JULY 31, 2014 INFRASTRUCTURE



SPECIAL COMMENT

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State Housing Finance Agencies Benefit from Declining Variable Rate Debt

Pressure on Certain Issuers Remain

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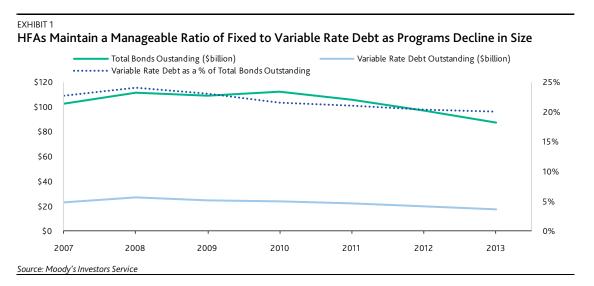
Summary

In the last 5 years, the levels of Moody's rated U.S. housing finance agencies' (HFAs) variable rate debt outstanding has declined as both variable rate bonds were redeemed as swaps amortized and new issuance consisted primarily of fixed rate debt. The lower levels make risks associated with variable rate debt less intense. This is enhanced by significant and gradually increasing HFAs fund balances (equity), providing more financial flexibility and tools to address potential variable rate challenges.

- » HFAs' levels of variable rate debt declined both in amounts (35%) and as a percent of total bonds outstanding (17%), strengthening the agencies overall risk profile while maintaining a manageable ratio of fixed to variable rate debt.
- The amount of equity for the sector (\$22.7 billion) is growing and surpassed variable rate debt outstanding (\$17.4 billion) in 2012. The high level of equity allows HFAs to absorb risks associated with variable rate debt.
- Although HFAs credit profile continues to improve, a wide discrepancy persists between those that issued large amounts of variable rate debt and those that issued limited amounts. HFA programs with variable rate debt remain exposed to a variety of risks, including rising interest rates, a potential need to pay off the bonds on an accelerated basis, and risks associated with swaps employed as interest rate hedges.

Declining levels of variable rate debt strengthens HFAs overall credit profile

Since the 2008 financial crisis, the total amount of variable rate debt declined 35% to \$17.4 billion as of the end of 2013 (see Exhibit 1). The drop from \$26.6 billion lessens the impact of variable rate debt risks on HFAs. Variable rate debt as a percent of total bonds outstanding also declined to 20% from 24%, over the same period. As variable rate debt declines, HFAs are able to better align their bond liabilities with their assets, which are primarily composed of fixed-rate mortgages. The alignment freesup resources and improves credit quality.



In the run-up to the 2008 financial crisis, HFAs issued variable rate debt, often hedged with interest rate swaps¹ as a means of cheaper financing. HFAs stopped issuing variable rate debt as the sector faced unprecedented challenges from disrupted capital markets, including concerns about the credit quality of financial institutions, scarcity and increased cost of liquidity, and limited effectiveness of interest rate swaps as hedges against interest rate risk. These concerns coupled with higher-than anticipated mortgage loan prepayments prompted HFAs to use prepayment proceeds to redeem bonds, including variable rate bonds. Further, the introduction of the federal government's New Issue Bond Program² (NIBP), which was established in the fourth quarter of 2009, helped speed up the decrease of variable rate debt as a percent of total bonds outstanding. NIBP added approximately \$15.3 billion, or roughly 14% of bonds outstanding, of fixed rate bonds to the HFAs portfolios.

While new issuance of variable rate debt, excluding refundings, has contracted considerably since 2009, we have seen a modest amount of new variable rate issuance since 2013. However, given current market forces, we do not expect it to gain steam. The amount issued totaled only \$160 million and was limited to four HFAs that have not historically had a very high exposure. In the near term, we project the overall share of variable rate debt to continue a downward trend as HFAs call variable rate bonds when swaps amortize and/or increase their issuance of fixed rate bonds.

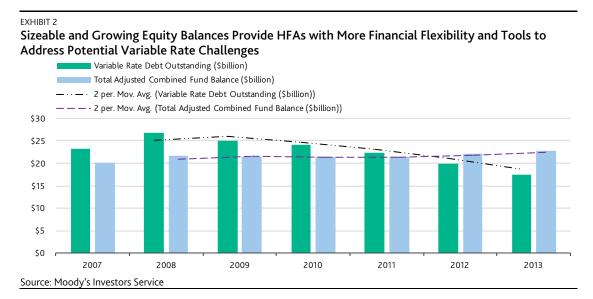
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HFAs typically use interest rate swaps to limit or manage exposure to fluctuations in interest rates. The swap allows them to exchange a fixed payment for a floating payment that is linked to a benchmark rate such as SIFMA and LIBOR.

