STATE STREET

Improving Cash Yields

Direct Treasuries Trading

After a long dormant rest, cash is once again king following the most aggressive Fed tightening campaign in the last four decades. We have observed rates rise by 500 basis points (bps) within a year and the Fed is signaling that it may still need to do more depending on how the economy evolves. Inflation has been at the center of these aggressive actions, and the latest Consumer Price Index (CPI) data continues to support the need for additional tightening. While recent volatility in the banking sector calls into question the Fed's ability to raise rates meaningfully, the Fed continues to signal that yields may need to nonetheless remain higher for longer. The current turmoil within the regional banking sector also highlights the benefit, if not outright need for a diversified cash management strategy. Although the debt ceiling creates short term concerns, we expect that the yield advantage from Treasury bills will widen once the ceiling is raised again (or suspended). In this paper, we look into the benefits of diversifying from a traditional deposit base and why Treasury securities will add both yield and safety to cash management programs.

Why Cash Management Is Important

The Fed has hiked interest rates by 500 bps since early 2022 and according to Fed commentary, it may need to raise rates further based on evolving economic data.

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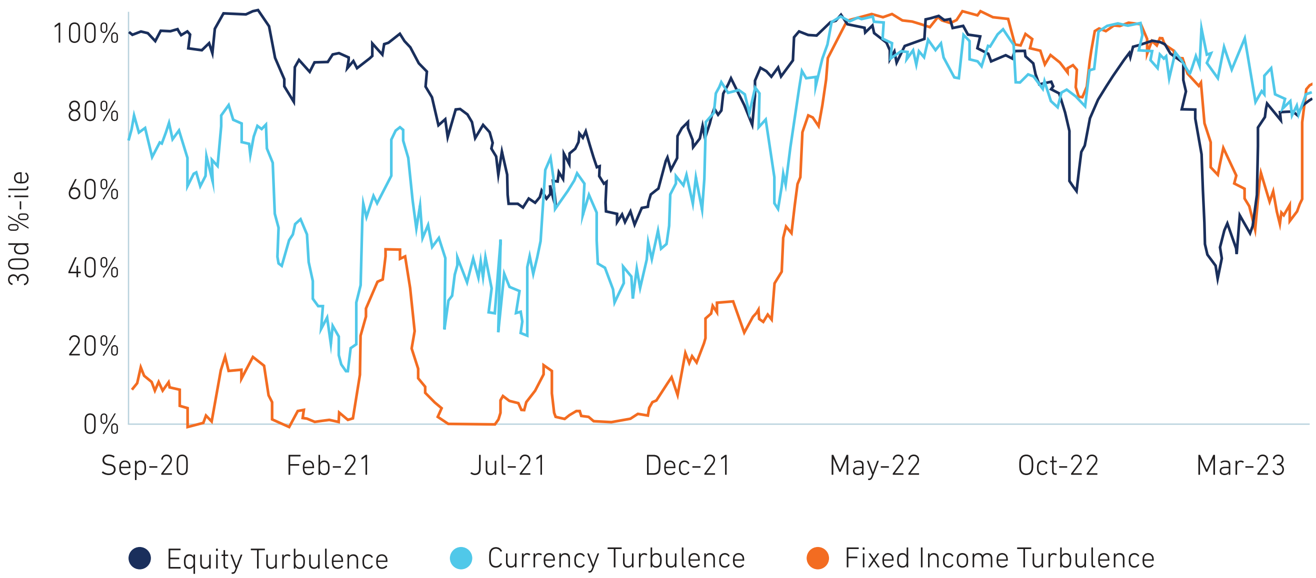
Cash Diversity

The uncertainty of the current tightening cycle has become evident in the disparate views regarding the ultimate path of the funds rate as we near the end of the tightening cycle. This has created an unprecedented volatility, which we measure in our turbulence indicators, which track the unusualness of price movements amongst and across asset classes. As Figure 1 indicates, turbulence remains elevated across all three major asset classes we track, with levels spiking over the last three to six weeks.

