

# A Review of Fannie Mae's Issuance of Floaters, Step-Ups, and Zero-Coupon Callable Securities

March 2009

*Fannie Mae provides a number of different investment options across the curve to investors who have a desire to invest in Fannie Mae's debt securities.*

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In this issue of *FundingNotes*, we focus on three different debt structures that Fannie Mae has issued with increasing frequency over the past three months. Each of the three structures that we discuss appeals to investors who wish to target different sectors of the yield curve. For example, if a money market fund has a desire to invest in a shorter-dated asset, with a three-month reset, that investor could invest in Fannie Mae issued floaters. If a municipality has a desire to invest in an intermediate-term security, and attempts to capture excess yield over a similar duration security, investing in a callable step-up note may provide such an opportunity. If an insurance company has a desire to invest in the long end of the curve, securities with tenors between 10- and 30-years, and it also wishes to receive specific fixed-rate cash flows at a later date, the investor may find Fannie Mae zero-coupon callable bonds to be an attractive option. In this edition of *FundingNotes*, we evaluate each of these different structures and how they may fit the needs of Fannie Mae's fixed-income investors.

## Floating Rate Notes

The first type of security that we analyze is the floating rate note, or floater, that Fannie Mae has frequently issued in recent years. Floaters are issued by both our short- and long-term funding desks and have been a relatively reliable source of funding for the company over the past year. During the period beginning January 2008 and ending February 2009, Fannie Mae issued nearly \$69.4 billion in floaters (See **Figure 1**). The floaters issued during this time period tended to be larger in size. Of the nearly \$69.4 billion of floaters issued, over 92 percent of those floaters were between \$1 billion and \$10 billion in size.

