DoubleLine Agency MBS and CMO Update

Phil Gioia, CFA & Michael Ortiz | July 2021

Key Takeaways

- For most of the last year, Agency Mortgage Backed Securities (MBS) prepayments have remained at their highest levels since the refinance wave of the early 2000s; the supply of mortgages over the past 12 months has been unprecedented.
- Federal Reserve purchases via its quantitative easing (QE) policy and strong bank demand have created a double QE effect that has driven mortgage spreads to trade below their pre-pandemic tights.
- While spreads have remained close to the tightest levels of the post-Global Financial Crisis (GFC) period, short-term technicals remain favorable.
- Should the U.S. Treasury yield curve continue to steepen, there will likely be greater diversity in Collateralized Mortgage Obligations (CMOs) creation, with more creative options available for different situations.
- It is possible Fed tapering of asset purchases could lead to Agency MBS spreads widening. However, the Fed would likely continue to add mortgages during the tapering period, albeit at a slower rate, and would continue to put reserves into the system, potentially keeping Agency MBS spreads relatively contained, as banks would continue to have deposit capital to put to work.

Market Overview

Following the drop in mortgage rates to historic lows, Agency MBS prepayments have climbed to the highest levels since the refinance wave of the early 2000s. For a majority of the last year, prepayment speeds were above 30 constant prepayment rate (CPR) as borrowers took advantage of low mortgage rates, increased home price appreciation, reduced refinance costs and aggressive product offerings from nonbank originators. Home prices rose approximately 15% year-over-year in April, the highest reading since September 2005.[1] *(Figure 1)*

Annual Percentage Change in Home Prices

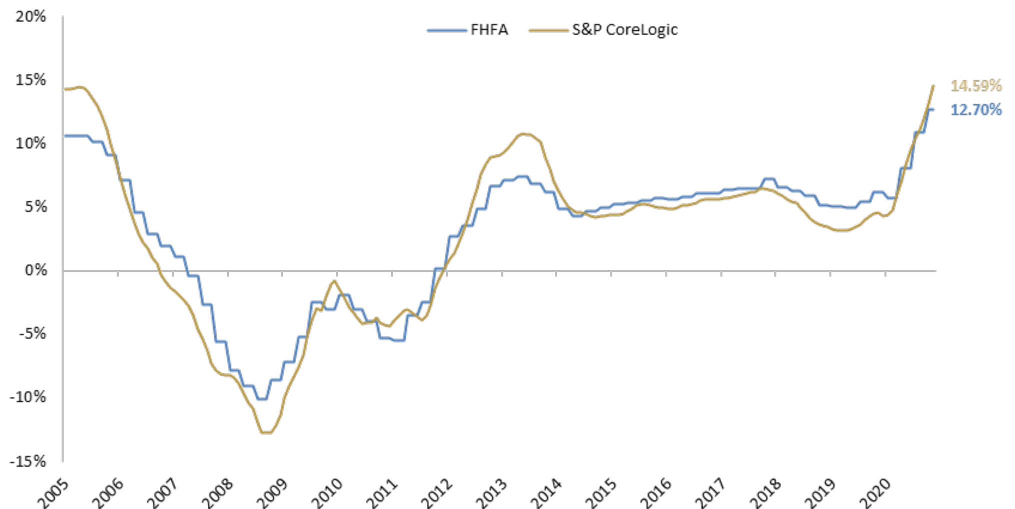


Figure 1
Source: S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index/Federal Housing Finance Agency (FHFA) House Price Index, as of April 30, 2021. You cannot invest directly in an index.

Issuance and Prepayments

While annualized CPR has remained below 2003 levels, prepayment speeds remained high relative to recent history, which has produced record high Agency MBS issuance, particularly given the much higher amount of outstanding paper relative to 2003. The sheer amount of Agency MBS supply set a monthly record in April 2021, with gross issuance across Fannie Mae, Freddie Mac and Ginnie Mae totaling $376 billion. *(Figure 2)* April net issuance also set a record. The net issuance of $137 billion surpassed the previous high of June 2009 by over $30 billion.[2] Including May net issuance of just under $100 billion, year-to-date (YTD) net issuance has been $410 billion in just five months.

