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An Overview of Agency Mortgage-Backed Securities (MBS) in 2022 and 2023

In March 2022, the Federal Reserve embarked on an aggressive tightening campaign to curb inflation coming out of the COVID-19 pandemic. The first hike, delivered on March 16, 2022, took the federal funds rate to 0.25%-0.5%; at the time, two-year and 10-year U.S. Treasury yields were 1.9% and 2.2%, respectively. About 14 months later, the federal funds rate stands at 5%-5.25%, and two-year and 10-year Treasury yields are 4.3% and 3.7%, respectively, thereby flattening over 90 basis points (bps). (Figure 1) This has represented some of the most aggressive policy tightening in many decades.

Fed Tightening Policy: 2-yr, 10-yr UST Yields and Fed Funds Rate December 31, 2021 through May 19, 2023



Figure 1
Source: DoubleLine, Bloomberg



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Two effects of this policy have been an inverted yield curve and elevated interest rate volatility. For example, the ICE BofA MOVE Index, which measures implied volatility on Treasury yields, began to increase in 2022, reaching as high as ~160 in October of that year and then ~200 in March 2023. (Figure 2) These are levels generally seen amid severe market dislocations such as the Gobal Financial Crisis (GFC) or the onset of the COVID-19 pandemic in March 2020. Though off its recent highs, volatility remains elevated relative to pre-Fed tightening levels. The Treasury yield curve remains inverted, with the two-year/10-year yield spread reaching as low as negative 108 bps before recovering to approximately negative 60 bps during this tightening cycle. And recession probability based on the Fed's preferred gauge of curve inversion – three-month versus 18-month T-bill yields – is flashing red, indicating greater than 97% probability of recession within the next 12 months.1

MOVE Index

December 11, 2006 through December 31, 2022

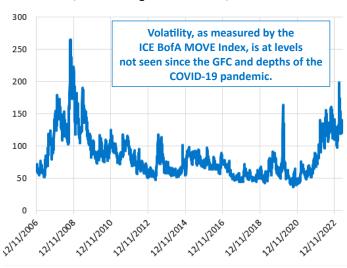


Figure 2
Source: DoubleLine, Bloomberg

In March 2023, Silicon Valley Bank (SVB) and Signature Bank experienced a deposit run and were both placed into receivership by the Federal Deposit Insurance Corp. (FDIC). Their security portfolios were retained by the FDIC, which has subsequently hired BlackRock Financial Market Advisory (BLK FMA) to dispose of the securities. Contained in these portfolios are \$65bn in Agency MBS pass-throughs, \$24bn in Agency CMOs and \$14bn in Agency CMBS as of Q4 2022, representing roughly \$103bn in Agency MBS to sell. BLK FMA started selling pass-throughs on April 18, and as of May 16 had sold approximately one-third of the pass-through portfolio. The SVB and Signature Bank failures put focus on regional bank business models, as increased funding

costs due to rate hikes and deposits that haven't been as sticky as assumed threaten net-interest margin and earnings and could result in further consolidation in this part of the banking sector.

Agency mortgages, given their exposure to rates and volatility as well as their ample liquidity, were significantly impacted by policy tightening and technical factors such as the FDIC portfolio liquidation and bank demand for Agency MBS. Spreads widened for most of 2022, with current coupon spread increasing ~75 bps to end the year at 143 bps.² In 2023, current coupon spread at first tightened to ~120 basis points, but then the regional banking crisis and FDIC Agency MBS supply caused it to widen to where it currently stands, ~175 bps. While we have not seen the wides reached in October 2022 in response to the U.K. LDI crisis (~180 bps), spread levels are nearly there, and aside from a brief period during the depths of the COVID-19 pandemic in March 2020, we haven't seen these spread levels since the GFC. (Figure 3)

Agency MBS Current Coupon Spread to UST 5y/10y Yield Blend December 11, 2006 through December 31, 2022