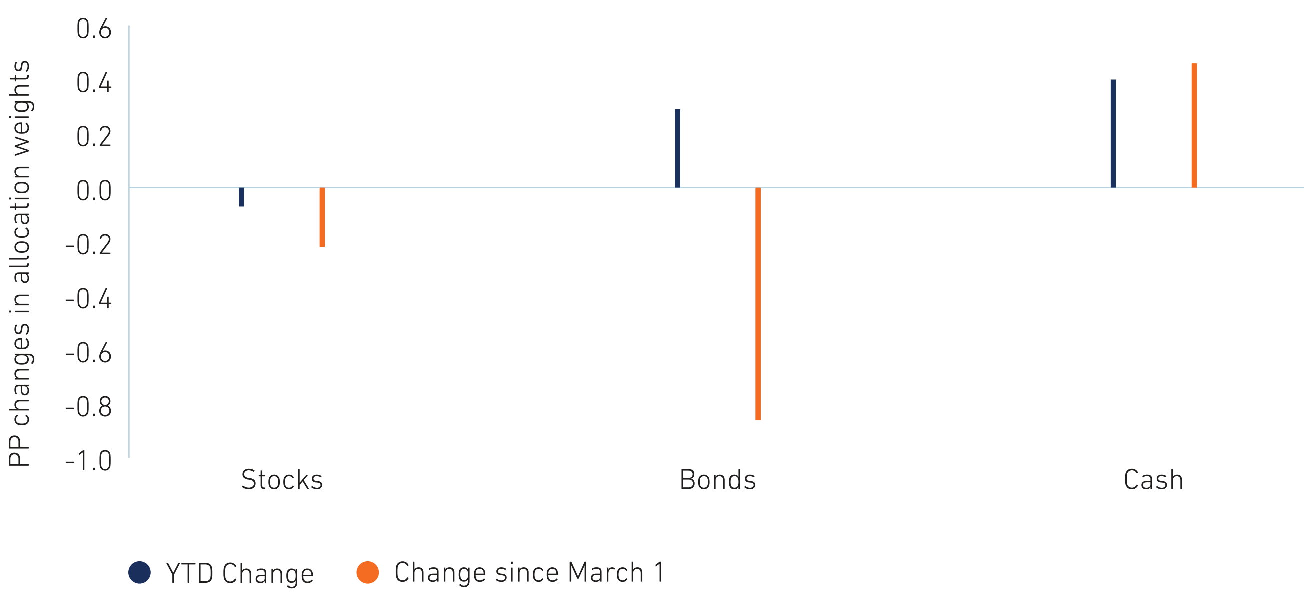
This in turn has resulted in a notable reallocation into the cash asset class, which we account for as Treasury bill ownership and money market assets (Figure 2). It is worth noting that while our overall readings of real money cash holdings have been increasing since near the start of the year, they have accelerated recently in light of the current stress in the banking system, which has created demand for alternatives away from the regional banking providers into money market funds (MMF), US Treasuries and larger banks.

Figure 1: Turbulence Elevated



Source: State Street Global Markets, as of March 14, 2023.

Figure 2: Reallocation to Cash



Source: State Street Global Markets, as of March 24, 2023.

Yield Diversity

Larger banks have been one of the more notable recipients of depositor flight, as their sizable balance sheets, regulatory oversight and systemically significant role in the banking system has been viewed positively by the nervous depositor base. One of the costs of this comfort and convenience are generally much lower yields than those offered by traditional depository alternatives. Banks have generally been slow to raise deposit rates even as the Fed has aggressively raised yields over the past year, as shown in Figure 3, which according to the FDIC shows that banks have hardly raised their depositor rates. For instance, the national checking rate yields just 6 bps, while the funds rate is targeted to trade at a 5.125 percent[1] mid-point. The unwillingness of banks to pay competitive rates has resulted in a flight of overall bank deposits, when measured by the level of bank reserves held at the Fed. Figure 4 shows that flows into the reverse repo facility (RRP), which acts as a repository for overnight cash that does not want to be captive in the banking system has increased over US$600 billion in the past year, while bank reserves have fallen by US$350 billion during that period. The RRP facility is part of the Fed's policy tools and access is limited to banks, money funds and government sponsored enterprises. Once rate cuts start, we suspect that the rates paid by RRP will become less competitive as the Fed would like to force cash into other short-term alternatives, such as Treasury bills.

[1] As of 5/5/2023

The Best Mousetrap

For the moment, the popularity of the Fed's reverse repo facility continues to attract a large share of the market's excess liquidity. Those rates will need to be lowered once the Fed starts to normalize rates, as reverse repo represents the lower bound of the targeted funds rate. At that point, we would expect other short-term assets to become more attractively priced, including Treasury bills. The debt ceiling is also presently suppressing Treasury bill supply, thereby putting downward pressure on Treasury bill yields. Once Congress raises debt limit, which we expect before the end of summer, the additional supply of Treasury securities will drive a yield adjustment as Treasury rebuilds the Treasury general account to its normal operating levels.