Agency Constant Prepayment Rate (CPR) and Issuance

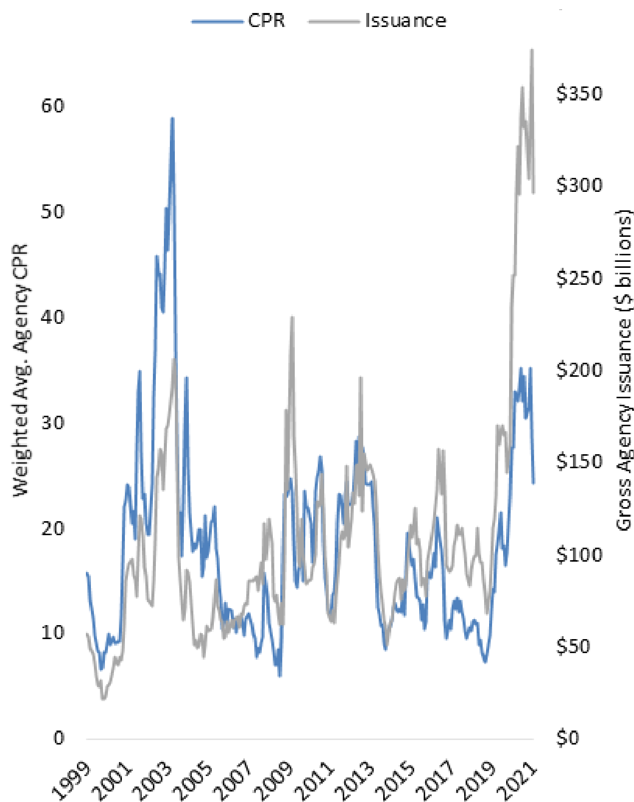


Figure 2
Source: eMBS, as of May 31, 2021

Helping this momentum was a historically wide primary-secondary (P-S) spread, which is the difference between the primary mortgage rate offered to borrowers and the current coupon yield on a par-priced security. This spread widened by nearly 100 basis points (bps) at the onset of the pandemic. The wide P-S spread provided originators cushion to keep rates low, even as 10-year Treasury yields rose. More recently, the P-S spread has reverted to its historical average. *(Figure 3)*

Primary-Secondary Mortgage Spread

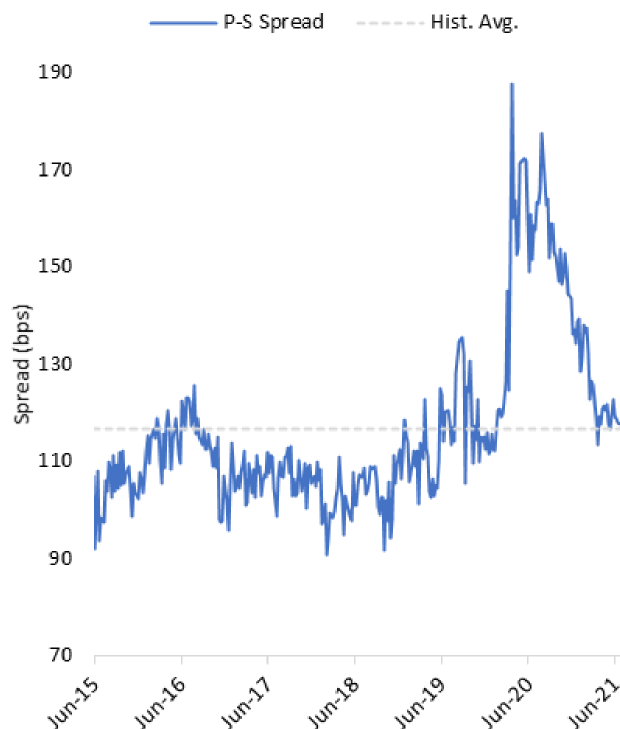
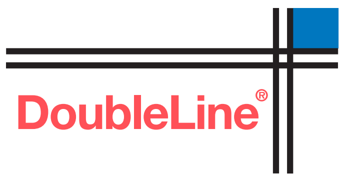


Figure 3
Source: Bloomberg, Conventional 30-Year Fixed-Rate Mortgage No-Point Actual Primary-Secondary Mortgage Rate Spread to Par Coupon, as of June 25, 2021



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Issuance and Prepayments (cont'd)

The prepay outlook for the next 12 months should be considerably different than the past year as P-S spreads have normalized. Given a more normalized spread, it is likely that movements in the 30-year mortgage rate will be more correlated to movements in the 10-year Treasury rate. Furthermore, given the first quarter selloff in Treasury rates, mortgage rates rose 35 bps from their lows in January, which could slow the pace of prepayments, although speeds will likely continue to remain elevated relative to history. *(Figure 4)*

