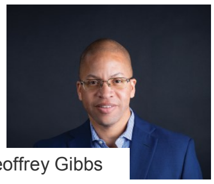
DWS

Marketing Material

THE FED AND MONEY-MARKET FUNDS

Relief from the Fed boosts liquidity in short-term markets.



Geoffrey Gibbs
Head of Liquidity Management Americas

IN A NUTSHELL

_ Elevated cash demand by U.S. companies has increased pressure on U.S. money-market mutual funds to meet rapid, large redemptions.
_ The Fed created a Money Market Mutual Fund Liquidity Facility (MMLF) to alleviate liquidity issues faced by U.S. prime money-market mutual funds.
_ The facility better enables prime funds to liquidate high-quality securities, predominantly commercial paper and certificates of deposit issued by U.S. companies, to meet shareholder redemptions.

In the United States, the money-market mutual fund industry has around $4 trillion in assets under management (AuM) as of March 18, 2020 according to the Investment Company Institute)[1]. These assets are split predominantly between retail (around $1.5 trillion) and institutional (around $2.5 trillion) money-market mutual funds. Due to unprecedented actions taken by governments around the world to stop the spread of the Coronavirus, many U.S. companies have experienced large, unexpected, short-term funding needs as numerous businesses have seen their normal day-to-day operations come to a standstill. In response, companies have been accessing bank funding lines, attempting to issue commercial paper (CP) and longer-maturity debt, and withdrawing money from money-market mutual funds. The sudden increase in demand for cash has put significant strain on short-term markets, and the U.S. Federal Reserve (the Fed) has recently stepped in to alleviate some of the pressure.

In March, to boost liquidity and ease stress in financial markets, the Fed lowered the federal funds rate to a range of 0.0%-0.25%, introduced a new round of Quantitative Easing committing to buy $700 billion of Treasuries and mortgage-backed securities (MBS) and announced that it would lend directly to highly-rated U.S. companies. In addition, the Fed also announced that it would provide $1.5 trillion in short-term loans to banks to alleviate strains on the U.S. repurchase-agreement (repo) market, a fundamental part of U.S. financial-market infrastructure.

Most recently, the Fed created a Money Market Mutual Fund Liquidity Facility (MMLF) to specifically support U.S. prime money-market mutual funds. Prime money-market funds invest in diversified portfolios of commercial paper, certificates of deposit, and other high-quality, short-term, liquid debt issued by governments, banks and corporations. Prime funds serve both retail and institutional investors and in the United States have around $700 billion in AuM, or about 18% of all U.S. money-market-mutual-fund assets. The MMLF will allow U.S. banks and broker-dealers to borrow money from the Fed at low interest rates, collateralized by predominantly commercial paper and certificates of deposit (amongst a few other securities included in MMLF) issued by U.S. companies. The MMLF also gives U.S. banks and broker-dealers regulatory relief from capital, liquidity and leverage requirements related to these purchases.

Typically, prime money-market mutual funds invest around 60%-80% of their assets in commercial paper and certificates of deposit, with the remainder in repurchase agreements, government and agency discount notes, corporate bonds and similar instruments. In normal market conditions, fund managers buy and sell commercial paper and certificates of deposit from broker-dealers who make markets in these instruments. When broker-dealers cannot find buyers for funds that need to sell their commercial paper or certificates of deposit, they have a limited ability (due to post-financial-crisis bank regulation) to use their balance sheet to purchase the securities.

In the current environment, market participants have indicated that liquidity for commercial paper and certificates of deposit has been the most pressing area of weakness. This

[1] https://www.ici.org/research/stats/mmf/mm_03_19_20

is because investment managers facing redemptions from their clients have shifted from investing in long-dated commercial paper to investing in overnight maturities and repo that may be more quickly liquidated to meet those redemptions. The combination of reduced demand from investment managers for long-dated commercial paper and certificates of deposit, along with broker-dealers' limited ability (due to regulatory hurdles) to directly buy and hold securities, severely diminishes money-market mutual funds' ability to sell long-dated securities. This in turn directly impedes prime money-market mutual funds from meeting the demands of large, rapid redemptions.

