A Study of the Performance of Money Market Funds and the Short-Term Funding Markets During March 2020

Investment Company Institute Roundtable
April 29, 2021

Summary of Proceedings and Key Points

The Investment Company Institute (ICI) organized a two-hour roundtable to investigate the activities of money market funds, their investors, and the short-term funding markets during the weeks before the Federal Reserve announced the Money Market Mutual Fund Liquidity Facility (MMLF) on March 18, 2020 and in the days following. The purpose of the roundtable was to study the experience of money market funds during the liquidity crisis through analyzing proprietary data and asking fund managers to detail the behavior of money market funds and money market fund investors in March 2020.

Over 160 international regulators, policymakers, industry participants, and academics attended the roundtable. The moderator of the roundtable was Professor Erik Sirri, a professor of finance at Babson College and former Director of Trading and Markets and Chief Economist at the US Securities and Exchange Commission (SEC). Audience members had the opportunity to ask questions.

Part One of the roundtable consisted of ICI economists Sean Collins and Shelly Antoniewicz presenting their research about money market funds' portfolio activities during March 2020.

Part Two of the roundtable consisted of fund managers from eight of the most significant money market fund providers describing their personal experiences managing money market funds during the March 2020 period, their interactions with investors, and the choices made regarding the portfolios.

The following are the key points made during each part of the roundtable.

Part I—Presentation by ICI Economists (see attached presentation slides)

ICI Research on money market funds' portfolio activities during March 2020

- Prime money market funds pulled back very little from the commercial paper market before the Federal Reserve announced the MMLF on March 18, 2020.
    - For example, for the week ended March 17 (the day before the Federal Reserve announced the MMLF), prime money market funds on net reduced their holdings of commercial paper by only $6.2 billion relative to outflows of $64 billion. Moreover, prime money market funds continued to make gross *purchases* of commercial paper, although

tilting them increasingly toward overnight issuances as the month wore on to build liquidity.

- The statements in the President's Working Group Report ("From March 10 to March 24, [prime] funds cut their [commercial paper] holdings by $35 billion. This reduction accounted for 74 percent of the $48 billion overall decline in outstanding [commercial paper] over those two weeks.") are misleading because they do not distinguish between the activity of prime money market funds before versus after March 18.

  - Survey data show that two-thirds of the reduction in prime money market funds' commercial paper holdings ($23 billion) represented sales to the MMLF *after* March 18. Because these sales just moved assets from money market funds to the Federal Reserve's balance sheet, they did not contribute to the decline in commercial paper outstanding, in turn suggesting that prime money market funds did not significantly contribute to the liquidity issues in the commercial paper market.

- The regulatory tie between weekly liquid assets and fees and gates made prime money market funds *less resilient* to redemptions and *more dependent* on financial intermediaries.

- Prime money market funds accessed the MMLF primarily to keep weekly liquid assets above 30 percent.

Part II—Discussion by Money Market Fund Managers

March 2020 events represented a unique liquidity crisis arising from the COVID-19 pandemic

- Unlike the global financial crisis of 2007-2009, which was a credit crisis, the turmoil that gripped financial markets in March 2020 originated from businesses, households, and financial institutions' sudden and immediate need for liquidity (a "dash for cash") to protect against the uncertainty caused by the COVID-19 pandemic and government-imposed economic shutdowns.

- COVID-19 triggered an *extremely* rapid financial crisis—the most crucial elements unfolding quickly over 45 days—from mid-February to end of March.

- Fund managers viewed communication with investors as a first line of defense during the crisis, starting in early March and continuing through May. Fund managers fielded daily calls with investors, posted website commentaries, and held market update calls that attracted hundreds of investors. Topics included the Federal Reserve's actions, market and fund liquidity, market pricing, portfolio maturities, and the prospect of imposing fees or gates. Unlike the global financial crisis, investors were not concerned about credit issues, but focused on liquidity.

- As the virus began to spread globally in February and early March, fund managers positioned their portfolios to reflect increased uncertainty about the state of the economy *(e.g.*, building liquidity and limiting or reducing term investments).

Markets exhibited stress before prime money market funds experienced outflows

- Fund managers saw liquidity problems first arise in early March in the repo market and the market for US Treasuries. Liquidity problems in the short-term credit markets occurred later.

- The first Federal Reserve programs on March 9 and March 12, which preceded the MMLF by a week, were "massive" increases in the Federal Reserve's overnight and weekly term repo limits designed to address disruptions in Treasury financing markets.

    - For example, normally the difference between bid-ask spreads for "off-the-run" Treasuries (bonds that are not the most recent issue of a given maturity) and "on-the-run" Treasuries (the most recently issued bond of a given maturity) are narrow. This was not the case in early March 2020 when the difference between these spreads jumped, something that happens only during periods of stress, indicating dislocations in the Treasury market.