Mortgage and Treasury Rates

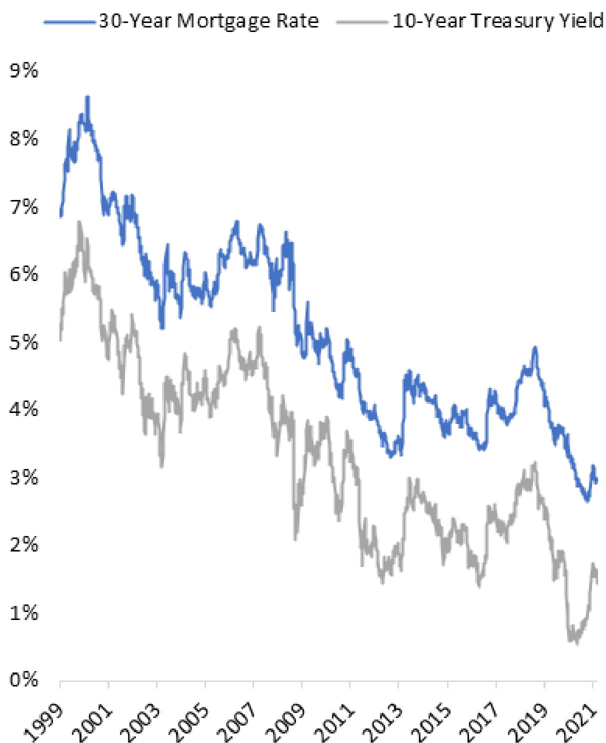


Figure 4
Source: Freddie Mac U.S. Mortgage Market Survey 30 Year Homeowner Commitment National Index, U.S. Generic Govt 10 Yr Index, as of June 10, 2021

The composition of the Mortgage Bankers Association (MBA) Refinance Index, which measures refinance application volume for loans originated through retail and consumer direct channels, has changed to include more lenders, but still does not show the full picture. The index previously captured 50% of mortgage application volume by covering mostly bank-origination volume but has since grown to 75% by including some nonbank originators. *(Figure 5)*

Conventional Origination by Originator Type-Market Share

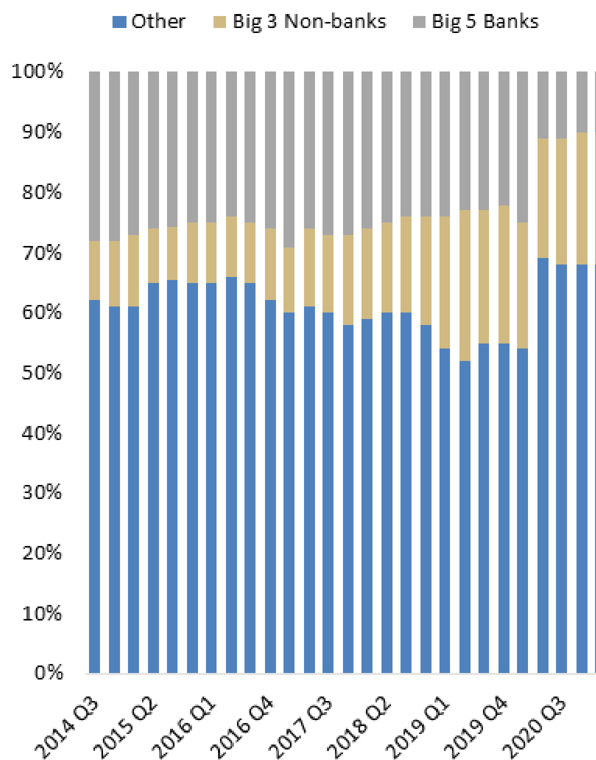


Figure 5
Source: Morgan Stanley, eMBS, as of March 31, 2021

Issuance and Prepayments (cont'd)

Even with 75% coverage, the index still does not include some of the largest, most efficient originators, which means the index does not capture the actual primary mortgage rate. It is likely the actual rate is roughly one-eighth of a percentage point lower than what is shown in the index. *(Figure 6)*

MBA Refi Index and 30-Year Mortgage Rate

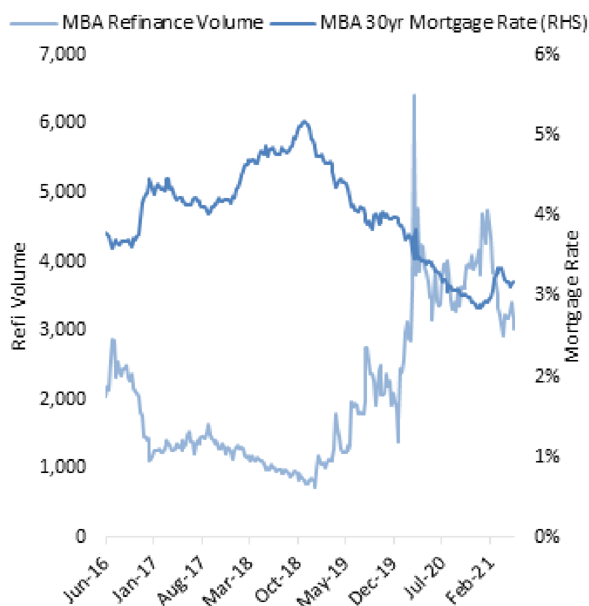


Figure 6
Source: DoubleLine, MBA, Bloomberg, as of May 31, 2021

Demand

Under its current QE program, the Fed has been buying $80 billion in Treasuries and $40 billion in Agency MBS on a net basis each month. The Fed absorbed all the Agency MBS net supply for 2020 and will continue to do so through 2021. The Fed will likely add $480 billion of Agency MBS to its balance sheet this year, and its gross purchases will likely be roughly $1.5 trillion. If these numbers hold, this will bring the Fed's total purchases of Agency MBS to close to $3 trillion by the end of the year since the last round of QE began in March 2020.[3] *(Figure 7)* Fed Chairman Jerome Powell has indicated that tapering of their QE purchases is not close to happening and rising home prices are not worrisome, which likely means continued monetary support from the Fed in the near term.

