Investor double take: US Agency MBS

Allocating to US Agency MBS during a Fed tightening cycle

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A "double take" is a delayed reaction to a surprising or significant situation that initially escaped notice. Investors may do a double take when presented with surprising information about a well known asset class. US Agency Mortgage-Backed Securities (US Agency MBS) is an asset class that may elicit this type of reaction from investors when they take a more in-depth look at the opportunity this asset class has the potential to offer.

When considering US Agency MBS in a rising rate environment, we believe two features most commonly come to mind for investors:

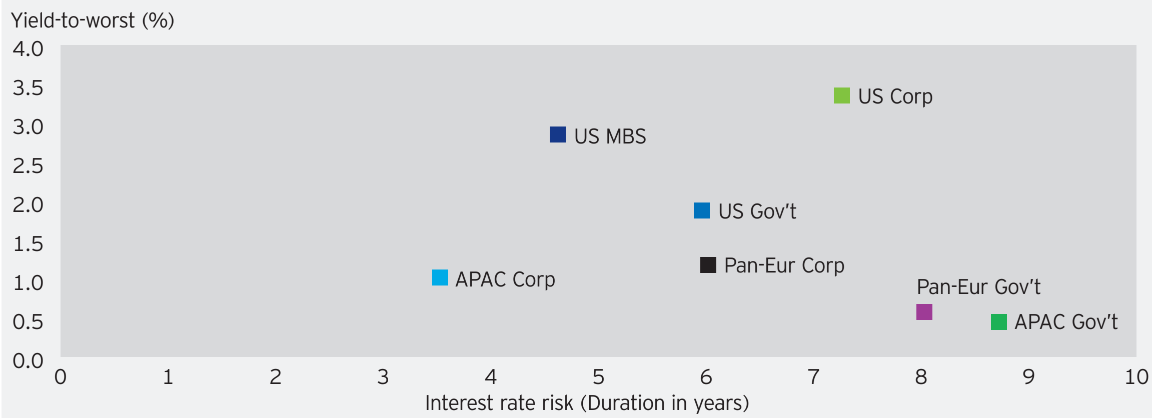
1. Their return potential is partly dependent on the propensity of homeowners to prepay their mortgages ("prepayment risk").
2. The duration tends to shorten when interest rates fall and extend when interest rates rise ("negative convexity").[1]

When considering US Agency MBS, the concepts of "prepayment risk" and "negative convexity" are clearly important for investors to consider. If mortgage interest rates fall, US Agency MBS may be subject to a higher level of borrower prepayments on loans, potentially subjecting investors to reinvestment risk, resulting in a shorter duration. Conversely, if mortgage interest rates rise, homeowners may tend to hold on to their below-market mortgage interest rate rather than refinance, causing investors to earn a below-market interest rate, resulting in an extended duration.

These concepts are likely to be especially relevant currently as the US Federal Reserve (Fed) prepares to raise interest rates. Because of these risks, investors may conclude that holding US Agency MBS in a rising interest rate environment is undesirable. However, while the prepayment option on this asset class may be adverse, we believe US Agency MBS may potentially provide greater return for the risk, often to an adequate, if not generous degree.

- **Double take moment:** US Agency MBS have offered a relatively attractive yield/interest rate risk profile, with a higher yield and shorter duration than other major fixed income asset classes, as Figure 1 below illustrates.

Figure 1: Global investment grade (yield versus interest rate risk profile)



Source: Bloomberg Barclays Global Indices as of Dec. 31, 2016. Past performance is no guarantee of future results. Listed Indices: Bloomberg Barclays US Aggregate MBS Index, the Bloomberg Barclays US Aggregate Corporate Index, the Bloomberg Barclays US Aggregate Treasuries Index, the Bloomberg Barclays Pan-European Aggregate Corporate Index, the Bloomberg Barclays Asian Pacific Aggregate Corporate Index, the Bloomberg Barclays Asian Pacific Aggregate Treasury Index and the Bloomberg Barclays Pan-European Aggregate Treasury Index.