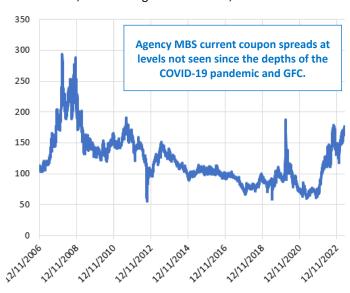


Figure 3
Source: DoubleLine, Bloomberg

This dramatic spread widening is explained by fundamental macro factors and Agency MBS-specific technical factors. Agency mortgage bondholders are naturally short volatility, as the collateral — residential mortgages — embeds an option to the borrower to prepay their mortgage. In addition, the inverted yield curve implies that forward rates are below spot rates, thereby increasing the value of this embedded option to the borrower (since future mortgage rates will presumably be lower than mortgage rates today). Thus, increased volatility and an inverted curve have been headwinds to Agency MBS. Further, three



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significant technical factors have pressured spreads. First, the Fed ended its quantitative easing program in March 2022, subject to a repayment cap on Agency MBS. Effectively, this has increased Agency MBS supply by ~\$15bn-\$20bn a month. Second, banks – which were buying Treasury and Agency MBS at an aggressive pace in 2020 and 2021 – reined in their purchases and reduced holdings in 2022 and 2023, with the largest 25 banks reducing Treasury and Agency MBS holdings from about \$2.1 trillion at the beginning of 2022 to \$1.9 trillion by May 2023. Third, the FDIC sales from SVB and Signature Bank Agency MBS securities represent an additional ~\$10bn a month of supply, although we expect the sales of Agency MBS pass-throughs to complete by the middle or end of Q3 2023.

Currently, the debt-ceiling debate introduces additional uncertainty across capital markets, and while our expectations are that technical default will be averted, we do not discount the possibility of increased short-term volatility ahead of the debt-ceiling resolution.

Opportunities: The Case for Agency Mortgage-Backed Securities (MBS)

We believe that Agency MBS represent a significant investment opportunity, as elevated spreads and increased volatility have cheapened a government-guaranteed sector to historically attractive levels. Indeed, the recent technical factors have decoupled Agency MBS from volatility, and this decoupling has generally been short-lived since the start of 2022. (Figure 4) As volatility starts to come down over the medium term, due to the Fed approaching the end of its hiking cycle and a hopefully resolved debt-ceiling impasse, Agency MBS could quickly follow and tighten as this relationship is re-established. Given that the resolution of SVB and Signature Agency MBS portfolios are well underway, as the FDIC comes closer to winding down sales, we believe that Agency MBS should resume a more traditional relationship to volatility. Further, as the market continues to expect the Fed to pause or even cut rates in the face of a looming recession, the yield curve should steepen considerably, which would also benefit Agency MBS.

Looking at the Bloomberg US MBS Index excess returns (that is, returns net of a duration-matched Treasury position), we note that Agency MBS are at decade-plus lows, with cumulative excess returns on a rolling two-, three- and five-year basis at their lowest levels since the GFC. (Figure 5)