MBS Holdings-Fed vs. Bank

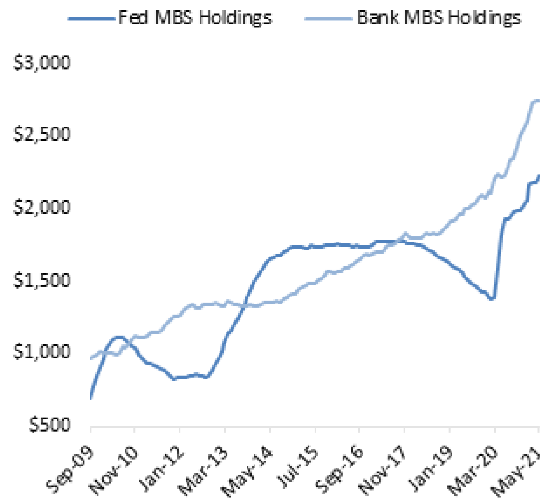
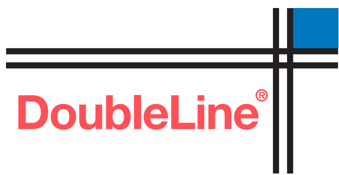


Figure 7
Source: Federal Reserve, Bloomberg, as of May 31, 2021

Banks have added Agency MBS on par with the Fed, collectively purchasing similar monthly numbers. Recent deposit growth in domestic banks has been unprecedented. In 2020, bank deposit growth was larger than the cumulative deposit growth of the previous five years.[4] *(Figure 8)* Going forward, the Fed will continue to create reserves through QE, and many of those reserves will end up as deposits on bank balance sheets.

Cash on Bank Balance Sheets

Figure 8
Source: DoubleLine, Federal Reserve, H.8, Bloomberg, as of April 30, 2021



Demand (cont'd)

The net result has been in effect a double QE that has driven mortgage spreads to trade through their pre-pandemic tights of last year as the banks and Fed have continued to add at a record pace. Furthermore, with the expiration of the supplementary leverage ratio exemption, we anticipate bank demand for Agency MBS to remain elevated, as they have a record depository base to put to work.

Agency CMOs

At the end of 2020, the Agency MBS market was roughly $8.4 trillion in size, including $7 trillion in Agency MBS and $1.4 trillion in Agency CMOs. *(Figure 9)*

Agency MBS and CMOs Outstanding

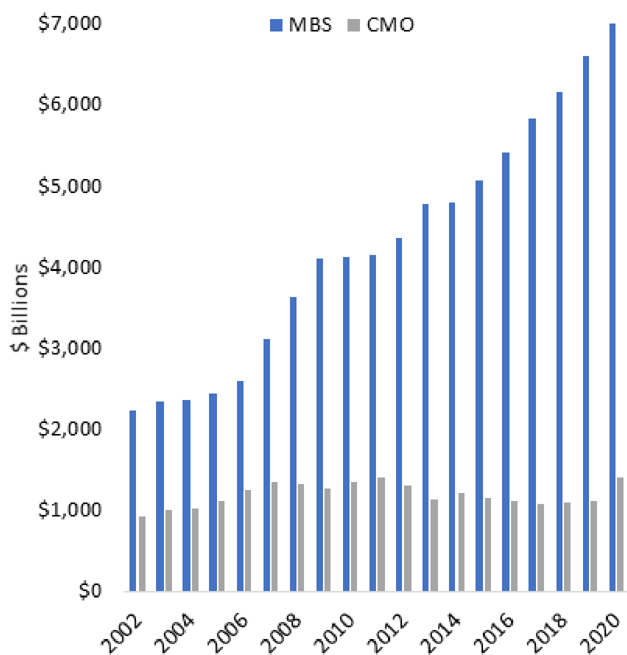


Figure 9
Source: SIFMA, as of Dec. 31, 2020

Agency CMO net issuance for May 2021 was $25.6 billion, bringing the YTD total slightly above $125 billion. While Agency CMO monthly gross issuance has recently declined, it has remained elevated relative to recent history, largely driven by the steepness of the Treasury curve. *(Figure 10)* Typically, a flatter curve leads to less CMO issuance relative to a steeper curve. Our expectation is that the curve will continue to steepen, leading to an increase in Agency CMO issuance.