- To fully understand what happened in the short-term funding markets in March 2020, it is also important to look at events on a day-to-day basis. For example, as the virus and government shutdowns spread from region to region, the equity markets started falling rapidly. From late February to early March, premiums on credit default swaps for investment grade corporate debt had widened substantially, and the difference between 3-month LIBOR and the federal funds rate (also known as the FRA-OIS spread)—a proxy for stress in the interbank lending market—also had widened substantially. These events took place *many days before* money market funds in aggregate began to see meaningful daily outflows.

- It is also important to keep in mind that there were added liquidity pressures in mid-March 2020 because of corporations' and other institutional investors' normal cash management needs. In the United States, for example, corporations with specified fiscal year-ends (including June 30 and September 30) were required to make estimated tax payments by Monday, March 16. In normal circumstances, prime money market funds build liquidity to meet these predictable flows. But managing even these normal and predictable flows became more challenging by mid-March as the fixed-income markets froze.

- Markets were stressed, yet still functioning by Friday, March 13. But over the weekend after people in the United States were sent home *en masse*, the Federal Reserve cut the federal funds rate by 100 basis points (and took other unprecedented actions) on Sunday, March 15. On Monday, March 16, market participants faced completely frozen short- and long-term markets.

- When the Federal Reserve cuts rates, a fund manager typically "extends out the curve" (*i.e.*, invests in instruments with longer maturities) because money flows into the fund. Reflecting the very atypical market conditions in March 2020, including the Federal Reserve's March 15 actions, outflows instead increased from prime money market funds on March 16.

Role of intermediaries has evolved since 2008 impacting the functioning and liquidity of the short-term funding markets

- In the face of uncertainty about the virus and the economy, *all* market participants, *not just money market funds*, demanded liquidity during the week of March 16.
    - Sellers seeking liquidity found it difficult, if not impossible, to find buyers for even very high-quality short-term credits. Bids for short-term credits were generally absent.
    - Dealers, who normally provide multiple competitive bids for money market instruments, were facilitating trades only as agents (if they could find willing buyers) because they too needed to maintain liquidity and adequate capital.
- Regulatory constraints, intertwined with the global pandemic, dramatically changed the willingness and ability of dealers to act as intermediaries. In addition, by mid-March (and quarter-end), dealer balance sheets were tight and under more strain given the dislocations in the Treasury and other markets, corporations drawing down on their bank lines, and normal quarter-end demands.
- Under normal market conditions, secondary market trading in money market instruments is limited because these securities, being short-dated, generally mature quickly, obviating the need to sell them to raise cash. The events of March 2020, however, demonstrate the importance of reliable secondary market liquidity when funds and other market participants are seeking to liquidate positions in the short-term funding markets but finding no bids for high-quality, short-term money market instruments.

Regulatory tie between weekly liquid assets and potential for fees and gates made prime money market funds less resilient to investor redemptions and more dependent on financial intermediaries during stress events

- The SEC's 2014 linking of liquidity fees or redemption gates to the 30 percent weekly liquid asset threshold created a tripwire for investors. In March 2020, to avoid the mere possibility that funds *could* impose fees and gates if weekly liquid assets fell below 30 percent, investors preemptively redeemed as funds' weekly liquid assets started falling toward (but not reaching) the 30 percent threshold. For some funds, this happened as their weekly liquid assets fell close to or below 35 percent and, in a few other cases, as soon as weekly liquid assets reached 40 percent.
- Investors treated the 30 percent threshold as an event that would automatically trigger fees and gates. This effectively locked up 30 percent of prime money market funds' highly liquid assets, preventing fund managers from touching any of these liquid assets to meet redemptions.
- Investors were concerned about their continued access to liquidity if a fund were to impose a gate (a regulatory requirement that differentiates prime money market funds from other cash alternatives in the short-term funding markets) and less concerned about the possibility of fees or, more generally, about the possibility of losing principal. Questions from investors regarding liquidity levels (*e.g*., are you at or near 40 percent? 35 percent? 33 percent?) were

much more common than questions or concerns regarding the fund's net asset value. Investors simply ignored a third of the portfolio's liquid securities.

- There also is a misperception that a money market fund's portfolio is bifurcated into liquid (*i.e.*, weekly liquid assets) and illiquid (*i.e.*, everything else) securities. This misperception fails to take into account that non-weekly liquid assets quickly roll down the maturity curve, converting naturally to weekly liquid assets as time passes. For example, securities that now mature in two weeks automatically become weekly liquid assets next week.

- Money market funds are transparent products. Investors' ability to track weekly liquid asset levels on a daily basis, combined with a fear of gates, also helped drive their behavior.

