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# The new terrain of the ultra-short market

## Key takeaways

**The ultra-short bond market is deepening, with greater inflows and a new base of investors.**

**Treasury bill sales are expected to rise in 2018, lifting net issuance to between $400 billion and $500 billion.**

**Conservative ultra-short bond funds have more flexibility than prime money market funds to capture new opportunities at the short end of the yield curve.**

**Stay informed on the evolving ultra-short-term bond investment landscape**

Putnam offers three commentaries to keep you updated on changes to investing at the short end of the yield curve.

1 **CHANGING CURRENTS: THE MONEY MARKET SINCE REFORM**

Discusses the impact of the SEC reform on the behavior of industry participants.

2 **THE NEW TERRAIN OF THE ULTRA-SHORT MARKET**

Describes the decline of prime money market funds, the increase in commercial paper, and T-bill demand as the market reacted to reforms.

3 **THE FORCES SHAPING THE ULTRA-SHORT MARKET**

Addresses tax reform, Fed policy, and potential for future regulatory reforms and LIBOR replacement.

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## A shifting money markets landscape

A massive shift in assets from prime money market funds into government money-market funds was spurred by new Securities and Exchange Commission (SEC) regulations in October 2016. The rules on registered money market mutual funds changed the ultra-short universe. The market now has a deeper base of investors because of the shifting relative value of short-term instruments, while commercial paper issuance remains robust. In addition, government issuance of Treasury bills (T-bills) is expected to increase, and liquidity is being supported by the Federal Reserve's overnight reverse repo (ON RRP) program. For 2018, we foresee the ultra-short landscape continuing to evolve as investors adapt to shifting U.S. monetary policies and market regulations.

## New entrants picking up the slack

Prime money market funds no longer dominate the short-end credit markets. As investors shifted out of these funds, demand for commercial paper ("CP") and other credit instruments from Rule 2a-7 prime money market funds declined dramatically. Not surprisingly, spreads on CP and certificates of deposit (CDs) widened. However, faced with a flattening yield curve and near-market tights on one- to three-year corporate securities, new buyers took advantage of this relative value opportunity. These investors (including ultra-short funds, bond funds, securities lenders, separately managed accounts, and money fund replacement collective trusts) increased holdings as credit spreads widened at the short end of the yield curve. With prime money market funds less of a force in the short-end credit markets, the addition of new buyers means that all participants in the short end benefit from a deeper investor base.