Agency CMO Gross Issuance

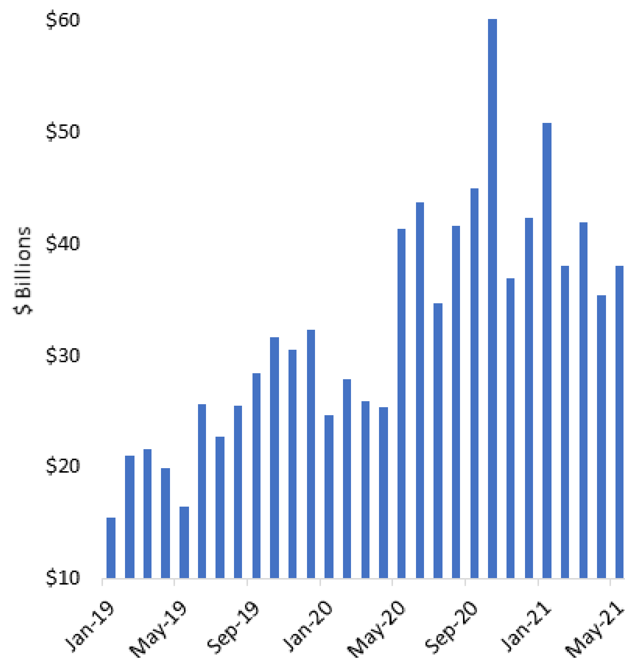
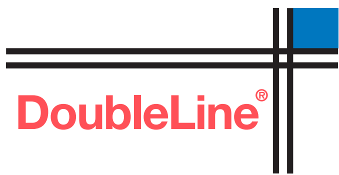


Figure 10
Source: SIFMA, as of May 31, 2021

Many dealers have tailored Agency CMO creation to accommodate bank demand, largely in the form of CMO strips, where the coupon has been stripped down, and the bond can be delivered at a lower dollar price with generally longer duration. Should the yield curve continue to steepen, it's likely there will be greater diversity in CMO creation, with more creative options available for different situations.



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Fed Taper

Perhaps the most notable development to come out of the April 2021 meeting minutes of the Federal Open Market Committee (FOMC) was that "a number of participants suggested that if the economy continued to make rapid progress toward the Committee's goals, it might be appropriate at some point in upcoming meetings to begin discussing a plan for adjusting the pace of asset purchases."[5] In June's press release, Chairman Powell affirmed the Fed's continued purchases of Agency MBS by at least $40 billion per month "until substantial further progress has been made toward the Committee's maximum employment and price stability goals."[6]

Although the May unemployment rate of 5.8% significantly improved from its 14.8% high in April 2020, there were approximately 8.2 million less individuals employed compared to February 2020, before the pandemic hit. Additionally, the latest Job Openings and Labor Turnover Survey data indicated that as of the last business day in April 2021, there were nearly 9.3 million job openings compared with a payroll shortfall relative to pre-COVID-19 levels of 7.6 million. *(Figure 11)* The Fed would likely want to see further advancements in the labor market prior to commencing a taper cycle.

Payrolls vs. Job Openings

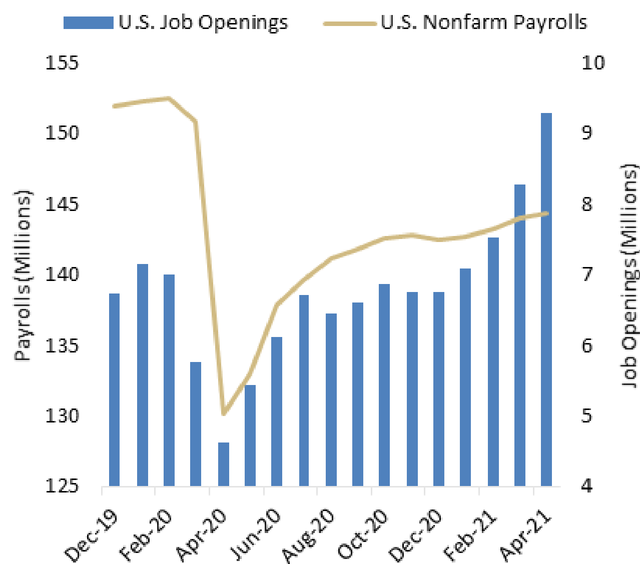


Figure 11
Source: Bloomberg, as of April 30, 2021

However, the prospect of Fed tapering remains in focus for many Agency MBS market participants. Over the last decade, there have been two prior periods of Fed tapering. Based upon those programs, it took either five or eight months after the Fed's initial suggestion of balance sheet normalization for the actual reduction of Fed purchases to begin.

On May 22, 2013, then-Fed Chairman Ben Bernanke stated in congressional testimony that the Fed might taper or reduce the size of its bond-buying program.[7] No exact date was referenced for a potential taper program, but this set off the Taper Tantrum in the bond market. *(Figure 12)* On Dec. 18, 2013, the FOMC announced QE tapering would begin in January 2014, eight months after Bernanke's comments before Congress.