- The 30 percent weekly liquid asset requirements should not be linked to the prospect of a fee or a gate. Before fees and gates were linked to the liquidity thresholds, funds were able to use the liquidity buffers to meet redemptions, such as in 2011 when the European banking crisis caused significant shifts from prime money market funds that funds met in good order. This is evidence that weekly liquid asset buffers work, but not when linked to gates.

Prime money market funds used the MMLF to keep their weekly liquid assets well above 30 percent

- Prime money market funds used the MMLF primarily to keep their weekly liquid assets well above the 30 percent weekly liquid asset threshold, not because they were yet in immediate danger of having redemptions overwhelm available weekly liquid assets held by the fund.

- During March 2020, except for assets naturally maturing into weekly liquidity, converting non-weekly liquid assets into cash or something that could be a weekly liquid asset was important and very difficult before the MMLF.

- Once the Federal Reserve indicated that it was willing to add liquidity to the markets, market participants felt more comfortable staying in the short-term funding markets, including in prime money market funds. Consequently, prime money market funds' use of the MMLF was relatively limited, according to ICI survey data, just 12 percent of the assets of public institutional prime money market funds and 3 percent for retail prime.

MMLF provided liquidity for the entire short-term funding markets and all participants in those markets

- The MMLF, which was just one among many Federal Reserve facilities and actions, helped restore liquidity and the flow of credit to the entire short-term markets. It is inaccurate to characterize the MMLF as a "bail out" for money market funds.

- Even though money market funds represented a minority of the commercial paper market, money market funds were a useful conduit for the Federal Reserve to channel funds to the short-term funding markets. Money market funds are a counterparty through which the Federal Reserve can conveniently provide liquidity to the markets for commercial paper and bank certificates of deposit, which benefits all market participants.

- The MMLF provided a “broad calming” effect for all participants in the short end of the market (including participants that did not have direct access to the MMLF, such as individual investors and offshore money market funds), slowed redemptions, and allowed fund managers to refocus their attention and energy on optimal portfolio positioning. In addition, intermediation returned, and the frozen short-term funding markets began thawing.

Addressing problems in the short-term funding markets requires more than just reforms to money market funds.

- Money market funds are just one participant in the short-term funding markets. Eliminating money market funds would not make these markets more resilient, and the short-term funding markets will continue to be a source of stress to the financial system.

- The March 2020 market volatility underscores the need to consider strengthening the resiliency of liquidity in the short-term funding markets.

- Before considering money market fund reforms, policymakers should focus instead on the functioning of the short-term funding markets, which are “flawed and broken,” especially during periods of stress. One roundtable participant provided the following analogy to describe how the short-term funding market functions by comparing it to a highway and money market funds and other products to cars and trucks on the highway:

  > *[L]et's imagine . . ., we had a highway in the US, a major highway, let's call it Route 95, that's essential to commerce, runs from Florida to Maine. Let's imagine that road was only safe to drive on when it was blue skies and sunny. And the second it rained, you got 100 car pile-ups. That's essentially the [short-term funding market]. It really only works on blue sky sunny days, when markets are functioning efficiently. And as soon as we get a crisis, we've seen it time and time again, it freezes. You get the equivalent of 100 car pile-ups. So you can talk about which cars are allowed to drive on that highway or what safety features they should have, or should we have 18 wheelers or not. It doesn't really matter as long as that is the case. . . . [R]egulators and we, as an industry, need to focus on this and create a more resilient [short-term funding market]. So that when it's raining or when it's sunny, this market functions, because right now, I don't think it does.*