US$600B

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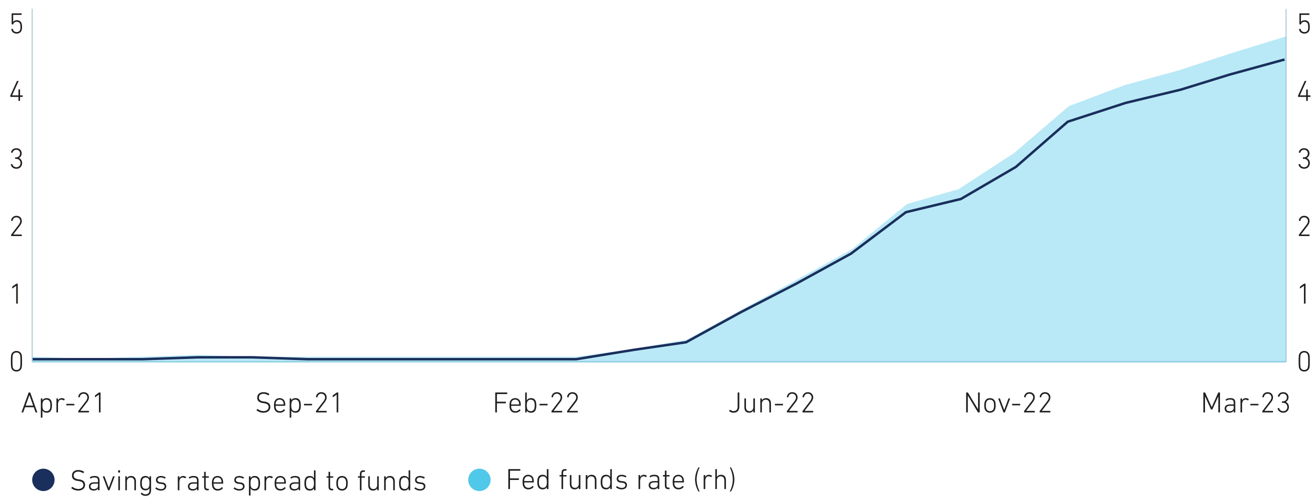
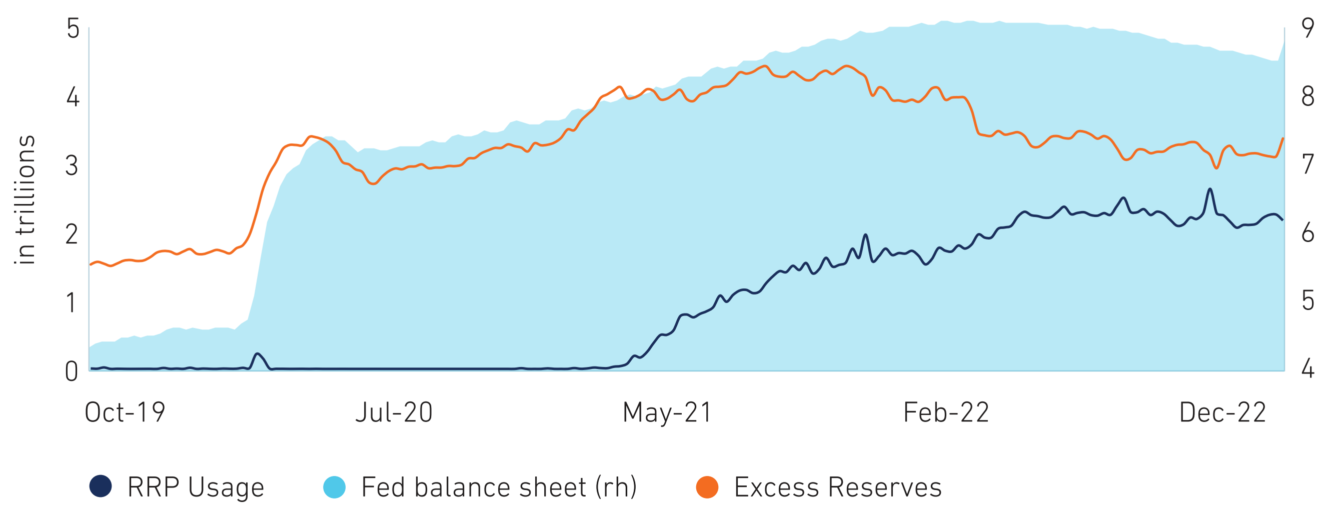
Figure 3: Bank Savings Rate Lags



Source: State Street Global Markets, Bloomberg, FDIC, as of March 31, 2023.