U.S. Treasury Yields

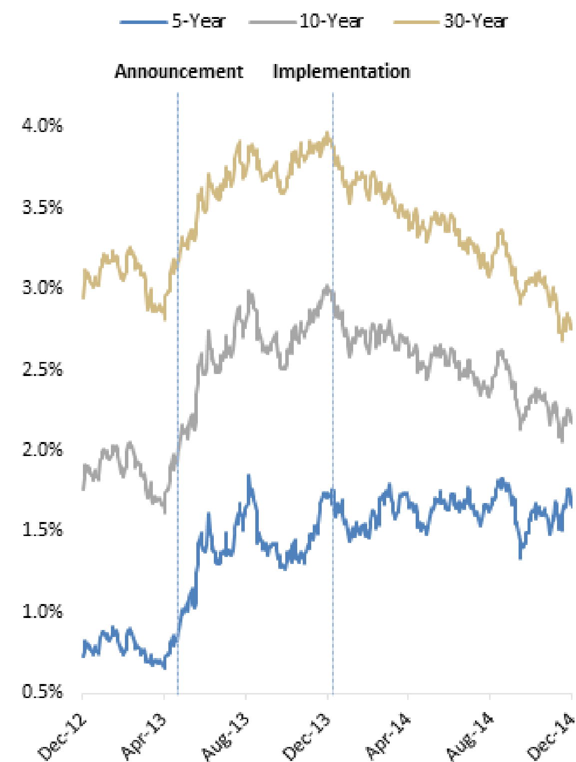
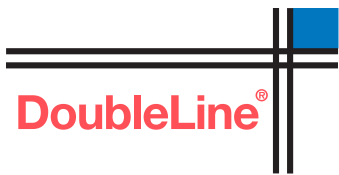


Figure 12
Source: Bloomberg, December 31, 2014



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Fed Taper (cont'd)

The swift move to higher rates at the onset of the Taper Tantrum was ruthless. Over a 25-business-day period, from the close on May 21, 2013, to the first peak on June 25, 10-year Treasury yields rose 68 bps. Before Chairman Bernanke's May 22 congressional appearance, primary dealers thought tapering would begin in the first quarter of 2014. Bernanke's suggestion that tapering could begin in the next few meetings represented an earlier start by three to six months.[8] As the market brought forward the timing of tapering, investors sought to front-run the Fed by reducing overall Treasury exposure and duration, which exacerbated movements higher in rates.

On May 24, 2017, almost exactly four years after Bernanke's testimony, minutes from that month's FOMC meeting were released that indicated board members had agreed to commence the process of tapering later in the year.[9] On Sept. 20, 2017, then-Fed Chair Janet Yellen announced that the FOMC would begin balance sheet normalization in October, five months after tapering plans were discussed at the May meeting.

Federal Reserve Balance Sheet

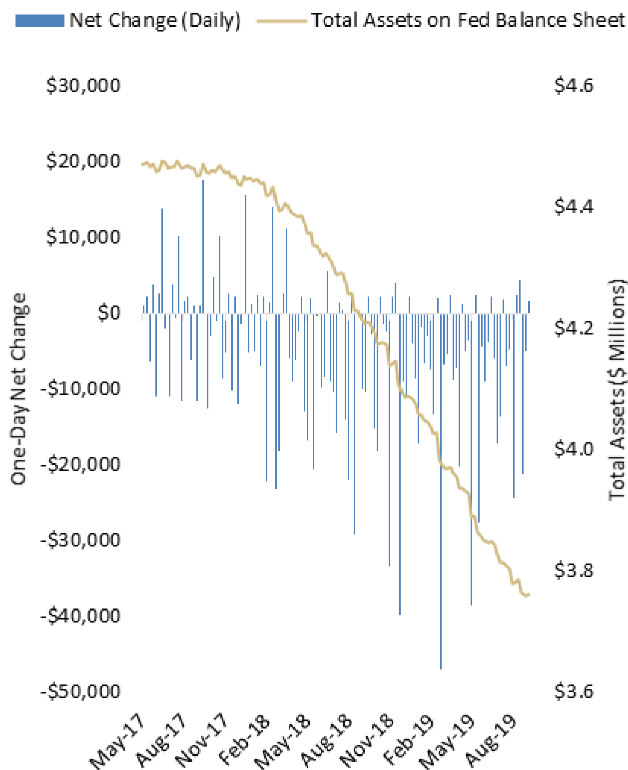


Figure 13
Source: Bloomberg, Sept. 25, 2019

Under Chair Yellen's plan, the Fed announced caps on the maximum number of Treasuries and Agency MBS allowed to roll off or prepay each month. This meant that even though the Fed's balance sheet was shrinking, the Fed continued to buy large amounts of Treasuries and Agency MBS for quite some time. *(Figure 13)* By communicating a predictable plan for balance sheet normalization, the Fed was able to avoid a repeat of the 2013 Taper Tantrum.