April 29, 2021

ICI Roundtable on Money Market Funds

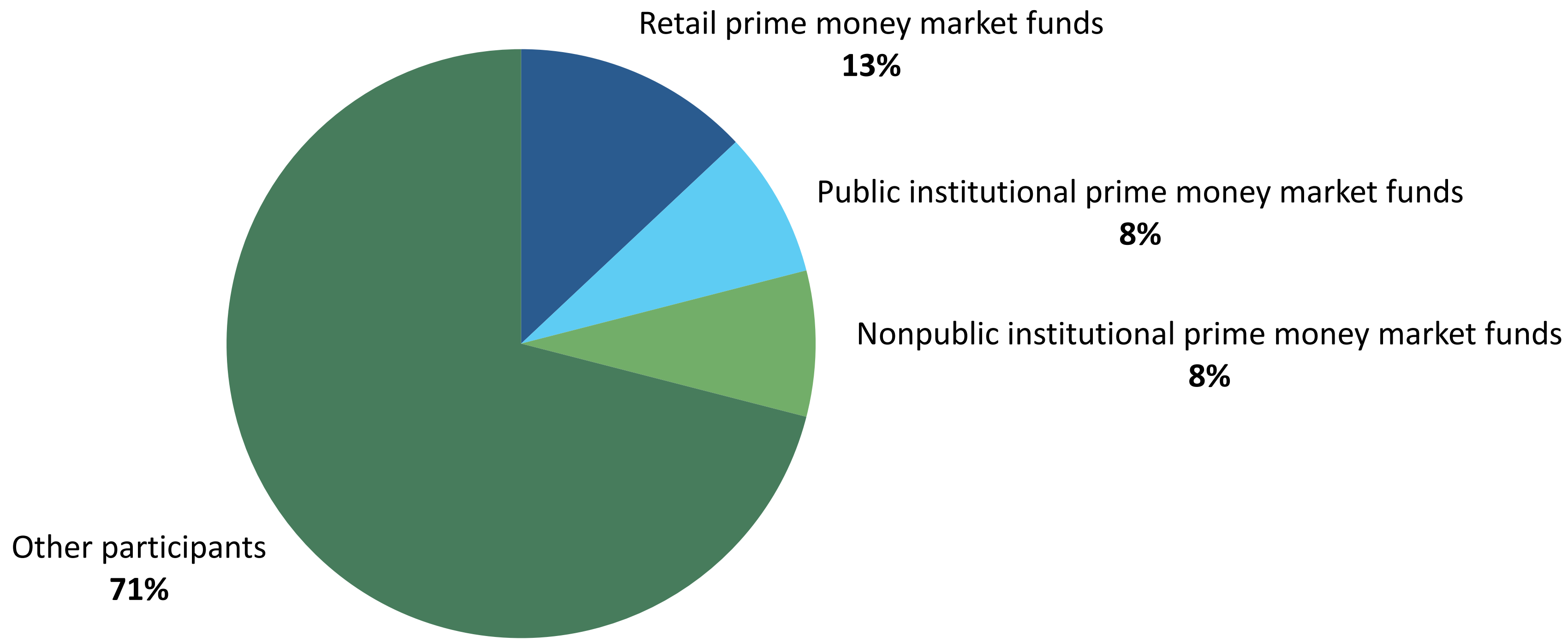
Sean Collins—Chief Economist
Shelly Antoniewicz—Senior Director, Financial and Industry Analysis

Key Takeaways

- Activities of ***all*** short-term market participants must be reviewed.
- Prime money market funds pulled back very little from the commercial paper (CP) market before the Fed announced the MMLF on March 18, 2020.
- Regulatory tie between weekly liquid assets (WLA) and fees and gates made prime funds **less resilient** to redemptions and **more dependent** on financial intermediaries.
- Prime funds accessed the MMLF to keep WLAs above 30% tripwire.

Prime Money Market Funds Are Not the Only Participants in the Commercial Paper Market

Share of commercial paper market held by money market funds and others, February 2020



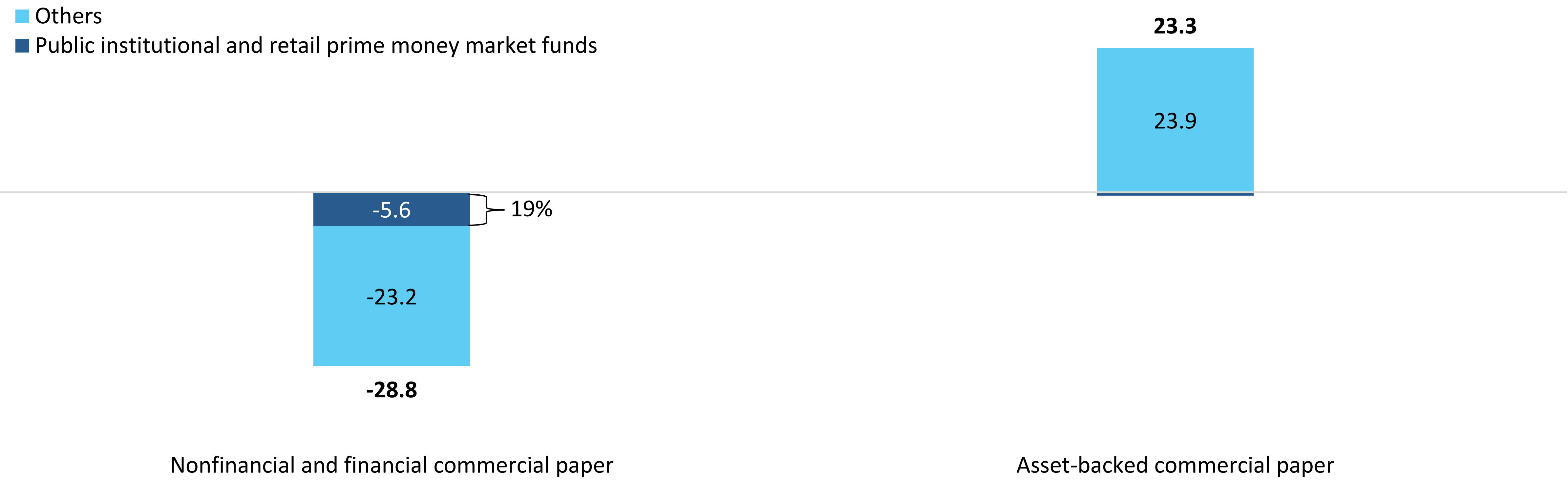
Note: Nonpublic institutional prime money market funds are registered under the Investment Company Act and comply with Rule 2a-7.
Sources: Investment Company Institute, Federal Reserve Board, and SEC Form N-MFP