As a result, fund managers have been forced to sell high-quality assets at distressed prices to generate liquidity, which has put downward pressure on money-market mutual funds' net asset values. To alleviate this bottleneck, the Fed's MMLF has committed to lend against commercial paper and certificates of deposit issued by U.S. companies and banks (among a few other accepted securities, such as U.S. Treasury bills and U.S. agency discount notes) from U.S.-based prime money-market mutual funds at amortized cost. For a discount security within a money-market fund, such as commercial paper, amortized cost refers to a price for the security that includes the portion of the security's original discount to par that has already accrued to the security's owner, similar to accrued interest.

By lending against commercial paper and certificates of deposit from prime money-market funds at amortized cost, the Fed effectively allows the funds to make investors whole, as opposed to if the funds were to sell the securities at steep discounts in an illiquid market when meeting redemptions. In other words, the Fed's action substantially increases the liquidity of U.S. prime money-market mutual funds. Note that securities issued by non-US corporations are not eligible under the facility.

A key question that investors have today is: will this action by the Fed be enough to provide relief to money-market mutual funds? The Fed's action predominantly targets commercial paper and certificates of deposit issued by U.S. companies and banks, which represent a majority of assets in U.S. prime money-market mutual-fund portfolios. Improving liquidity for prime money-market funds should help these funds avoid severe declines in their share prices and in turn provide large corporate investors with substantially better access to their cash.

Additional measures that the Fed has taken to boost liquidity in short-term funding markets are summarized in the table below. MMLF directly targets prime money-market mutual funds, while some of the other measures helps to ensure that liquidity in general doesn't dry up within short-term markets. This, in turn, should also improve the general market environment for money-market mutual funds, since they operate in the short-term fixed-income markets.

Contributor: Eric Legunn, CFA

DETAILS ON FED PROGRAMS INTRODUCED TO ALLEVIATE LIQUIDITY PRESSURES IN U.S. FINANCIAL MARKETS

Program	Full Name	Purpose	Summary Details
CPFF	Commercial Paper Funding Facility	Allow U.S. companies to issue commercial paper (CP)	Fed / U.S. Treasury-sponsored special-purpose vehicle directly purchases CP from A-1/P-1/F-1[2] rated companies. Pricing based on 3-month overnight indexed swap (OIS) +200 basis points (bps). Program runs through 3/17/2021.
PDCF	Primary Dealer Credit Facility	Enhance market liquidity by allowing primary dealers to post collateral with Fed for loans	Investment-grade corporate debt, international agencies, CP, municipal bonds, MBS, AAA ABS, equities (excluding ETPs, UITs, mutual funds, rights and warrants). Program runs for 6 months or longer.
MMLF	Money Market Mutual Fund Liquidity Facility	Provide liquidity to lend against assets from prime money-market mutual funds at amortized cost value	Banks post assets purchased from money-market mutual funds to Fed, with regulatory relief for balance-sheet treatment. Rate based on discount window +100bps. Program runs thru September 30, 2020.
FX Swap Lines[3]	Central bank U.S. dollar liquidity arrangements	Reduce dollar funding pressure for foreign banks	Central banks conduct U.S. dollar auctions and post currency at Fed and receive dollars for their depository institutions. Rate is OIS +25bps.

Sources: DWS Investment Management Americas, Inc. as of 03/19/20

[2] A-1: A short-term issuer credit rating that indicates the highest category by Standard & Poors and signals that an obligor has a strong ability to meet its financial commitments; P-1: According to Moodys, Issuers rated P-1, which stands for Prime-1, have a superior ability to repay short-term debt obligations; F-1: Fitch's highest short-term credit-quality rating.

[3] Central-bank liquidity swap (FX Swap Lines): a central bank uses this type of currency swap to provide liquidity of its currency to the central bank of another country

GLOSSARY

Agency Bonds are bonds issued by a government agency.