Figure 4: Fed Balance Sheet Allocation



Source: State Street Global Markets, Bloomberg, Federal Reserve, as of March 15, 2023.

In the sections that follow, we touch upon the ways in which State Street Global Markets Portfolio Solutions can help with cash management and provide a few simple examples of laddered US Treasury strategies for illustrative purposes.

How Can We Help?

Partner with our strategists, portfolio managers and trading desk to develop and implement a customized cash management approach that suits your needs.

We provide a range of agency trading services across multiple asset classes including fixed income, equities and exchange-traded derivatives. You can partner with our implementation experts to develop a customized cash management strategy that satisfies liquidity requirements and improves yield. This helps to remove some of the uncertainties of cash management and allows you to focus on your core competencies or portfolio management responsibilities.

Our Capabilities

- We provide robust outsourced Fixed Income trading capabilities via our experienced trading desk, based in Boston. With our access to liquidity through a multi-counterparty/dealer panel, we aim to source the best price.
- For US Treasuries, we provide access to our panel of 24 primary dealers. For example, we can source quotes from our top five[1] dealers identified in a particular issue and then execute the trade for you at the best price. Bid streams and transaction cost analysis are available to provide transparency into best execution.
- With our experienced staff and integrated trading infrastructure, we offer full trading desk capabilities. Our desk is multi-asset, hence you can also expand into other securities as needed over time.
- We offer agency-only trading with a transparent commission schedule and no other management fees or establishment costs as broker.
- Our trading team is the daily contact for your trading needs. We establish a direct dialogue for instruction delivery and any trading related interactions (e.g., daily indicative pricing or assistance with trade construction).
- Our simple order template for submission of orders to the desk enables instructions via email or Bloomberg chat. Integration with Charles River Development for FIX order connectivity is forthcoming in the near future.
- We trade Delivery Versus Payment and Receive Versus Payment (DVP/RVP). While a custody account is not necessary, if you have a custody account with State Street, we can deliver SWIFT trading instructions for settlement to simplify your workflows.

[1] Based on recent quotes and trade executions

Examples of Laddered Treasury Strategies

Treasury Bill ladders are highly liquid and customizable, providing flexibility to meet your liquidity needs. Since Treasury Bills trade at a discount, additional liquidity points can be generated with low probability of profit/loss impact. Below are weekly and monthly examples for illustrative purposes:

Weekly Ladder

Security	Par Amount (USD)	WAM (days)	Discount Yield	YTM
US T- Bill 4/6/2023	12,500,000	7	3.50	3.63
US T- Bill 4/13/2023	12,500,000	14	3.41	3.50
US T- Bill 4/20/2023	12,500,000	21	3.86	3.96
US T- Bill 4/27/2023	12,500,000	28	3.98	4.05
US T- Bill 5/4/2023	12,500,000	35	4.18	4.29
US T- Bill 5/11/2023	12,500,000	42	4.30	4.38
US T- Bill 5/18/2023	12,500,000	49	4.28	4.43
US T- Bill 5/25/2023	12,500,000	56	4.34	4.47
Total	**100,000,000**	**31.5**	**3.98**	**4.09**

Source: SSGM, Bloomberg, as of March 30, 2023.

- Weighted average maturity (WAM) of 31.5 days and yield to maturity (YTM) of 4.09 percent.
- Provides weekly natural liquidity, maturities on Thursdays.
- Roll trade at maturity involves purchasing eight-week Treasury Bill.

Monthly Ladder

Security	Par Amount (USD)	WAM (days)	Discount Yield	YTM
US T- Bill 4/27/2023	20,000,000	28	3.98	4.05
US T- Bill 5/30/2023	20,000,000	61	4.32	4.44
US T- Bill 6/29/2023	20,000,000	91	4.47	4.62
US T- Bill 7/27/2023	20,000,000	119	4.55	4.72
US T- Bill 8/31/2023	10,000,000	154	4.60	4.80
US T- Bill 9/21/2023	10,000,000	175	4.60	4.81
Total	**100,000,000**	**92.7**	**4.38**	**4.53**

Source: SSGM, Bloomberg, as of March 30, 2023.

- WAM of 92.7 days and YTM of 4.53 percent.
- Provides monthly natural liquidity, maturities on Tuesdays or Thursdays.
- Roll trade at maturity involves purchasing six-month Treasury Bill and adding to four-month Treasury Bill.

Please reach out to your Portfolio Solutions sales and relationship management contact for more details.

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