Revisiting the Narrative That Money Market Funds Fueled Meltdown in the Commercial Paper Market

- **Narrative:** prime money market funds, faced with large redemptions, sold CP heavily.
- **Example from PWG Report:**
  - "From March 10 to March 24, prime funds reduced their CP holdings by $35 billion, accounting for 74 percent of the $48 billion overall decline in outstanding CP over those two weeks."
- **The reality:**
  - The two-week period straddles the March 18 announcement of the MMLF.
  - Two-thirds of the reduction in prime funds' CP holdings—$23 billion of the $35 billion—represented sales to the MMLF *after* March 18.
  - Those sales, rather than adding to stress in the money markets, helped relieve it.

Prime Money Market Funds Reduced Their Commercial Paper Holdings Only Modestly Before March 18

Billions of dollars, change in prime money market funds' holdings for the week ended March 17, 2020, and change in not seasonally adjusted market-wide commercial paper outstanding for the week ended March 18, 2020

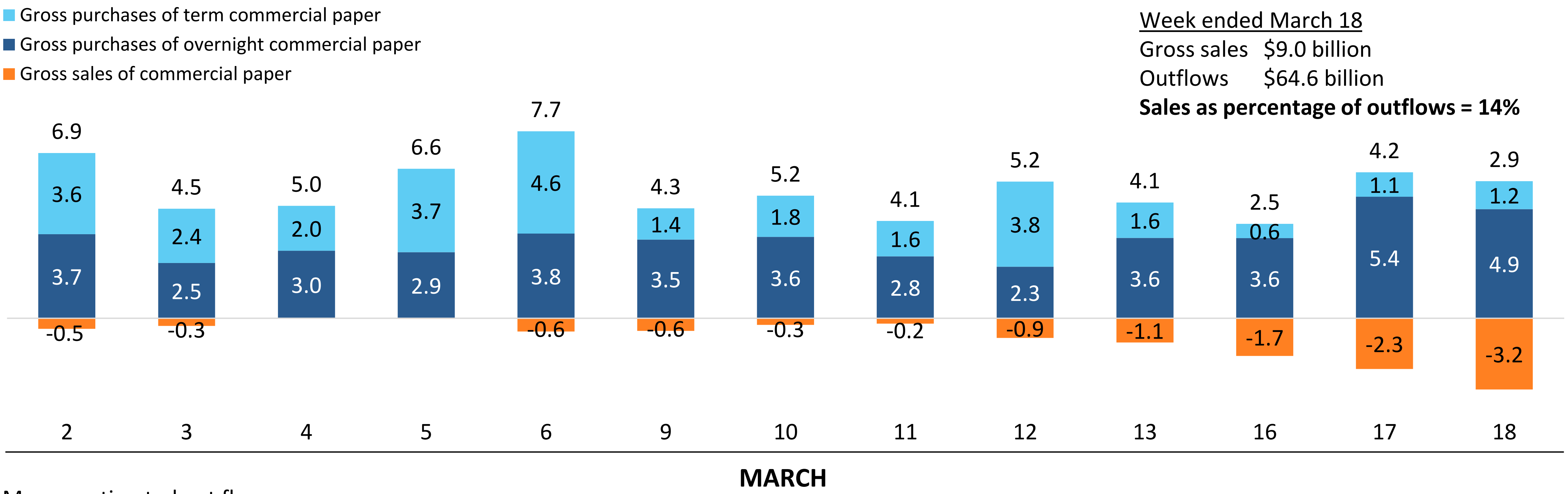


Memo: estimated outflows of prime money market funds, week ended March 17 = $64.3 billion

Sources: Federal Reserve Board and iMoneyNet

Sales of Commercial Paper Represented Only 14% of Outflows in Week Before MMLF Announced

Public institutional prime money market funds, billions of dollars, March 2–March 18, 2020