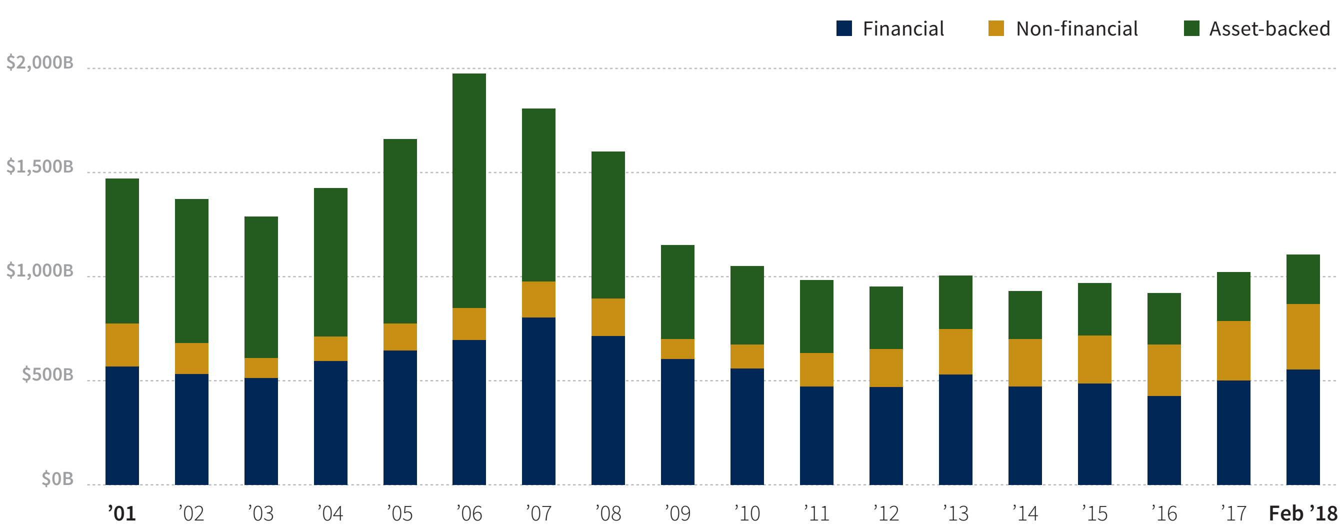
## Commercial paper is on the rise

The market for commercial paper expanded in 2017 after money market reform implementation. The total amount of CP outstanding, instead of shrinking, rose by a little more than $100 billion even as investors shifted out of credit-oriented prime money market funds. The new entrants described above took up the slack in the CP market, and then some. CP has a high turnover rate because it is typically issued with maturities of nine months and shorter. The chart below illustrates the changes in outstanding CP over the past 16 years. Overall,

FIGURE 1

# Trends in commercial paper outstanding

The market has declined to slightly over $1 trillion




Sources: JPMorgan, Putnam.

CP outstanding declined by almost half, to a little over $1 trillion as of December 27, 2017, from a high of almost $2 trillion in 2006. However, between 2016 and 2017, post money market reform, CP outstanding actually expanded by a little more than $100 billion (and has continued to expand so far in 2018), rather than contracting as might have been expected in the wake of such a major shift of assets out of credit-oriented prime money market funds.

There have been changes in the type of CP issued, as well as a shift between foreign and domestic issuers. Beyond the demand dynamic described above, U.S. financial reforms focused on reducing companies' reliance on issuing short-term debt such as CP for funding requirements has also affected the mix of supply. Asset-backed commercial paper (ABCP) issuance has declined materially since the global financial crisis, while financial companies' sales of traditional CP held steady. Also, CP issued by non-financial companies has increased on the margin. Post-financial crisis, domestic companies' outstanding CP declined by about half compared with year-end 2007. Foreign CP outstanding has remained fairly constant. International financial companies are now the biggest issuers in the sector, representing nearly 85% of CP outstanding among financial companies. Foreign financial issuers, which aren't subject to the same regulations as U.S. financial companies, are taking advantage of an arbitrage opportunity that diminishes as U.S. interest rates increase. When that arbitrage opportunity wanes, assuming no other market changes, so will the potential issuance of CP.

## Rising demand for T-bills

With the mass migration into government money market funds, demand for U.S. Treasury bills (T-bills) dramatically increased. The demand added pressure to an already tight T-bill supply. Besides government money market funds, foreign central banks have historically held an estimated $700 billion of T-bills on their balance sheets, or about 35% of outstanding securities. That has lowered the supply available to government money market funds.

Beyond this demand profile, however, the term structure of T-bills does not naturally fit the liquidity requirements of money market funds. In 2010, the SEC imposed liquidity rules on money market funds for the first time, requiring these funds to hold a minimum of 10% in daily (one-day) liquidity and 30% in weekly (seven-day) liquidity. The SEC

FIGURE 2

## Annual U.S. Treasury bill issuance and outstanding

SIFMA year to date 2/28/18 (USD billions)

| Year | Gross | Net | Outstanding |
|---|---|---|---|
| **1998** | $759.1 | -$80.9 | $691.0 |
| **1999** | — | — | 737.1 |
| **2000** | 1,725.4 | -90.2 | 646.9 |
| **2001** | 2,362.5 | 164.4 | 811.2 |
| **2002** | 3,241.0 | 78.0 | 888.7 |
| **2003** | 3,503.3 | 40.0 | 928.8 |
| **2004** | 3,836.4 | 74.4 | 1,001.2 |
| **2005** | 3,615.7 | -40.0 | 960.7 |
| **2006** | 3,632.7 | -20.4 | 940.8 |
| **2007** | 3,742.3 | 59.8 | 999.5 |
| **2008** | 5,627.7 | 862.7 | 1,861.2 |
| **2009** | 6,417.7 | -73.2 | 1,793.5 |
| **2010** | 6,099.7 | -21.0 | 1,772.5 |
| **2011** | 5,401.7 | -252.0 | 1,520.5 |
| **2012** | 5,623.8 | 108.5 | 1,629.0 |
| **2013** | 5,715.9 | -37.0 | 1,592.0 |
| **2014** | 4,814.9 | -134.1 | 1,457.9 |
| **2015** | 4,894.0 | 56.1 | 1,514.0 |
| **2016** | 6,130.9 | 304.0 | 1,818.0 |
| **2017** | 6,562.8 | 137.9 | 1,955.9 |
| **Jan 2018** | 560.0 | 11.0 | 1,966.9 est. |
| **Feb 2018** | 611.0 | 111.0 | 2,077.9 est. |