During the two actual taper periods, both Treasury rates and Agency MBS option-adjusted spreads (OAS) were mixed. During the Bernanke-era taper, the 10-year Treasury yield declined, and Agency MBS OAS marginally tightened. During the Yellen-era taper, the 10-year Treasury yield rose, and Agency MBS spreads marginally widened. *(Figure 14)*

Bloomberg Barclays US MBS Index OAS During Prior Taper Periods

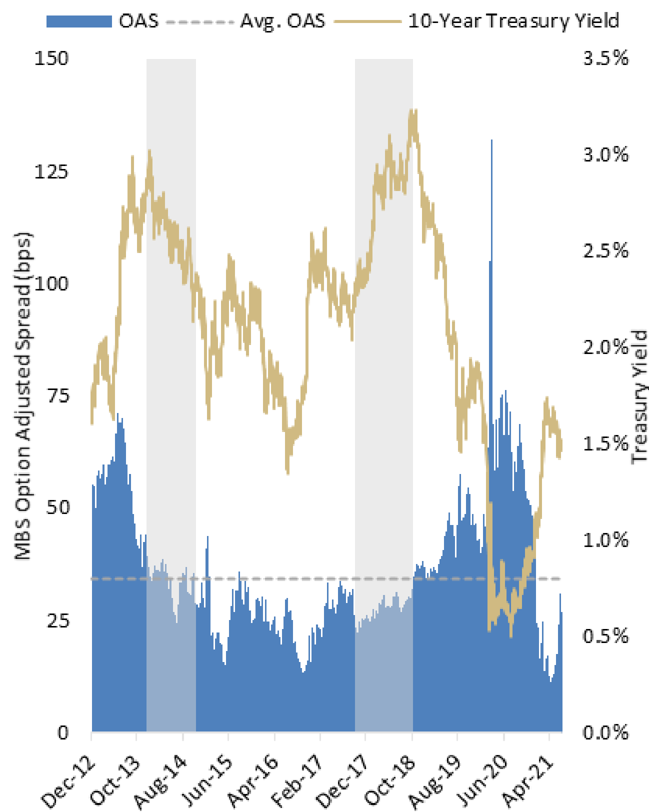
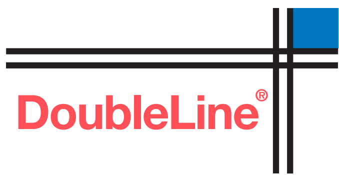


Figure 14
Source: Bloomberg, Federal Reserve, as of June 30, 2021. Gray-shaded areas indicate taper period. You cannot invest directly in an index.



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Fed Taper (cont'd)

Given current Agency MBS spreads, it is possible Fed tapering could lead to spreads widening. However, if the Fed tapers across 12 months, the same pace as in 2017, the Fed would still add roughly $240 billion net and $1.5 trillion gross mortgages during the period.[10] Additionally, the Fed would likely continue to put reserves into the system that could create deposits and incremental bank demand that could keep Agency MBS spreads relatively contained.

Conclusion

Although Agency MBS spreads remain at historic tights, short-term technicals are favorable. While not as robust as the demand from the Fed and banks, demand from other more-price sensitive account types, including money managers, the government-sponsored enterprises (GSEs), foreign investors and real estate investment trusts (REITs) could provide further support for Agency MBS spreads if they were to widen.[11]

Given the recent rise in mortgage rates, the refinanceable mortgage universe has declined from 75% in January to around 40% as of late, which has helped slow overall prepayments.[12] Additionally, should Treasury and mortgage rates continue to increase, supply might decline due to less refinancing activity, while a steeper yield curve would likely lead to greater CMO issuance.

Lastly, while Fed tapering might lead to some spread volatility, it is likely the continued large-scale purchases from the Fed, robust bank demand, potentially slower prepayments and increased CMO issuance could create attractive opportunities for mortgage investors, particularly in a rising rate environment where it would be possible to source lower-dollar-priced securities with positive convexity. ■

Author Biographies

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Mr. Gioia joined DoubleLine in 2018. He is a member of the Product Specialist Team. In this capacity, he is responsible for various aspects of DoubleLine product marketing, investment strategy updates, portfolio communications and competitive analysis, with a focus on DoubleLine's Structured Product strategies. Mr. Gioia is also responsible for producing market commentary and dedicated strategy content. As part of the Product Specialist Team he attends the Fixed Income Asset Allocation, Macro Asset Allocation, and Structured Product meetings. Prior to DoubleLine, Mr. Gioia was an Investment Product Manager for Fidelity Investments. He holds a BS in Financial Management and Business Administration with a minor in Accounting from Salve Regina University. Mr. Gioia is a CFA® charterholder and holds the Series 7 and 63 Licenses.