Memo: estimated net flow

1.3	0.3	5.0	6.4	-1.5	-1.9	0.5	-1.7	-6.5	-12.2	-13.6	-18.6	-14.7

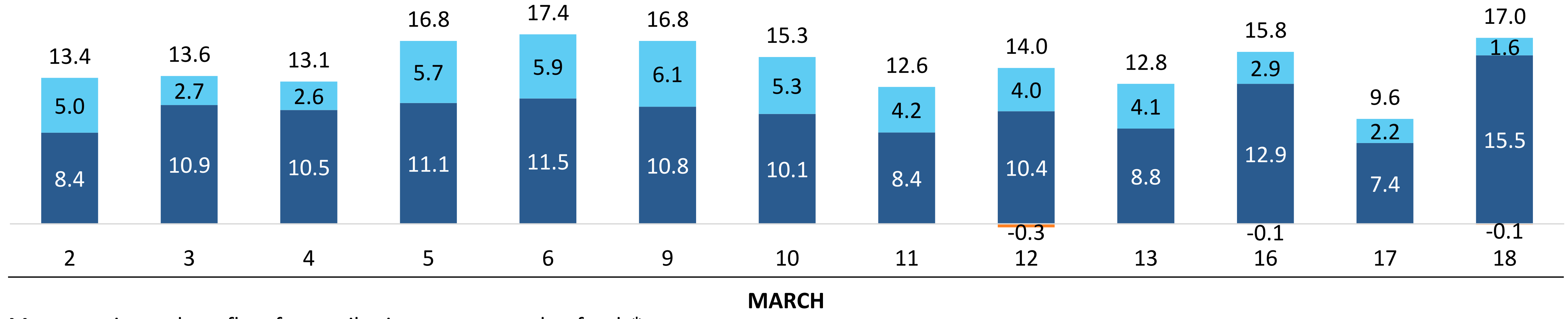
Sources: ICI survey of prime money market funds and iMoneyNet

Other Prime Funds Sold Minuscule Amounts of Commercial Paper

Nonpublic institutional and retail prime money market funds, billions of dollars, March 2–March 18, 2020

Gross purchases of term commercial paper
Gross purchases of overnight commercial paper
Gross sales of commercial paper

<u>Week ended March 18</u>
Gross sales of retail prime $0.5 billion
Outflows of retail prime $17.1 billion
Sales as percentage of outflows = 3%



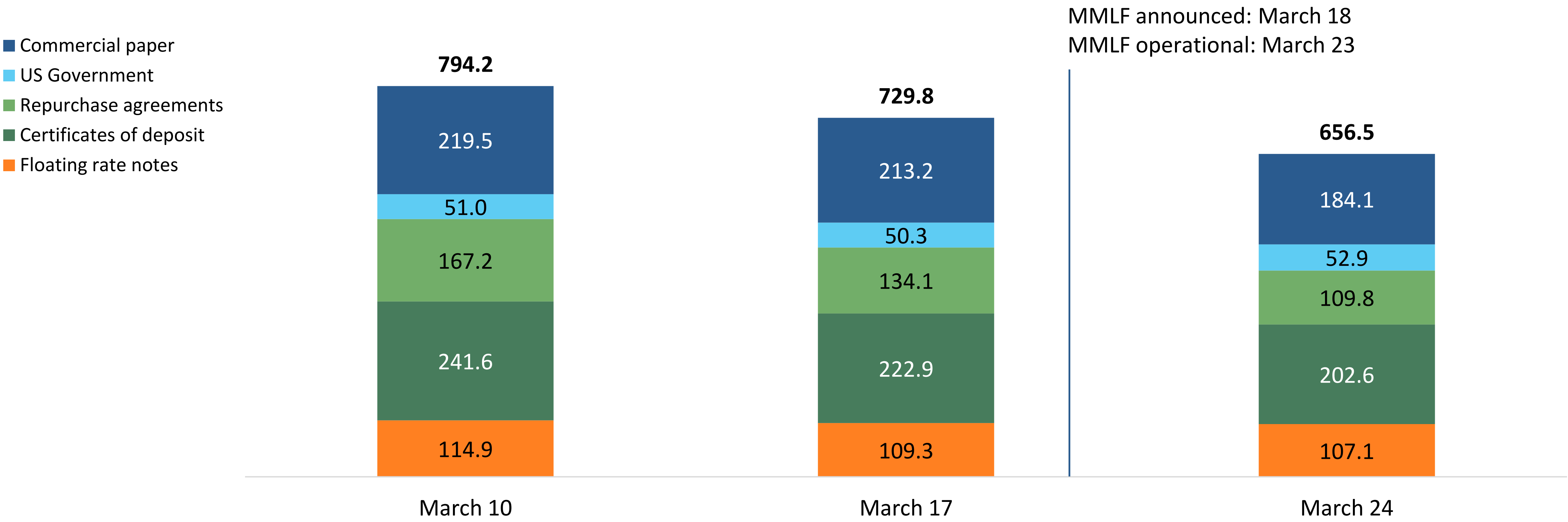
Memo: estimated net flow for retail prime money market funds*

