PGIM FIXED INCOME Perspectives June 2017

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Fed Shift Set to Muddy MBS Waters

The Federal Reserve's reduced market presence could increase volatility amid historically tight MBS spreads

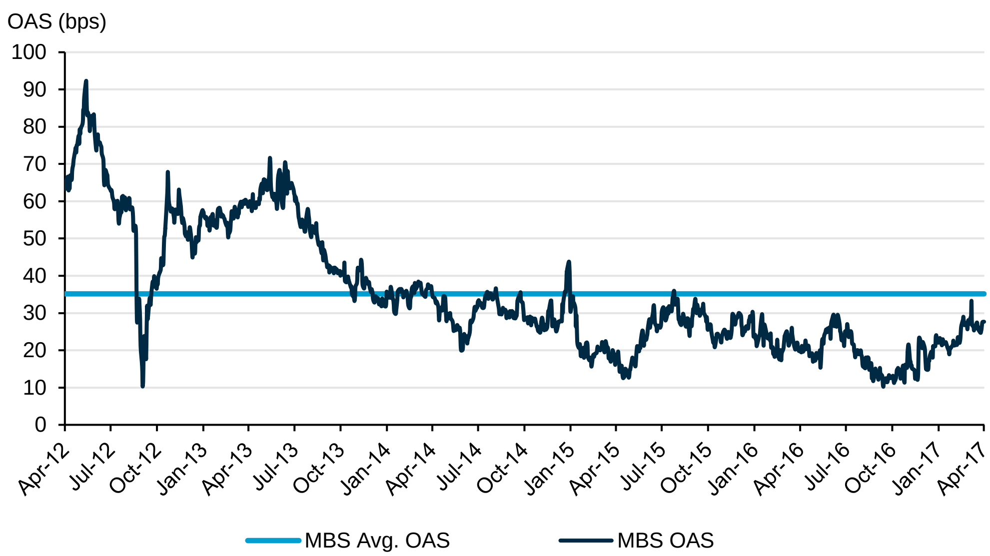
As a staple of the fixed income markets, mortgage-backed securities (MBS) continue to have a role in multi-sector portfolios benchmarked to the Bloomberg Barclays U.S. Aggregate Index. While MBS often underperform Treasuries with similar durations during periods of volatility (as observed in 2016), they also tend to outperform the credit sectors during these periods. However, some looming risks within the agency MBS sector could challenge that dynamic going forward.

With the Fed widely expected to begin tapering its MBS reinvestments in late 2017, the sector not only stands to see one of its largest sources of demand retreat from the market, but it could also lose a filter that has absorbed much of the sector's optionality risk over the past several years.

The combination of these risks plus the constraints on generating alpha given the tight spread levels and the sector's volatile optionality underscore our long-held view for multi-sector portfolios to underweight MBS relative to our best ideas across the various spread sectors.