Source: Securities Industry and Financial Markets Association.

also shortened the weighted average maturity (WAM) of money market funds to 60 days from 90 days. The combined effect of the liquidity requirements and the overall shorter WAM means that much of a money market fund's holdings are extremely short dated. Treasury bills are issued with maturities of 1 month, 45 days, 3 months, 5 months, 6 months, and 1 year. This makes it even more challenging for funds to find T-bills that meet money market funds' SEC structural requirements. It also applies downward pressure on front-end credit spreads, including TED[1] or LIBOR-OIS[2] spreads, which other investors have the ability to take advantage of, such as ultra-short or short-term bond funds.

The net issuance of T-bills generally declined from 2009 until 2015, effectively helping to hold T-bill rates lower until the year after money market reform became effective. Based on initial indications, it did not appear that the Treasury was going to materially increase their net issuance. However, the Treasury ultimately issued a net $304 billion of T-bills in 2016 compared with $56.1 billion the previous year. The government's debt ceiling dynamics curbed T-bill sales in 2017. However, assuming the debt ceiling issue is resolved relatively early in 2018, we expect T-bill issuance to increase significantly. This will be due to the unwinding of Treasuries held on the balance sheet and the need for additional funding to cover future projected fiscal deficits, which are the result of balance sheet normalization and broad tax reform. Net T-bill issuance between $400 billion and $500 billion is expected, according to market estimates. Material issuance has already occurred in February 2018, with the Treasury auctioning $55 billion in 1-month T-bills and $51 billion in 3-month bills.

The yields of T-bills are beginning to reflect both the Fed's interest-rate increases since 2015 and the beginning of Fed balance sheet normalization. T-bill rates did not reflect the full effect of the Fed's December 2015 rate hike. Additional net issuance in 2016 helped loosen the T-bill market and allow yields to increase on pace with the December 2016 rate increase. In 2017, three rate hikes by the Fed were fully reflected and even surpassed in the T-bill market, with the additional yield possibly a result of the Fed beginning the process of balance sheet normalization. The additional T-bill supply in 2018 may push yields higher, but not dramatically so, in our view. There is so much demand, particularly from government money market funds and foreign central banks, that it is likely to be easily absorbed.

FIGURE 3

## Yields on 3-month Treasury bills are rising

Yield to maturity (ask)

| | |
|---|---|
| **December 31, 2014** | 0.02% |
| **December 31, 2015** | 0.19% |
| **December 31, 2016** | 0.51% |
| **December 31, 2017** | 1.32% |
| **January 31, 2018** | 1.41% |
| **February 28, 2018** | 1.61% |

Source: Bloomberg, USD T-bills curve.

1 TED spread is the difference between 3-month T-bills and 3-month LIBOR and is one indicator of credit risk on interbank loans. As the TED spread increases, credit risk is increasing.

2 LIBOR-OIS spread is the difference between LIBOR and the overnight index swap rate and is also used as an indicator of credit risk in the interbank lending market.

## The Fed's overnight reverse repo program

The Fed's overnight reverse repo (ON RRP) agreement facility offers another outlet for qualified money market funds. The program was created as a temporary supplementary policy tool in September 2013, and after a year of testing, was implemented in September 2014. The goal was to assist in regulating the federal funds rate[3] and maintain it in the target range set by the FOMC during the policy normalization process. The ON RRP facility is used not only by certain money market funds (those Rule 2a-7 money funds that meet the $5 billion minimum asset requirement), but also by banks and government-sponsored entities (e.g., the Federal Home Loan Bank) that meet the eligibility requirements. Along the way, the facility became a tool for money market funds to manage liquidity around challenging time periods such as quarter-end and year-end.