Z-Score of Volatility vs. Agency MBS Spreads

December 31, 2021 through May 19, 2023

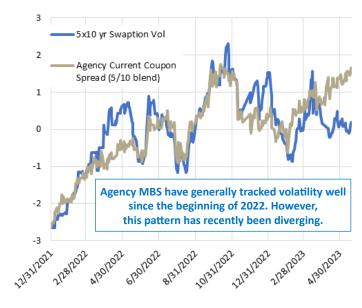


Figure 4
Source: DoubleLine, Bloomberg

Cumulative US MBS Index Excess Returns

January 2007 through April 2023

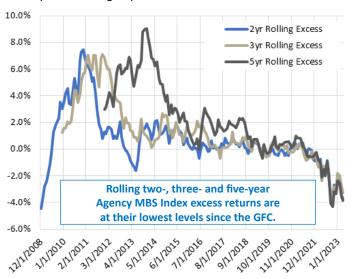


Figure 5
Source: DoubleLine, Bloomberg



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On a relative basis, Agency MBS are also attractive versus investment grade (IG) corporates. In fact, only the 30-year UMBS 2.0 to-be-announced (TBA) bond shows less spread for its duration compared to the AA Credit Index.³ (Figure 6) Historically, corporate spreads have not widened in sympathy with Agency MBS throughout the period of Fed tightening. While IG corporate index spreads widened to ~165 bps in October 2022 and March 2023, they are well under wides seen during the COVID-19 pandemic (~373 bps), February 2016 (~215 bps) or the GFC (> 600 bps). While corporate earnings remain robust, we see these relatively tight spread levels at risk for widening in case of either banking stress or recession. March 2023 is perhaps a preview of price action during a period of banking volatility and stress, as corporates started the month outperforming Agency MBS but significantly lagged Agency MBS around the time SVB and Signature failed before staging a recovery at the end of the month. (Figure 7) Indeed, during the acute phase of that dislocation, we observed a strong rally in Treasury, wider Agency MBS spreads and even wider IG corporate spreads - consistent with investors moving down the risk curve in response to the dislocation.

Investment Grade Credit/Corporates vs. Agency MBS Stack As of May 19, 2023

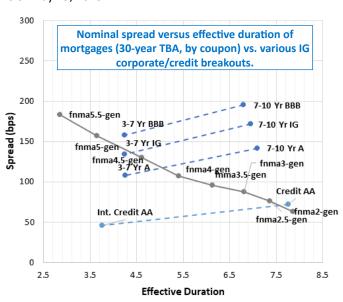
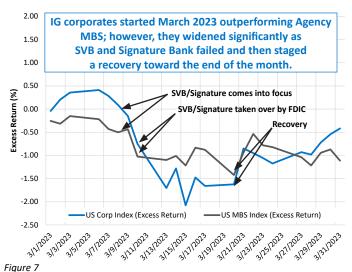


Figure 6
Source: DoubleLine, Bloomberg, YieldBook

Month-to-Date Excess Returns

March 1, 2023 through March 31, 2023



Source: DoubleLine, Bloomberg

Conclusion

As the Agency MBS market has widened from historical tights in 2021, we believe it presents historically unique opportunities for active allocation and management. There are many flavors of securities within Agency MBS, everything from pass-throughs to time-tranched collateralized mortgage obligations to Agency MBS derivatives such as interest-only and inverse interest-only securities. While there is value in trying to summarize a large market such as Agency MBS in just a few charts and numbers, we believe there is significant alpha opportunities in actively managing an Agency MBS risk allocation within the entire landscape of the asset class.



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There are ultimately several potential tailwinds in Agency MBS that we plan to position for and capitalize on. First, we believe that the fundamental and technical factors that have played out since early 2022 represent an attractive entry point to the asset class. This means, for example, that both the Fed ending its tightening policy and any potential uptick in bank demand for Agency MBS can serve as a catalyst for spread tightening – the former via a reduction in volatility and a steepening of the yield curve and the latter via a demand for the asset class. Second, we think that as the FDIC works its way through the SVB and Signature Agency MBS sales, we are likely to see opportunistic entry levels for specific collateral and asset types that should perform very well over a market cycle. As those sales move toward completion, Agency MBS technical factors should improve considerably. Third, we believe that on a relative basis, Agency MBS are even more attractive, as IG bonds do not seem to reflect fundamental realities facing the economy and markets and are historically rich relative to Agency MBS. While we might encounter some shortterm volatility spikes related to banking stress or the debt ceiling, we remain firm in our view that Agency MBS can outperform from these levels, especially with thoughtful and experienced active management.

