of dramatic rescues and bailouts, hundreds of billions *flowed into* several asset classes, including prime MMFs, Treasury/ government MMFs, insured bank deposits and financial commercial paper.

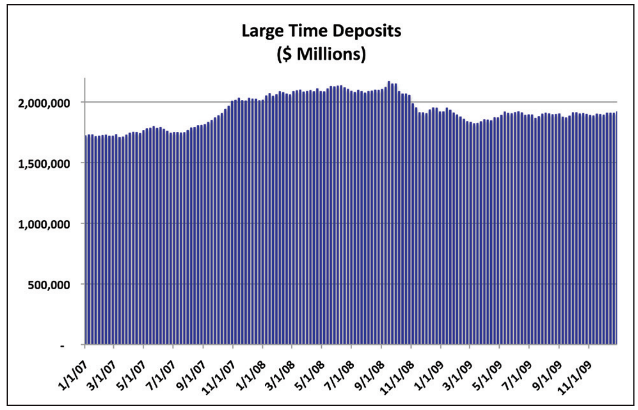
Inflow of Assets to Guaranteed Bank Deposits

On October 14, the FDIC expanded its insurance guarantee to cover *unlimited* non-interest-bearing bank deposits. During this phase, bank demand deposits grew by $230 billion (72%) to a total of $551 billion.



Source: Federal Reserve

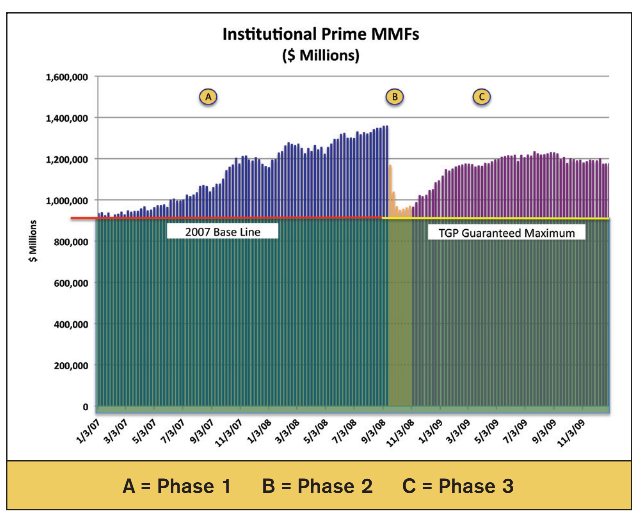
The inflow into demand deposits was somewhat offset by an outflow of large time deposits, which decreased by $148 billion during this period.



Source: Federal Reserve

Inflow of Non-Guaranteed Assets into Institutional Prime MMFs

As one reaction to the market panic of Phase 2, the Treasury established the Temporary Guarantee Program (TGP) for MMFs. TGP guaranteed any investments in MMFs at September 19, 2008 levels. New assets invested after this date were excluded from this program and therefore not guaranteed.



Source: The Investment Company Institute, Treasury Strategies

Despite the fact that incremental investments were not guaranteed, institutional investors increased their holdings in prime MMFs. These sophisticated investors were fully aware that new MMF investments were not guaranteed, and that other fully guaranteed options were available (i.e., bank demand deposits). This testifies to the value investors place on MMF instruments.

Phase 3 Summary

	Assets as of 10/15/08 ($B)	Assets as of 12/30/08 ($B)	Change ($B)	% Change
Inst. MMFs				
Prime MMFs	1,725	1,875	151	9%
Treas/Gov MMFs	1,359	1,473	114	8%
Commercial Paper				
ABCP	677	705	28	4%
Bank/Finance CP	588	714	125	21%
Non-Financial CP	188	181	(7)	(4%)
Bank Deposits				
Demand Deposits	321	551	230	72%
Large Time Deposits	2,066	1,919	(148)	(7%)
Other Instruments				
Enhanced Cash	25	25	—	0%
Auction Rate Sec.	*0	*0	—	0%
SIVs	0	0	—	0%

*$330 billion in assets were frozen/illiquid.

CONCLUSION

The financial crisis fueled by the housing market collapse reverberated throughout the overall money markets. The failure of some very prominent institutions was widely felt and many asset classes experienced runs or failed altogether as a result.