- **Double take moment:** US Agency MBS fared well in past tightening cycles. Since 1990, there have been three episodes when the Fed raised the US federal funds rate more than once before subsequently lowering it. It is instructive to look at how this asset class performed during these periods in both absolute and relative terms compared to two other major US investment grade sectors: US government bonds and US investment grade corporate bonds.

Figure 2: On average, US Agency MBS outperformed two major US fixed income sectors in past tightening cycles

	Total annualized return (%) in USD		
Tightening cycle	**US Gov't**	**US Corp**	**US Agency MBS**
1994-1995 (13 mos)	-0.82	-0.99	2.05
1999-2000 (11 mos)	3.59	0.69	2.96
2004-2006 (25 mos)	5.84	6.22	7.50
Average	2.87	1.98	**4.17**

Source: Bloomberg Barclays US Government Index, Bloomberg Barclays US Corporate Investment Grade Index, Bloomberg Barclays US MBS Index, Jan. 31, 1994 to Feb. 28, 1995; June 30, 1999 to May 31, 2000; May 31, 2004 to June 30, 2006. Past performance is no guarantee of future results.

In terms of absolute returns, Figure 2 shows the Bloomberg Barclays US MBS Index generated, on average, positive annual returns of around 4% during each of the three tightening cycles since 1990. Notably, US government and corporate bonds posted slightly negative returns during the 1994 to 1995 tightening cycle.

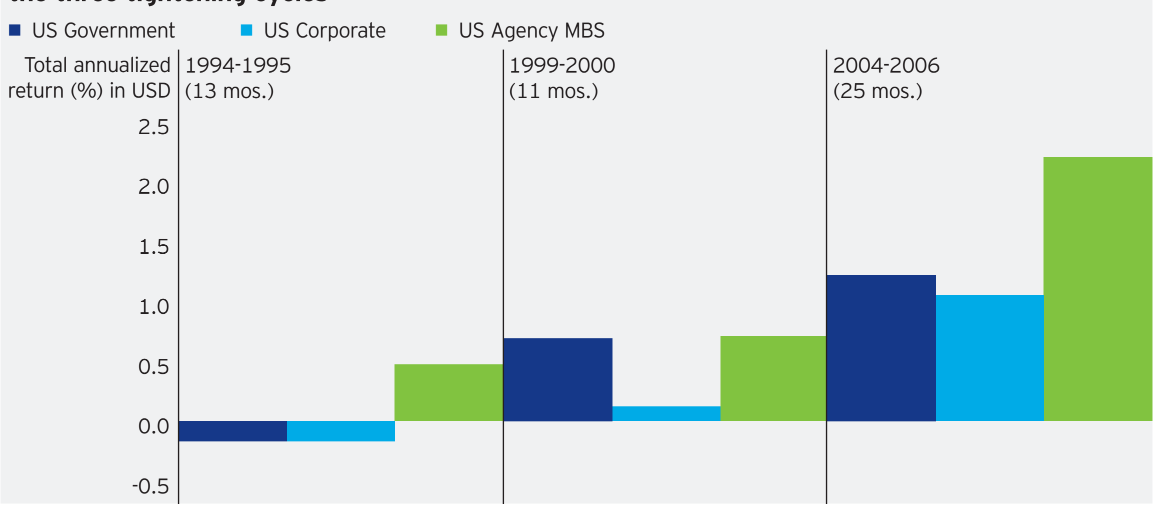
- **Double take moment:** In relative terms, US Agency MBS outperformed US corporate bonds in all three tightening cycles and outperformed US government bonds in two out of the three tightening cycles by 1% or more.