Michael Ortiz
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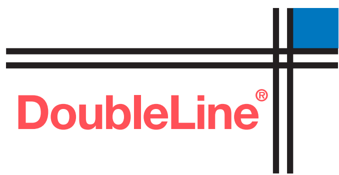
Mr. Ortiz joined DoubleLine in 2020 as an Analyst on the Agency RMBS Team. Prior to DoubleLine, he was with Morgan Stanley in various roles, including Vice President, Asset Manager within FID Secured Lending and Agency MBS Strategist within FID Research. Mr. Ortiz holds a BS in Operations Research and Financial Engineering from Princeton University.



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Citations

[1] S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index

[2] Morgan Stanley Research

[3] Morgan Stanley Research

[4] Morgan Stanley Research

[5] Federal Reserve FOMC statement, April 28, 2021

[6] Federal Reserve FOMC statement, June 16, 2021

[7] Board of Governors of the Federal Reserve System

[8] Morgan Stanley Research

[9] Board of Governors of the Federal Reserve System

[10] Morgan Stanley Research

[11] The GSEs are currently engaged in winding down their retained portfolios and maintaining a minimum level per their Preferred Stock Purchase Agreements (PSPAs) with the Treasury. If the GSEs exit conservatorship and can recapitalize, their demand for Agency MBS could go up

[12] Citi Research

Definitions of Select Terms

Constant Prepayment Rate (CPR) – Metric (also known as "Conditional Prepayment Rate") that indicates a loan prepayment rate at which the outstanding principal of a pool of loans, such as mortgage backed securities (MBS), is paid off. The higher the CPR, the more prepayments are anticipated and thus the lower the duration of the note. This is called "prepayment risk."

Convexity – A measure of the curvature, or the degree of the curve, in the relationship between bond prices and bond yields. Convexity demonstrates how the duration of a bond changes as the interest rate changes. Portfolio managers will use convexity as a risk-management tool, to measure and manage the portfolio's exposure to interest rate risk.

Delta – Ratio that compares the change in the price of an asset, usually marketable securities, to the corresponding change in the price of its derivative. For example, if a stock option has a delta value of 0.65, this means that if the underlying stock increases in price by $1 per share, the option on it will rise by $0.65 per share, all else being equal.

Federal Housing Finance Agency (FHFA) House Price Index (HPI) – Broad measure of the movement of single-family house prices. The FHFA HPI is the nation's only collection of public, freely available house price indexes that measure changes in single-family home values based on data from all 50 states and over 400 American cities that extend back to the mid-1970s. The FHFA HPI incorporates tens of millions of home sales and offers insights about house price fluctuations at the national, census division, state, metro area, county, ZIP code and census tract levels.

Federal Open Market Committee (FOMC) – Branch of the Federal Reserve System that determines the direction of monetary policy specifically by directing open market operations. The FOMC comprises the seven board governors and five (out of 12) Federal Reserve Bank presidents.

Freddie Mac U.S. Mortgage Market Survey 30 Year Homeowner Commitment National Index – This index tracks the 30-year fixed-rate mortgages component of the Freddie Mac Primary Mortgage Market Survey (PMMS), which tracks on a weekly basis the most-popular 30- and 15-year fixed-rate mortgages, and 5-1 hybrid amortizing adjustable-rate mortgage products among a mix of lender types.

Government-Sponsored Enterprise (GSE) – Quasi-governmental entity established to enhance the flow of credit to specific sectors of the American economy. Created by acts of Congress, these agencies – although they are privately held – provide public financial services. GSEs help to facilitate borrowing for a variety of individuals, including students, farmers and homeowners.

Mortgage Bankers Association (MBA) Refinance Index – This index, a component of the MBA's Weekly Application Survey, tracks the number of mortgage refinance applications. The index is used to help predict mortgage activity and loan prepayments based on the number of mortgage refinance applications submitted.

Option-Adjusted Spread (OAS) – Measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is then adjusted to take into account an embedded option. Typically, an analyst uses U.S. Treasury yields for the risk-free rate. The spread is added to the fixed-income security price to make the risk-free bond price the same as the bond.

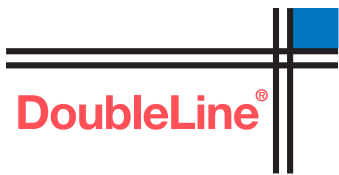
Out of the Money (OTM) – Expression used to describe an option contract that only contains extrinsic value. These options will have a delta of less than 50.0. An OTM call option will have a strike price that is higher than the market price of the underlying asset. Alternatively, an OTM put option has a strike price that is lower than the market price of the underlying asset.

S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index – This index tracks the value of single-family housing within the United States and is a composite of single-family price indexes for the nine Census Bureau divisions.

Spread – Difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings or risk.

Statutory Liquidity Ratio (SLR) – Minimum percentage of deposits that a commercial bank has to maintain in the form of liquid cash, gold or other securities. It is basically the reserve requirement that banks are expected to keep before offering credit to customers.

U-3 Unemployment Rate – Officially recognized rate of unemployment, compiled and released monthly by the U.S. Bureau of Labor Statistics, measuring the number of unemployed people as a percentage of the labor force.



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