-0.5	0.5	0.7	0.7	0.6	0.1	-3.0	-0.2	-0.3	-2.2	-2.1	-6.9	-5.6

*Daily estimated net flows of nonpublic institutional prime money market funds are unavailable.
Note: Nonpublic institutional prime money market funds are registered under the Investment Company Act and comply with Rule 2a-7.
Sources: ICI survey of prime money market funds and iMoneyNet

Prior to MMLF Prime Funds Met Redemptions By Running Down Repo and CDs

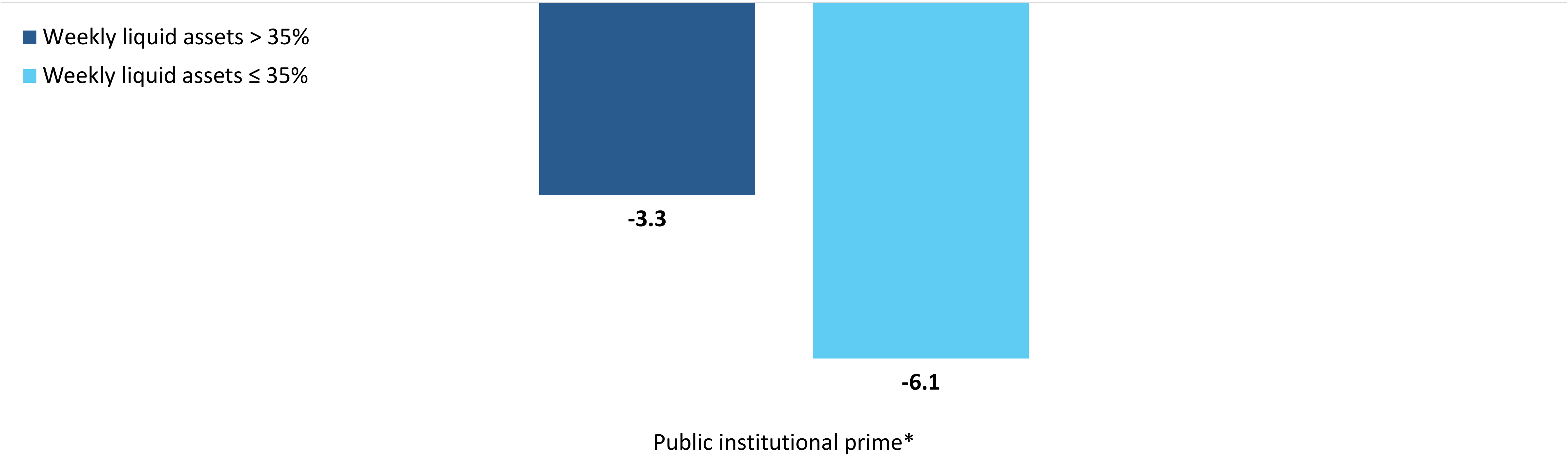
Public institutional prime and retail prime money market funds, billions of dollars