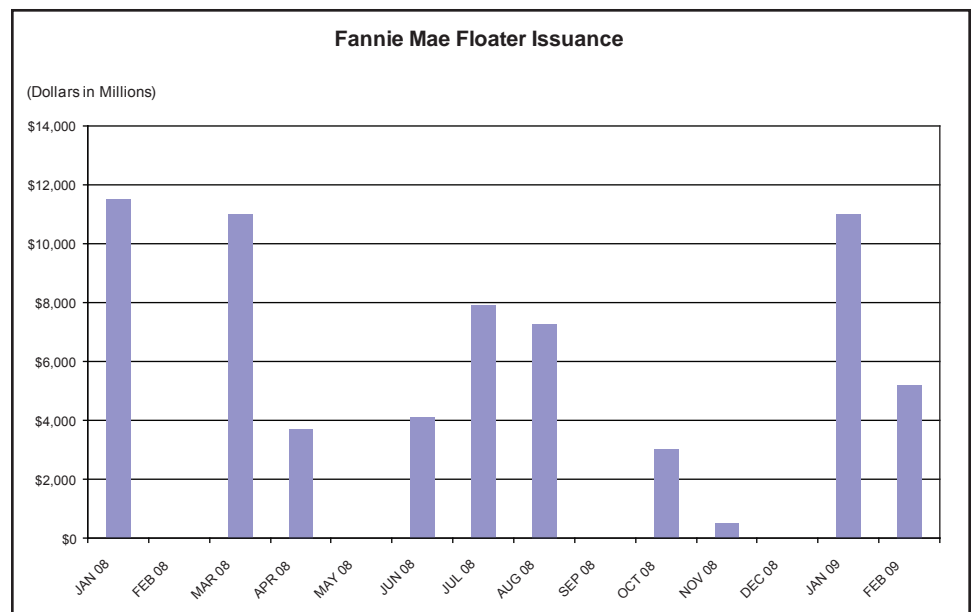


Figure 1

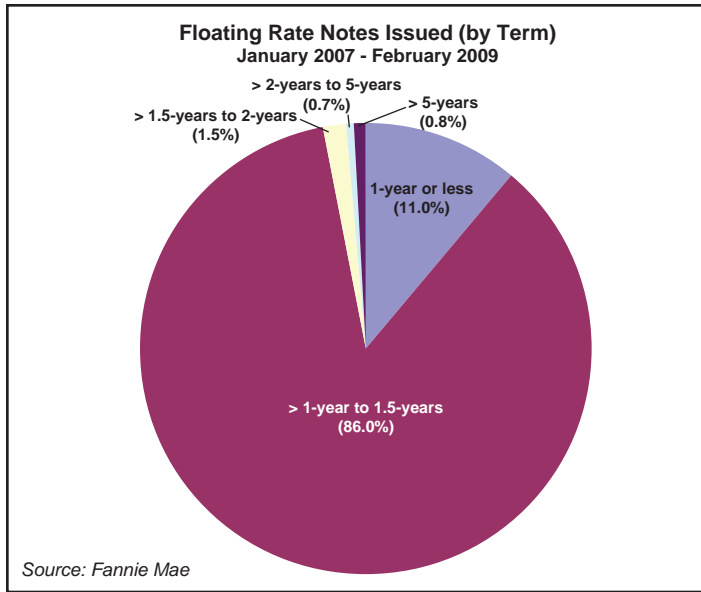


Figure 2

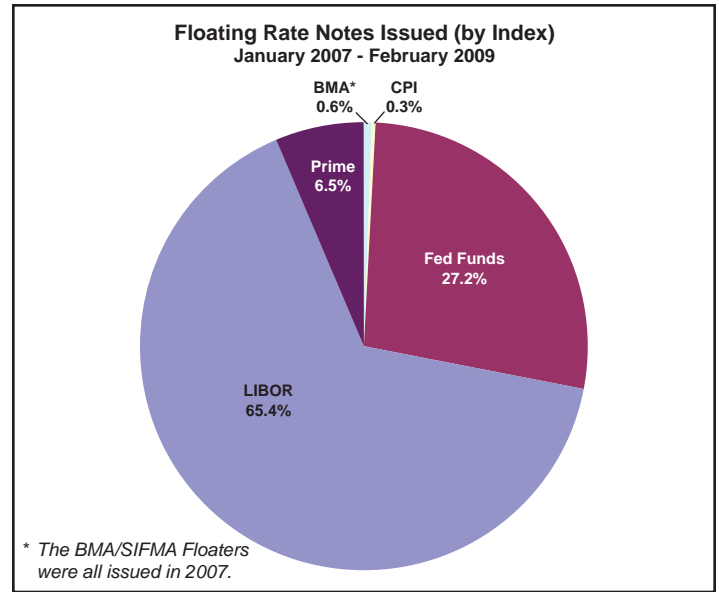


Figure 3

Money market funds often find floaters attractive because they provide investors with protection from possible future increases in interest rates. By purchasing longer dated floaters with a term of over a year, investors are able to lock in this protection for a longer period of time, but because the floater resets every three months, some money market funds may have the ability to report this security as a three month asset. This means, for example, that a money market fund potentially could purchase an 18-month floater but account for this asset as having only a three-month life.<sup>1</sup> In addition, when the floaters reset every three months, they reset at par, which may be important to some investors who are trying to maintain a \$1 net asset value.