A prolonged, credit-driven run took hold in mid-2007 as the housing tsunami cascaded across all asset classes. During this first phase, investors moved deliberately but without panic to higher ground. Excepting the surprise auction rate securities freeze,[6] major events of this period unfolded slowly, and problem institutions were well recognized in advance of their ultimate failures.

Then, two unanticipated shocks hit on successive days and triggered a firestorm run on all non-government guaranteed asset classes. First, the U.S. government abruptly reversed its very visible policy of supporting large distressed financial institutions. In a move that stunned the markets, it allowed Lehman Brothers to fail.[7]

Secondly, on the following evening while the markets were closed, the U.S. government reversed course again. While Lehman Brothers had been allowed to fail days earlier, the NY Fed that night announced an $85 billion bailout of AIG. This unexpected failure and its unprecedented magnitude shook the very foundations of the markets.

The next morning, investors ran for the high ground en masse, moving hundreds of billions of dollars into government and treasury MMFs, insured bank deposits, and government securities. They sold virtually everything else.

By year-end, with a mind-boggling list of support programs, bailouts, and guarantees, markets began to calm. When the dust settled, the crises that had begun in June 2007 had led to huge shifts of liquid assets. The ABCP, SIV, enhanced cash and auction rate securities markets were decimated. More than $1 trillion flowed *into* treasury/government MMFs during this time. An additional $600 billion flowed into government-guaranteed bank demand deposits, non-guaranteed prime MMFs, and large time deposits.

6 Treasury Strategies long insisted these should not be classed as cash or cash equivalents. The freeze was a surprise to investors, yet this was recognized as an asset class deserving close scrutiny.

7 The Reserve Fund, with 1.2% of its assets in A-rated Lehman commercial paper, was collateral damage to this policy change. Although Reserve "broke the buck," every other MMF holding Lehman paper maintained their $1 NAV.

Overall Crisis Summary

	Assets as of 6/27/07 ($B)	Assets as of 12/30/08 ($B)	Change ($B)	% Change
Inst. MMFs				
Prime MMFs	1,705	1,875	170	10%
Treas/Gov MMFs	427	1,473	1,064	245%
Commercial Paper				
ABCP	1,173	705	(469)	(40%)
Bank/Finance CP	763	714	(49)	(6%)
Non-Financial CP	196	181	(15)	(8%)
Bank Deposits				
Demand Deposits	326	551	226	69%
Large Time Deposits	1,743	1,919	176	10%
Other Instruments				
Enhanced Cash	250	25	(225)	(90%)
Auction Rate Sec.	330	0*	(330)	(100%)
SIVs	400	0	(400)	(100%)

*$330 billion in assets were frozen/illiquid.

RECOMMENDATION

We encourage regulators to carefully consider the precise sequence of events as the crisis unfolded. This time period reveals a great deal about how much stress the markets could systematically digest and at which point the cumulative impacts became overwhelming. One point in particular stands out: the unprecedented and unanticipated AIG collapse, triggered by losses on Lehman credit default swaps, is the single proximate event that triggered a firestorm run on all money market asset classes. For all intents and purposes, that event divided the markets into just two asset classes: anything guaranteed by the U.S. government and anything that was not. During September 2008, investors wanted out of the latter and in to the former.

This point – along with the failures of various other asset classes, the widespread market chaos during this period, the flight to quality *into* MMFs, and the fact that 2010 MMF regulatory changes have already strengthened one of the most resilient asset classes throughout the financial breakdown – should guide regulators in their evaluations of asset classes and considerations of regulatory change.

APPENDIX A

The Anatomy of a Financial Run

Before evaluating a proposal's effectiveness in preventing a run, it is important to understand the anatomy of a financial run. Financial institutions are susceptible to runs because they support highly liquid short-term liabilities with less liquid and longer-term assets. This maturity transformation is crucial to a well-functioning economy, because it facilitates the flow of funds from those with surplus to those with a shortage, in the form of deposits/investments and loans.

However, a maturity mismatch can be problematic when many investors want to withdraw funds over a short period of time. This is far more problematic with a bank than with a money fund. In a money fund, the difference between the average maturity of the assets and the liabilities can be measured in days or weeks. In a typical commercial bank portfolio, the difference is measured in months, if not years.