Source: iMoneyNet

Option to Impose Fees/Gates Made Prime Funds Less Resilient to Redemptions

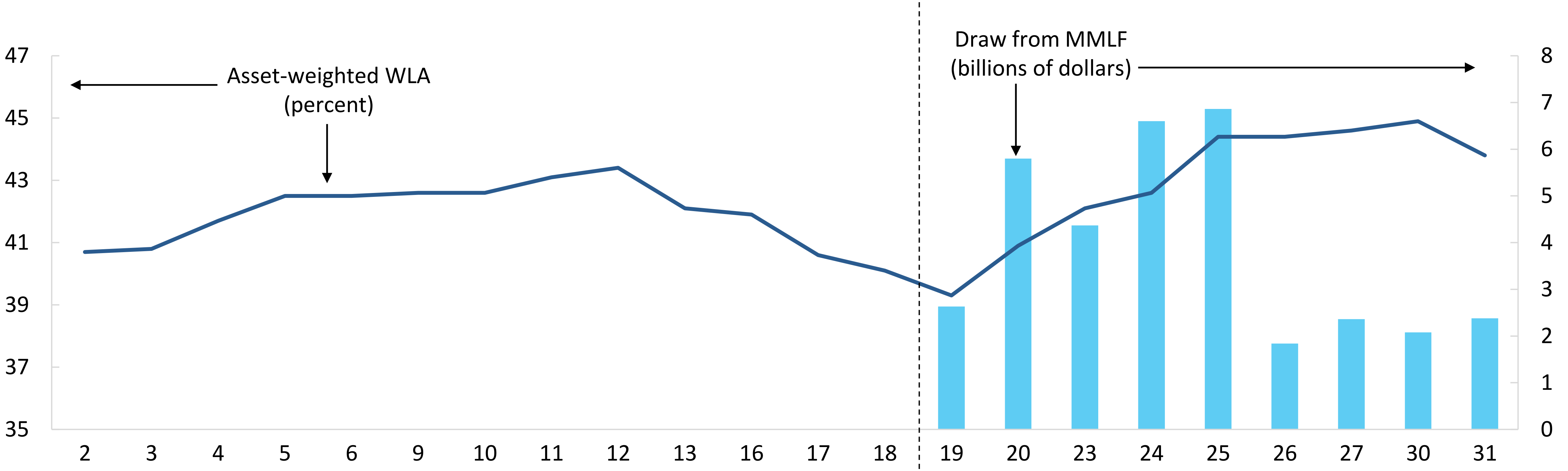
Average daily percent change in assets of public institutional prime money market funds, March 17–March 24, 2020



*The difference between the average daily percent change in assets for retail prime funds with weekly liquid assets greater than 35 percent and retail prime funds with weekly liquid assets of 35 percent or less is not significantly different from zero at standard levels of significance.
Source: Investment Company Institute tabulations of Crane data

Prime Funds Used MMLF to Keep WLA Well Above 30% Tripwire

Public institutional prime money market funds that drew on the MMLF, daily, March 2020



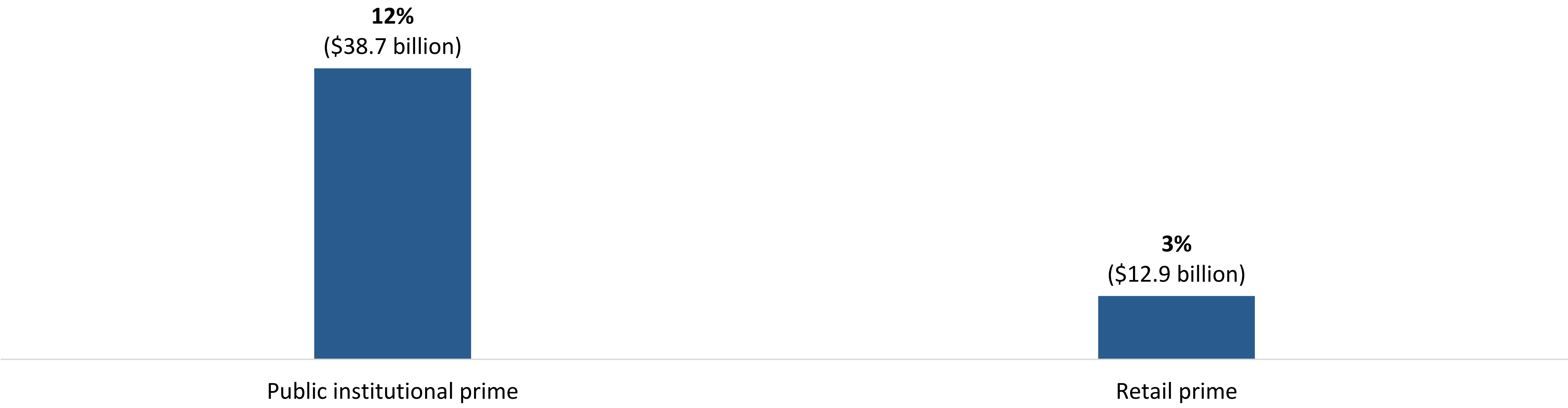
Memo: estimated net flows as a percentage of assets

-0.4	0.4	1.4	1.9	-0.5	-0.3	0.0	-0.2	-1.9	-3.8	-4.3	-6.2	-5.1	-5.5	-3.0	-2.6	-0.6	-0.2	-0.2	0.9	0.1	-1.1

Sources: Investment Company Institute, iMoneyNet, and Crane Data

Prime Money Market Funds' Use of the MMLF Was a Small Share of Their Assets

Total drawn from the MMLF as a percentage of February 2020 month-end total net assets



Memo: total net assets as of February 29, 2020

Public institutional prime	Retail prime
$313 billion	**$479 billion**

Note: Nonpublic institutional prime money market funds did not access the MMLF.
Source: Investment Company Institute

Summary

- Prime money market funds pulled back very little from CP market.
- Tie between WLA and fees/gates made prime funds less resilient.
- Activities of all short-term market participants must be reviewed.