Asset-backed securities (ABS) are securities whose income payments, and thus value, is derived from and collateralized (or "backed") by a specified pool of underlying assets.

One basis point equals 1/100 of a percentage point.

A certificate of deposit (CD) is an instrument offered by banks that offers a pre-specified rate of interest in exchange for the purchaser agreeing to deposit, and not touch, a lump-sum for a pre-specified period of time.

In some transactions, collateral is used to protect the lender against the borrower's default. In case the borrower defaults on the interest or principal payment, the collateral can be used to offset the loan.

Commercial paper (CP) is issued by corporations and represents short-term unsecured promissory notes with a maturity of 270 days or less.

A corporate bond is a bond issued by a corporation in order finance their business

A discount note is a non-interest bearing short-term debt obligation that is issued at a discount to par and whose value becomes par at maturity.

Part of monetary policy, the discount window allows eligible institutions to borrow, on a short-term basis, money from the central bank to meet temporary liquidity shortages

An exchange-traded product (ETP) is a derivatively priced security which trades during the day on a national stock exchange.

The federal funds rate is the interest rate, set by the Fed, at which banks lend money to each other, usually on an overnight basis.

The financial crisis refers to the period of market turmoil that started in 2007 and worsened sharply in 2008 with the collapse of Lehman Brothers.

Investment grade (IG) refers to a credit rating from a rating agency that indicates that a bond has a relatively low risk of default.

Leverage attempts to boost gains when investing through the use of borrowing to purchase assets.

Liquidity refers to the degree to which an asset or security can be bought or sold in the market without affecting the asset's price and to the ability to convert an asset to cash quickly.

The final payment date of a financial instrument is its maturity

The money market is a financial market for assets involved in short-term borrowing and lending like treasury bills, commercial papers, certificates of deposit and repurchase agreements

A mortgage-backed security (MBS) is a special type of asset-backed security where the holder receives interest and redemption payments from pooled mortgage debtors, secured by the underlying mortgages.

Municipal bonds (Munis) are debt securities issued by a state, municipality or country.

Net asset value (NAV) is the value of an organisation's assets minus the value of its liabilities.

An overnight indexed swap (OIS) is a hedging contract whereby a party exchanges a predetermined cash flow with a counterparty on a specified date. One side of the swap tracks a debt, equity or other price index, and in the case of an overnight index swap, an overnight interest rate index is used.

Quantitative easing (QE) is an unconventional monetary-policy tool, in which a central bank conducts broad-based asset purchases.

A rating is a standardized assessment of the creditworthiness of the issuer and its debt instruments by specialized agencies. The main three rating agencies are the Moody's (Aaa over Baa1 to C, best to worst) , S&P (AAA over BBB+ to D, best to worst) and Fitch (AAA over BBB+ to D, best to worst).

In a repurchase (repo) agreement dealer sells a security (usually government bonds) and buys them back, by agreement between the two parties, shortly after

Rights represent a privilege that company shareholders can receive that allow them to subscribe to new shares of a stock issue before those shares get offered to the public. Rights typically have a 2 to 4 week life and they enable company shareholders to buy the new stock offering below the price of the public offering.

Treasuries are fixed-interest U.S. government debt securities with different maturities: Treasury bills (1 year maximum), Treasury notes (2 to 10 years), Treasury bonds (20 to 30 years) and Treasury Inflation Protected Securities (TIPS) (5, 10 and 30 years).

A unit investment trust (UIT) is a type of investment company that offers a portfolio (generally of stocks and bonds) as unies that investors can redeem, for a specified window of time. UITs are designed to provide investors with access to capital appreciation or investment income.

The U.S. Federal Reserve, often referred to as "the Fed", is the central bank of the United States.

Similar to an option (in that it provides the owner with a contractual right to buy securities), a warrant is a security that enables the owner to buy stock of the issuing company at a fixed price, the exercise price, until the contract expires.

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