² A Treasury initiative to support affordable housing and facilitate lending. New housing bonds were issued by state and local HFAs that were securitized by Fannie Mae and Freddie Mac and subsequently purchased by the Treasury.

Growing equity allows HFAs more flexibility and tools to address potential variable rate challenges

Over the years, HFAs have accumulated significant financial resources as reflected in their substantial and gradually growing equity, which currently equals \$22.7 billion, or 26% of total bonds outstanding and 131% of variable rate debt outstanding. The sizeable equity allows HFAs to absorb program risks such as those associated with variable rate debt, including risks that subject their programs to potential accelerated repayment periods and/or higher interest rates. As shown in Exhibit 2, the dollar amount of equity for the sector has surpassed that of variable rate debt outstanding by approximately 31%. We expect this favorable trend to continue as variable rate debt balances decline and HFA profitability results in equity balance growth. HFAs have historically managed variable rate debt risks well and have demonstrated ability to quickly deploy available financial resources strategically when challenges arise.



Although the sector has made progress in reducing variable rate debt, certain HFAs continue with sizeable levels

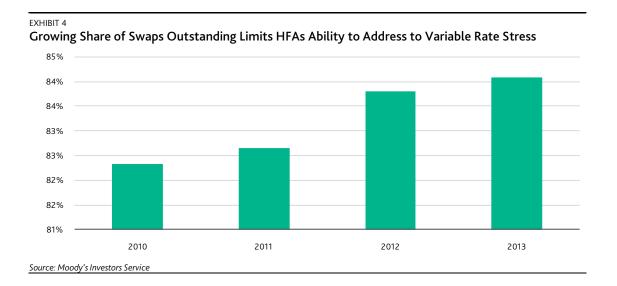
Sector-wide improvement does not mean that all HFAs are out of the woods when it comes to exposure to risks of variable rate debt. There continues to be a wide discrepancy between HFAs that issued large amounts of variable rate debt and those that issued limited amounts. While there are 32 HFAs with variable rate bonds outstanding, most variable rate debt is concentrated in 14 HFAs. As shown in Exhibit 3, the top 14 HFAs account for \$13.4 billion, or approximately 77%, of the variable rate debt outstanding as of 2013.

EXHIBIT 3 Top 14 Issuers of Variable Rate Debt are More Vulnerable to Variable Rate Risk ■ Swapped Bonds as a % of Total Bonds Outstanding ■ Variable Rate Bonds as a % of Bonds Outstanding Colorado Housing and Finance Authority Idaho Housing & Finance Association Wisconsin Housing & Economic Development Authority Michigan State Housing Development Authority Utah Housing Corporation Nebraska Investment Finance Authority California Housing Finance Agency Iowa Finance Authority Alaska Housing Finance Corporation Ohio Housing Finance Agency New Jersey Housing and Mortgage Finance Agency Connecticut Housing and Finance Authority Pennsylvania Housing Finance Agency Texas Department of Housing and Community Affairs 80% 90% 20% 50% 60% 70%

Source: Moody's Investors Service

Some of these HFAs, and in particular some of their individual programs, are more pressured than others. Since variable rate programs are subject to risks, including interest rate risk, renewal risk and the risk of bond acceleration due to an event of default, resulting in losses, these HFAs will face challenges if variable rate markets become disrupted again. While we expect them to utilize their expertise and resources to mitigate these challenges, as they have done in the past, they may still experience lower profitability levels and higher credit risk.

Another consideration is the amount of swaps associated with variable rate debt. Sector-wide, we have seen the share of swaps trending upward since 2010 (see Exhibit 4). While this mitigates the risk of higher interest rates in the future, it limits HFAs' financial flexibility in the near term, including their ability to take advantage of current low interest rates and refinance or redeem variable rate debt. Furthermore, as HFAs redeem variable rate bonds from prepayments, they face the challenge of being over hedged (e.g., having more swaps than variable rate bonds outstanding). In the current low interest rate environment, HFAs' swaps are under water and the option of terminating the agreements earlier than scheduled is costly. This is particularly an issue for HFA programs with large amounts of variable rate debt where there may be limited amount of fixed rate bonds left to redeem, forcing the HFAs to call variable rate bonds instead.



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