MBS OAS OVER TREASURIES REMAIN IN A TIGHT RANGE BELOW THEIR LONG-TERM AVERAGE

May 1, 2012–April 24, 2017



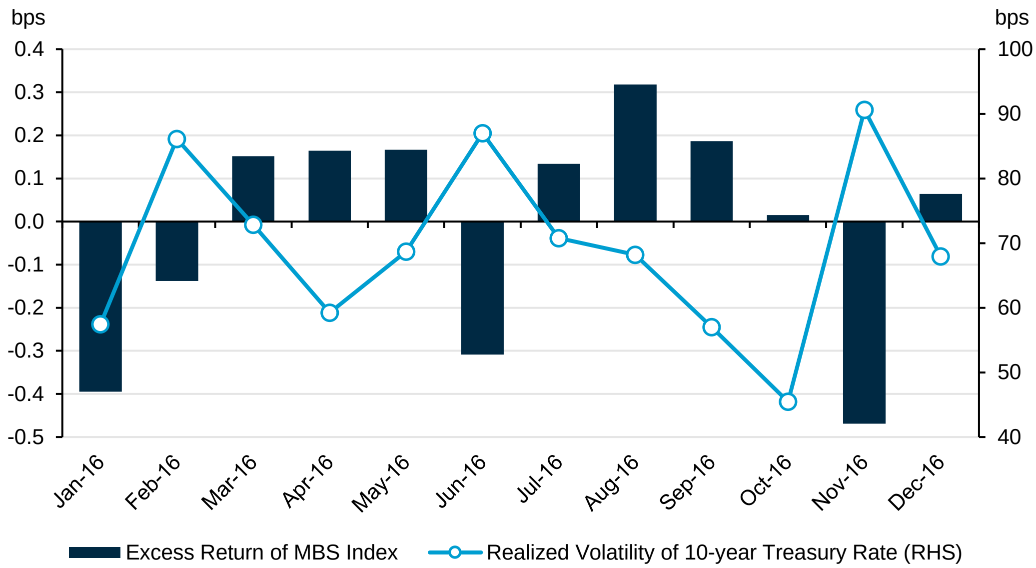
Source: Bloomberg Barclays Indices

Spreads Resilient Amid Increased Rate Volatility

In what was a volatile year, the performance of agency MBS in 2016 showed that it can cut two ways. Throughout the early-year selloff in the spread sectors, the UK's Brexit vote, the aftermath of the U.S. presidential election, and the uncertainty regarding the future path of Fed rate hikes, agency MBS were a source of relative stability as Treasury OAS traded in a narrow range of just over 30 bps at the wides to about 10 bps at the tightest levels, as illustrated in the preceding chart.

However, from an excess return perspective, agency MBS consistently underperformed Treasuries during bouts of volatility in 2016. In addition to the negative excess return in January 2016, the following chart shows that MBS posted negative excess returns when the realized volatility on the 10-year Treasury yield topped 85 bps. This underperformance more than offset the outperformance of MBS during periods of relative calm, and the MBS index finished 2016 trailing duration matched Treasuries by 11 bps.

MONTHLY MBS EXCESS RETURNS AND REALIZED VOLATILITY OF THE 10-YEAR TREASURY RATE IN 2016



Source: PGIM Fixed Income and Barclays

Technicals Support MBS Spreads

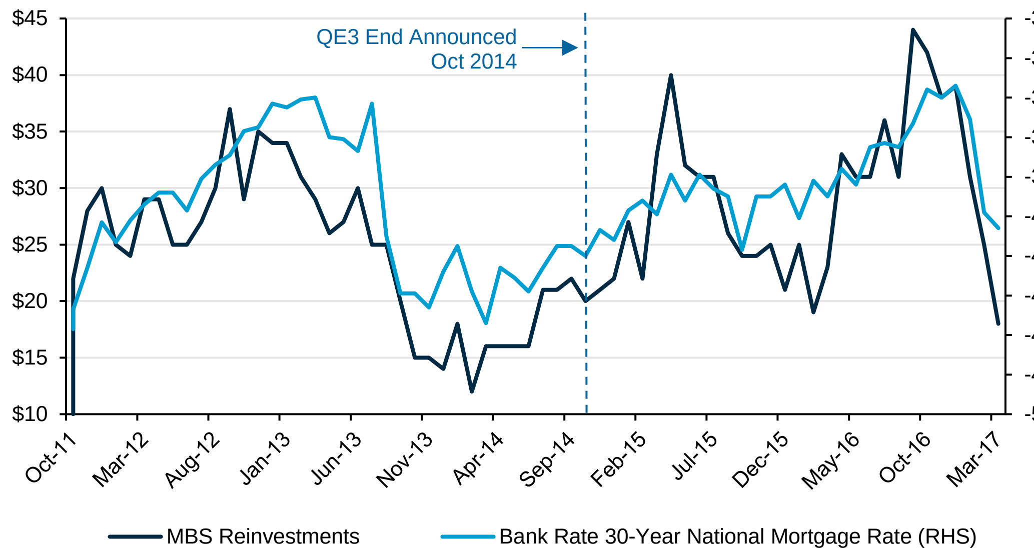
In addition to demand from the Fed, well-contained origination levels coupled with steady demand from banks and overseas investors have also contributed to the sector's technical tailwind. Given the post-crisis focus on capital levels and treatment, banks increased their MBS purchases amid the recent strength in deposit growth. In 2016, banks added more than $100 billion to their agency MBS holdings, which was the equivalent to about half of the year's net supply. U.S. assets, including agency MBS, have also become a compelling option for investors in Europe and Japan, many of whom are yield-based buyers and are facing the negative interest-rate policies of the European Central Bank and the Bank of Japan.