In broad strokes, the ON RRP facility works this way: The Fed sells securities held on their balance sheet to eligible ON RRP counterparties with an agreement to buy the assets back the next business day. The eligible counterparties lend cash to the Fed in exchange and earn the fixed rate offered by the facility at that time. This provides an alternative investment for the eligible lending counterparties (money market funds), which otherwise may have required private market (non-Fed) borrowers to bid more aggressively for funds resulting in lower income for the lending counterparties.

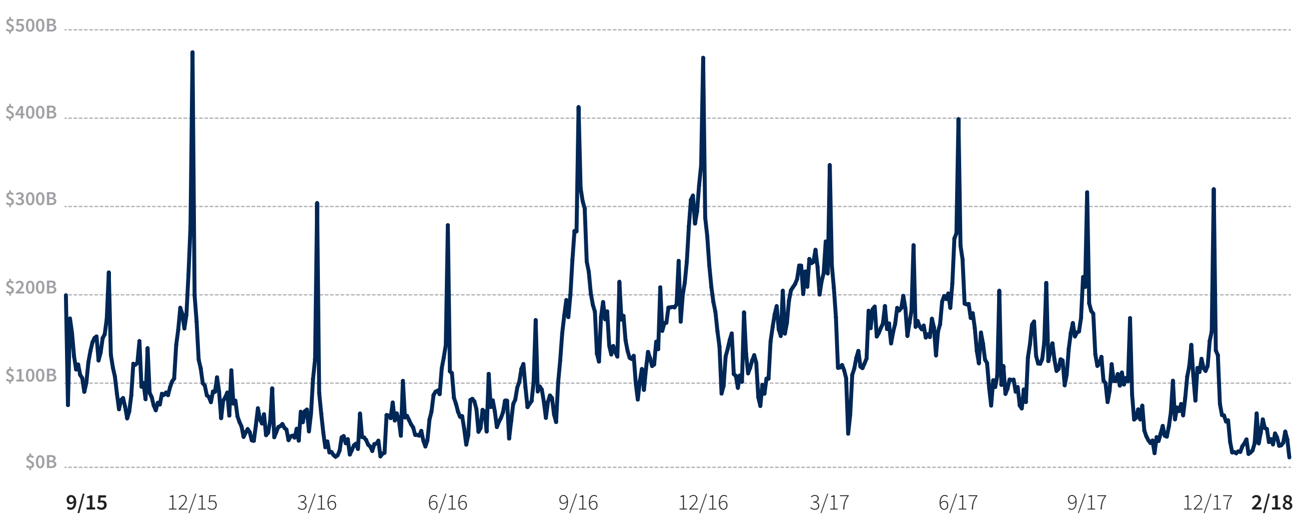
The end result has been the increasing use of this facility by money market funds, specifically government money market funds, to manage cash at the end of each quarter. As the Fed navigates policy normalization, it will be interesting to see whether this tool is eventually phased out or becomes a permanent part of the Fed's ongoing policy tool kit. Figure 4 illustrates the usage of the ON RRP facility. It highlights quarter-end spikes and the increase starting in the third quarter of 2016 before the SEC reforms took effect.

3 The fed funds rate is the interest rate that banks charge each other to lend out the Federal Reserve's funds on an overnight basis. The borrowed funds help banks maintain the Federal Reserve requirement for cash on hand on a nightly basis. The fed funds rate is used as a policy tool to control U.S. economic growth and is the base rate for all other short-term interest rates.

FIGURE 4

## Activity in the Fed's overnight reverse repo facility

Overnight reverse repo




Sources: Bloomberg, Putnam.

FIGURE 5

## Option-adjusted spread narrows for 1–3 year corporates

Bloomberg Barclays U.S Corporate 1–3 Year Index, OAS, 9/30/16–2/28/18


Source: Bloomberg.