What accounts for the average outperformance in past tightening cycles in this asset class?
- Net US Agency MBS supply fell as interest rates rose and housing activity receded.
- Interest rate volatility declined during the tightening cycles.
- As interest rates rose, the convexity profile of US Agency MBS improved as voluntary prepayments fell.[2]

- **Double take moment:** Historically, US Agency MBS have benefited from relatively short duration and therefore have historically had lower sensitivity to interest rate changes. On this basis, we believe this asset class has the potential to outperform other longer duration fixed income asset classes when rates rise, all else being equal.

In fact, over the historical tightening cycles shown below, this asset class outperformed by more than the duration measure alone would have indicated. As shown in Figure 3, US Agency MBS were the top performers in each of the three tightening cycles, even adjusting for duration. To show this, the return of each sector for each period was divided by the average duration of each sector over each period to compare return per unit of duration.

Figure 3: US Agency MBS (adjusted for duration) outperformed during the three tightening cycles



Source: Bloomberg Barclays US Government Index, Bloomberg Barclays US Corporate Investment Grade Index, Bloomberg Barclays US MBS Index, Invesco calculations, Jan. 31, 1994 to Feb. 28, 1995; June 30, 1999 to May 31, 2000; May 31, 2004 to June 30, 2006

Reasons for outperformance

Why did US Agency MBS perform better in these tightening cycles, even though their duration extends as interest rates rise? The answer lies in the fact that when interest rates rise, prepayments typically decline and slowing prepayments can be positive for US Agency MBS returns. We explain this dynamic below.

The average market price of US Agency MBS in the Bloomberg Barclays US MBS Index is currently around USD103.[3] Prepayments pay USD100, causing a 6% loss of market value on each prepaid dollar of principle. To compensate for this risk, the market yield of US Agency MBS is typically substantially higher than yields on other comparable government guaranteed debt, such as US Treasury and US Government Agency securities. Therefore, when prepayments slow, not only do investors generally benefit by avoiding a potential loss, but the required yield also declines as the risk of prepayment declines. The prices of US Agency MBS are therefore effectively cushioned, and, historically, as interest rates have risen, US Agency MBS have typically performed better than other bonds, as shown in Figures 1 and 2.

In addition, in a rising interest rate environment, there may be a yield curve effect. In Fed tightening cycles, longer-term interest rates have historically been more stable than shorter-term interest rates since the Fed has more direct influence over short-term rates. Because US Agency MBS yields tend to be influenced by longer-term interest rates, this flattening of the yield curve has made the extension risk of this asset class less onerous than might have been expected during tightening cycles, in our view.

Conclusion

Given the historical context provided above, investors may do a double take on the possibility of including US Agency MBS as part of their fixed income allocations, despite a likely future Fed tightening cycle. US Agency MBS have the potential to offer attractive yields relative to other major fixed income asset classes, shorter durations and much higher credit quality. While the mortgage prepayment option is important to consider, we believe US Agency MBS may potentially yield greater return for the risks they pose.

1 Duration is a measure of interest rate risk, which indicates how much the price of a bond would be expected to change in percentage terms if interest rates changed by 1%. Generally, corporate bonds have the longest duration, followed by government bonds, while US Agency MBS typically have the lowest duration and, therefore, the least interest rate sensitivity.

2 Source: Bloomberg Barclays US MBS Index, Invesco calculations, Jan. 31, 1994 to Feb. 28, 1995; June 30, 1999 to May 31, 2000; May 31, 2004 to June 30, 2006. As interest rates rise, the rate at which homeowners can finance their homes also rises. Once the new mortgage rate is above homeowners' existing rate, their incentive to prepay is substantially reduced. Past that point, further increases in interest rates will not likely cause a meaningful change in prepayment rates and convexity. Said a different way, changes in duration given a change in interest rates will likely decrease.

3 Source: Bloomberg Barclays US MBS Index, Dec. 31, 2016.

Important information

All information is sourced from Invesco, unless otherwise stated. All data as of Dec. 31, 2016 unless otherwise stated. All data is USD, unless otherwise stated.

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