Yet, the effects of the Fed's reinvestments remain the overriding factor responsible for keeping MBS spreads range bound in recent years. The importance of the Fed's market presence is not only underscored by its $1.8 trillion agency MBS portfolio, but also by its increased reinvestment activity during periods of accelerated prepayment speeds that has absorbed a considerable amount of market volatility.

With the general preface that declining mortgage rates trigger an uptick in prepayment speeds, the pace of the Fed's reinvestments surged to about $40 billion during notable declines in mortgage rates in recent years, as seen in the following chart. The precipitous drop in reinvestments to about $18 billion in the first quarter of 2017 may have foreshadowed the Fed's stated plans to subsequently begin shrinking its balance sheet—a move that would essentially dampen what has been the most significant technical factor keeping MBS spreads range bound in recent years. And now that the Fed has signaled its intention to taper its reinvestments, overseas investors and banks may also back away from the market until spreads cheapen.

FEDERAL RESERVE MBS REINVESTMENTS ($ IN BILLIONS)

October 2011 to March 2017 (mortgage rate shown inverted on secondary axis on 3-month lag)



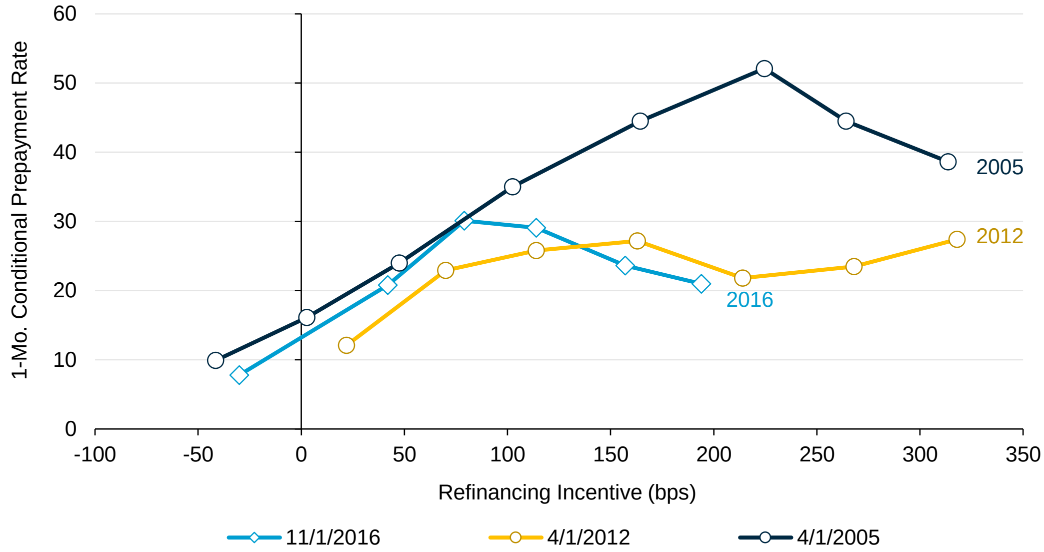
Source: Federal Reserve, Bloomberg

With that uncertain backdrop in mind, some market participants could counter with the apparent exhaustion in prepayment speeds as more recent dips in Treasury yields have failed to elicit prepayment responses that were comparable to those in preceding years. For example, the following chart shows that when the refinancing incentive reached approximately 150 bps in 2005 and 2016, the conditional prepayment rate soared to 44.5 in 2005, while only hitting 23.6 in 2016.