### Fund similarities are only temporary

A review of many ultra-short bond funds shows an increase in net cash, money market instruments, or the percentage of net assets with short-term ratings from rating agencies (A1+/P1, A2/P2, etc.). In 2017, the CP market provided new opportunities following the SEC rule changes. For example, Ford CP offered yields that were about 10 to 20 basis points higher than Ford bonds with similar maturities. There was a similar phenomenon among other companies' securities, including Berkshire Hathaway and United Technologies. The CP and the ABCP of many Tier 1 banks, including Société Général, Groupe BPCE, Crédit Agricole, BNP Paribas, and Danske Bank were also trading at cheaper levels than their bonds.

The more attractive CP and certificates of deposit (CD) spreads were a boon for ultra-short funds and similar investors, whose natural base in the one- to three-year part of the corporate credit or mortgage-backed securities curve became more expensive. Spreads on one- to three-year corporate credit investments — particularly floating rate notes — have tightened due to demand from ultra-short and short-term bond funds, along with Asian and European investors seeking yield but not significant interest-rate risk.

The ultra-short funds and the prime money market funds are looking more similar these days due to shifting relative value among ultra-short securities, market technicals, and the flattening of the yield curve in 2017. But that will not always remain the case. The conservative ultra-short funds have more flexible investment parameters, giving them greater ability to capture new opportunities at the short end of the yield curve.

**For Money Market Fund, consider these risks before investing:** *You can lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time. The values of money market investments usually rise and fall in response to changes in interest rates. Changes in the financial condition of an issuer or counterparty, changes in specific economic or political conditions that affect a particular type of issuer, and changes in general economic or political conditions can increase the risk of default by an issuer or counterparty, which can affect a security's or instrument's credit quality or value.* Certain securities in which the fund may invest, including securities issued by certain U.S. government agencies and U.S. government-sponsored enterprises, are not guaranteed by the U.S. government or supported by the full faith and credit of the United States. Mortgage-backed securities are subject to prepayment risk and the risk that they may increase in value less when interest rates decline and decline in value more when interest rates rise.

**For Government Money Market Fund, consider these risks before investing:** *You can lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.* The values of money market investments usually rise and fall in response to changes in interest rates. Changes in the financial condition of an issuer or counterparty, changes in specific economic or political conditions that affect a particular type of issuer, and changes in general economic or political conditions can increase the risk of default by an issuer or counterparty, which can affect a security's or instrument's credit quality or value. Certain securities in which the fund may invest, including securities issued by certain U.S. government agencies and U.S. government sponsored enterprises, are not guaranteed by the U.S. government or supported by the full faith and credit of the United States. Mortgage-backed securities are subject to prepayment risk and the risk that they may increase in value less when interest rates decline and decline in value more when interest rates rise.

**For Short Duration Income Fund, consider these risks before investing:** Putnam Short Duration Income Fund is not a money market fund. The effects of inflation may erode the value of your investment over time. Funds that invest in government securities are not guaranteed. Mortgage-backed investments, unlike traditional debt investments, are also subject to prepayment risk, which means that they may increase in value less than other bonds when interest rates decline and decline in value more than other bonds when interest rates rise. We may have to invest the proceeds from prepaid investments, including mortgage-backed investments, in other investments with less attractive terms and yields. Bond prices may fall or fail to rise over time for several reasons, including general financial market conditions, changing market perceptions (including perceptions about the risk of default and expectations about monetary policy and interest rates), changes in government intervention in the financial markets, and factors related to a specific issuer or industry. These factors may also lead to periods of increased volatility and reduced liquidity in the fund's portfolio holdings. Bond investments are subject to interest-rate risk (the risk of bond prices falling if interest rates rise) and credit risk (the risk of an issuer defaulting on interest or principal payments). Interest-rate risk is greater for longer-term bonds, and credit risk is greater for below-investment-grade bonds. Credit risk is generally greater for debt not backed by the full faith and credit of the U.S. government. Risks associated with derivatives include increased investment exposure (which may be considered leverage) and, in the case of over-the-counter instruments, the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations. Unlike bonds, funds that invest in bonds have fees and expenses. You can lose money by investing in the fund.

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