Endnotes

- Recession probability based on Bloomberg's BLERP12M model.
- ² Current coupon is the implied coupon of a par-priced 30-year conventional MBS pass-thru. Current coupon spread, when referenced in this paper, is the current coupon less the average of 5-year and 10-year US Treasury yields.
- The exhibit shows 30-year TBA securities across the coupon stack. For example, "fnma5.5-gen" is the 30-year UMBS (uniform mortgage-backed security) TBA with a 5.5 coupon. That is, owning this security to settlement will mean taking delivery of a Fannie Mae- or Freddie Mac-issued pass-through Agency MBS with a 30-year term and a coupon of 5.5%.

Agency – Refers to mortgage-backed securities (MBS) whose principal and interest are guaranteed by a U.S. government agency such as Fannie Mae (FNMA) or Freddie Mac (FHLMC).

Basis Points (bps) – Basis points (or basis point (bp)) refer to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01% or 0.0001, and is used to denote the percentage change in a financial instrument. The relationship between percentage changes and basis points can be summarized as: 1% change = 100 basis points; 0.01% = 1 basis point.

Bloomberg US Mortgage-Backed Securities (MBS) Index – This index measures the performance of investment grade, fixed-rate, mortgage-backed, pass-through securities of the government-sponsored enterprises (GSEs): Federal Home Loan Mortgage Corp. (Freddie Mac), Federal National Mortgage Association (Fannie Mae) and Government National Mortgage Association (Ginnie Mae).

Commercial Mortgage-Backed Securities (CMBS) – Securitized loans made on commercial rather than residential properties.

Collateralized Mortgage Obligation (CMO) – Refers to a type of mortgage-backed security that contains a pool of mortgages bundled together and sold as an investment. Organized by maturity and level of risk, CMOs receive cash flows as borrowers repay the mortgages that act as collateral on these securities. In turn, CMOs distribute principal and interest payments to investors based on predetermined rules and agreements.

Duration – Measure of the sensitivity of the price of a bond or other debt instrument to a change in interest rates.

Federal Funds Rate – Target interest rate, set by the Federal Reserve at its Federal Open Market Committee (FOMC) meetings, at which commercial banks borrow and lend their excess reserves to each other overnight. The Fed sets a target federal funds rate eight times a year, based on prevailing economic conditions.

Global Financial Crisis (GFC) – Severe worldwide economic crisis in 2007 and 2008 that was the most serious financial crisis since the Great Depression of 1929. The crisis was triggered by aggressive lending practices that targeted low-income homebuyers, excessive risk-taking by global financial institutions and the bursting of the U.S. housing bubble. Governments in response employed massive bailouts to financial institutions and enacted other financial and monetary policies. Some governments, including the United States, also imposed stricter oversight of the financial industry.

ICE BofA MOVE Index – This index is a measure of U.S. interest-rate volatility that tracks the movement in U.S. Treasury yield volatility implied by current prices of one-month over-the-counter options on two-, five-, 10- and 30-year Treasuries.

Investment Grade (IG) – Rating that signifies a municipal or corporate bond presents a relatively low risk of default. Bonds below this designation are considered to have a high risk of default and are commonly referred to as high yield (HY) or "junk bonds." The higher the bond rating the more likely the bond will return 100 cents on the U.S. dollar.

Mortgage-Backed Securities (MBS) – Investment similar to a bond that is made up of a bundle of home loans bought from the banks that issued them. Investors in MBS receive periodic payments similar to bond coupon payments.

Par – Short for "par value," par can refer to bonds, preferred stock, common stock or currencies, with different meanings depending on the context. Par most commonly refers to bonds, in which case, it means the face value, or value at which the bond will be redeemed at maturity.

2s10s – Shorthand term used in tracking the spread between the two-year U.S. Treasury note (2s) and the 10-year Treasury bond (10s). The inversion of the yields, when the two-year is higher than the 10-year, is seen by some economists as an indicator of impending recession.

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.

You cannot invest directly in an index.



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