Yet, there are several reasons why prepayment speeds could accelerate going forward. Not only have housing prices continued to recover from the depths of the housing bust, but prices in many metropolitan areas have now exceeded their pre-crisis peaks, thus possibly raising the incentive for homeowners to "trade up" or pull cash out via a refinancing. In addition, the potential for changes in government regulation, originator business models, and underwriting automation could increase the efficiency of refinancing a mortgage. Finally, MBS participants may be complacent regarding the conservatorship of Fannie Mae and Freddie Mac, but GSE reform remains a distinct possibility in the future. The potential for these scenarios to steepen S curves—perhaps towards 2005 levels—contribute to the ongoing, heightened uncertainty within the MBS sector.

While our prepayment model is calibrated to the more recent, subdued prepayment experience, when recalibrated to pre-crisis data—a time of less stringent underwriting standards and more pronounced borrower responses to declining mortgage rates—MBS valuations appear even less attractive than the current, relatively tight levels. Furthermore, if prepayment behavior becomes more efficient in the future, MBS should be expected to continue underperforming similar duration Treasuries. For example, if we were to recalculate OAS over Treasuries using prepayment curves from 2003-2005, spreads on higher coupon MBS would richen by 30 to 35 bps given the increased option cost. To get back to current OAS levels, prices on higher coupon issues would have to decline by more than 2 percentage points.

S-CURVES AT DIFFERENT POINTS IN TIME



Source: PGIM Fixed Income, Fannie Mae, and Freddie Mac

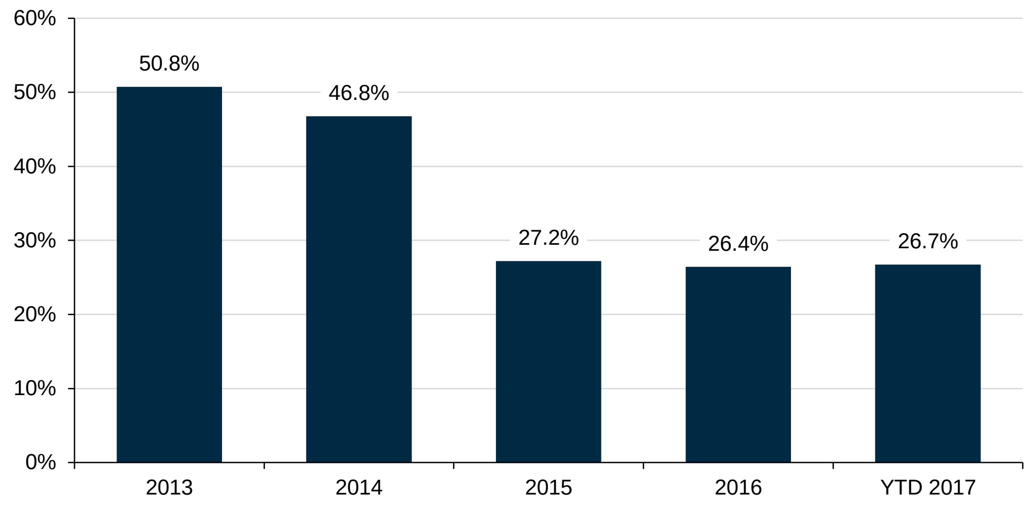
Telegraphing an Exit that Will be Felt on Multiple Fronts

With the Fed reiterating that it will continue hiking the Fed funds rate until it reaches a normalized level, MBS investors have been in suspense as they sought information on when the Fed would focus on its MBS reinvestment policy and begin the path towards a smaller balance sheet. While that information was conspicuously absent early in its tightening cycle, the Fed's comments in the minutes from the May 2017 meeting that "it likely would be appropriate to begin reducing the Federal Reserve's securities holdings this year," has shed some light on the timing. The consensus in the mortgage market is that the Fed could begin tapering MBS reinvestments in the fourth quarter of 2017 and, once underway, "could likely proceed without a need for the Committee to make adjustments as long as there was no material deterioration in the economic outlook."