A run is caused by investors who believe if they wait too long to withdraw their money, they may lose some or all of it. It is this psychological aspect combined with people's natural aversion to loss that make runs so dangerous.

Three types of financial runs are relevant to financial institutions:

- Credit-driven runs occur as a result of a confirmed negative credit event in a security in which the institution invested; this leads investors to liquidate shares to limit possible losses.
- Liquidity-driven runs are precipitated by investors redeeming shares out of fear that, if they fail to do so immediately, they will be unable to do so later.
- Speculative runs occur as a result of rumors or speculation about what may or may not occur within a fund.

Although interrelated in terms of outcome, the proximate causes are quite different. Quite simply, the proximate cause of a credit-driven run is poor credit quality of the underlying assets. The proximate cause of a liquidity-driven run is a seizing up of the markets. The proximate cause of a speculative run is rumor based on a lack of transparency into the financial institution's assets and liabilities.

The reforms instituted in early 2010 by the SEC and the MMF industry have already adequately dealt with **each** of these three situations.

Type of Financial Run	Proximate Cause	2010 MMF Regulations
Credit Driven Run	Credit Loss	Tightened Credit Standards
Liquidity Driven Run	Market Seizing	Instituted Liquidity Requirement of 10 % Next Day, 30 % Weekly Shortened Maturity Structure
Speculative Run	Uncertainty / Misinformation	Reporting of Holdings Reporting Shadow NAV

Source: Treasury Strategies, Inc.

The Timing of a Financial Run

It is also important to understand that there are two ways in which a financial run plays out:

- Firestorm runs occur in a panic environment in which investors rush cash out at any price, notwithstanding any barrier. In today's electronic world, these are likely to play out within hours or a day or two at most.
- Prolonged runs occur when investors fail to roll over maturing investments or reinvest in instruments upon which the institution had come to rely.

Given its nature and speed, it is unlikely that any intervention or barriers to exit will succeed in preventing the firestorm run. A holdback provision will be useless in this type of run since investors will most certainly want to exit at any cost. It is best to have in place the safeguards that prevent the proximate causes of the run. These are precisely the safeguards that went into effect for the money market fund industry with the Securities and Exchange Commission's Rule 2a-7 amendments in early 2010.

A prolonged run, on the other hand, occurs over an extended period of time. It is usually quite visible well ahead of time. For example, investors refuse to roll over their maturing commercial paper or holders of auction rate securities fail to bid at future auctions. Because of the slow nature of these runs, regulators have a number of tools at their disposal. However, efforts to "bar the door" have no usefulness, since these runs are not caused by investor withdrawals, but rather by investors refusing to reinvest.

APPENDIX B

Acronym Definitions

- AIG = American International Group, Inc.
- ALMF = Asset Backed Commercial Paper Money Market Mutual Fund Liquidity Facility
- CD = Certificate of Deposit
- CP = Commercial Paper
- CPFF = Commercial Paper Funding Facility
- ECB = European Central Bank
- FDIC = Federal Deposit Insurance Corporation
- GSE = Government Sponsored Entity
- IRS = Internal Revenue Service
- MMIFF = Money Market Investor Funding Facility
- TAF = Term Auction Facility
- TALF = Term Asset-Backed Securities Loan Facility
- TARP = Troubled Asset Relief Program
- TGP = Temporary Guarantee Program
- SEC = Securities and Exchange Commission

APPENDIX C

About Treasury Strategies

Treasury Strategies, Inc. is the leading treasury consulting firm working with corporations and financial services providers. Our experience and thought leadership in treasury management, working capital management, liquidity and payments, combined with our comprehensive view of the market, rewards clients with a unique perspective, unparalleled insights and actionable solutions.

Corporations

We help our clients maximize worldwide treasury performance and navigate regulatory and payment system changes through a focus on best practices, technology, liquidity and controls.

Treasury Technology

We provide guidance through every step of the technology process. Our expert approach will uncover opportunities to optimize the value of treasury through fully integrated technology solutions.

Financial Services

Our depth of experience, analytic approach and benchmarks provide unique consulting solutions to help clients strengthen and grow their treasury, payments, liquidity and trade businesses.

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