Prior to policy normalization, the Fed's reinvestment activity is likely to continue shifting based on its portfolio's realized prepayments, and its formal market withdrawal will have even greater ramifications. Since it started QE in 2009, the Fed has accounted for a significant portion of gross issuance purchases that continued when its reinvestment policy began in 2014. Even as the Fed's share of gross issuance purchases has declined in recent years, it still absorbed more than 25% of the gross issuance in 2016, and it may remain at that pace in 2017. With several bank originators now expecting an uptick in total mortgage originations in 2017, an increase in supply may be another factor that contributes to wider MBS spreads as the Fed's role in the market recedes.

FED PURCHASES AS A PERCENTAGE OF GROSS ISSUANCE

January 2013–March 2017



Source: Nomura Securities

Lack of Fed Settlements Set to Worsen TBA Convexity

Beyond gross issuance purchases, once the Fed curtails its reinvestments, one of the key benefits for the TBA ("To Be Announced") market will also fade. Since 2009, the Fed has taken delivery of large amounts of pools that the market has deemed "worst-to-deliver" through the TBA settlement process and, as a result, the Fed has essentially been purifying the TBA market by assuming the risk of the lower-value pools. Thus, investors have seen a reduction in realized volatility and option cost, as well as an improved prepayment environment. However, non-bank originators (e.g. Quicken Loans) continue to increase their footprint in the TBA market and frequently exercise the "worst-to-deliver" option.

With the Fed's more porous filtering effect, the market conditions that have prevailed since 2009 may be poised to change along with valuations. When we shifted our proprietary option-model to account for the worsening TBA deliverable, in broad terms across coupons where the Fed remains currently active, option-adjusted spreads richened by 2-8 basis points. This potential erosion of investor returns highlights the impact that Fed reinvestments have had on the MBS market and how the landscape could change once tapering ensues.

The Rise of the Non-Bank Originators

The risk to MBS valuations is further heightened by the ascent of non-bank originators, which originated more than half of all loans in the second half of 2016. This marks the first time that non-bank originations exceeded those of banks and credit unions in more than 30 years. When compared to banks, these institutions are less capitalized, not as closely supervised, and have origination and refinancing practices that are often more aggressive—all of which are factors that increase the risks to investors. With the lack of Fed settlements worsening TBA convexity, investors will be tasked with absorbing the more aggressive practices of non-bank originators despite current spreads not adequately compensating them for the elevated risk. That said, we do not expect the continued transitioning of mortgage servicing from banks to non-bank entities to spark a drastic change in prepayment behavior in the short run, even though the development is one that will require careful monitoring going forward.

Conclusion

PGIM Fixed Income has held a long-term view of remaining underweight agency MBS in multi-sector portfolios given the sector's tight spreads and embedded optionality. Now that employment and inflation are moving closer to the Fed's policy goals, it has alerted the market that it soon intends to taper MBS reinvestments and reduce the size of its balance sheet. The market will now need to absorb a significant amount of supply and grapple with the worsening convexity of the underlying universe—a task previously undertaken by the Fed as the market's largest non-economic buyer.

Furthermore, it appears that the market has become complacent towards slower prepayment speeds and the Federal conservatorship of Fannie Mae and Freddie Mac. However, there are several factors that could increase prepayment speeds, and calls for comprehensive GSE reform are unlikely to end anytime soon.

These uncertainties have muddied the waters in the MBS market, and, despite a significant short base in the sector, we believe spreads are likely to widen from recent levels. And we'll wait for these cheaper MBS valuations before reevaluating our underweight positions in multi-sector portfolios.

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Source(s) of data (unless otherwise noted): PGIM Fixed Income, June 2017.

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