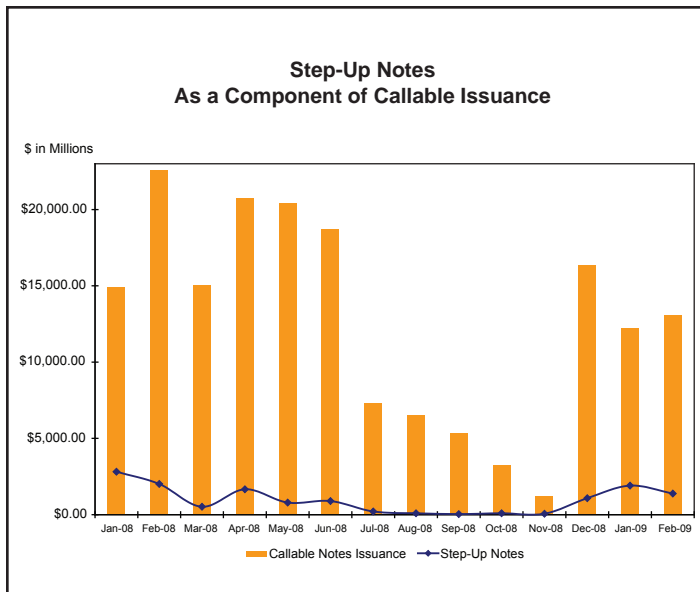
It is important to note that Fannie Mae has flexibility when determining the tenors of the floaters it issues. For example, of the floaters issued between January 2008 and February 2009 that were over \$1 billion, the tenors of those securities ranged anywhere from one to five years. In order to see clearly the issuance patterns since 2007, we have also broken out Fannie Mae issuance since that year by the length of the structure and by the index to which the floater is linked.

**Figure 2** illustrates the breakdown of maturity, or term, of the floaters that Fannie Mae has issued since January 2007. **Figure 3** further illustrates Fannie Mae floater issuance, since January 2007, by index type. Because Fannie Mae has flexibility in regards to the tenors it may issue, Fannie Mae is generally able to customize securities based on the particular needs of the investor that is purchasing the floater, whether the desired parameters are term, size, or the underlying index.

In addition to being able to structure large size floaters based on the specific needs of an investor, Fannie Mae also has the ability to issue a series of floaters with different maturities in order to attempt to provide structured, discrete cash flows that are often required by public entities to defease a large liability. For example, a city may issue a bond in order to build a new stadium; however, due to the length of a project of this size and scale, the city would require cash flows to be spread out over an extended period of time as construction takes place. By purchasing floaters that have cash flows that match the payments required to pay construction of the stadium, the city has the ability to ensure that they have the cash needed to pay for the construction of the stadium in the future.

<sup>1</sup> Adjustable Rate Government Securities: A Government Security that is a Variable Rate Security where the variable rate of interest is readjusted no less frequently than every 762 calendar days shall be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate. A Government Security that is a Floating Rate Security shall be deemed to have a remaining maturity of one day. (Investment Company Act of 1940 – Rule 2a-7.) As always, investors considering purchasing a Fannie Mae security should consult their own financial and legal advisors for information about such security, the risks and investment considerations arising from an investment in such security, the appropriate tools to analyze such investment, and the suitability of such investment in each investor's particular circumstances.

Figure 4



## Callable Step-Up Notes

Fannie Mae issues callable step-up notes through the medium-term notes (MTN) program. Callable step-up notes are securities with a coupon that increases to a specific rate on one or more predetermined dates over the life of the security. Generally, these notes pay interest on a semi-annual basis, although a very small percentage of the step-up notes that are issued by Fannie Mae pay interest quarterly. Callable step-up notes are typically issued with initial coupons above prevailing market rates for comparable Fannie Mae bullet securities. The spread premium, compared to a bullet security with a comparable duration, is intended to compensate investors for the risk that Fannie Mae could call the note prior to its maturity.

Callable step-up notes can be structured with European, Bermudan, Canary and American-style call options and may be called, at Fannie Mae's discretion, with ten-calendar days notice. Canary call options are a hybrid of a Bermudan and European call option – they are callable quarterly up to a period of time and then they cannot be called afterwards at which point they essentially become a bullet security. Canary style options, for the purposes of this analysis are considered to be Bermudan call options. A list of recently called and currently callable securities can be found on Fannie Mae's website<sup>2</sup>. The majority of step-up notes issued during the period January 2008 to Feb-

<sup>2</sup> [http://www.fanniemae.com/markets/debt/call\\_monitor/call\\_monitor.jhtml?p=Debt+Securities&s=Call+Monitor](http://www.fanniemae.com/markets/debt/call_monitor/call_monitor.jhtml?p=Debt+Securities&s=Call+Monitor)

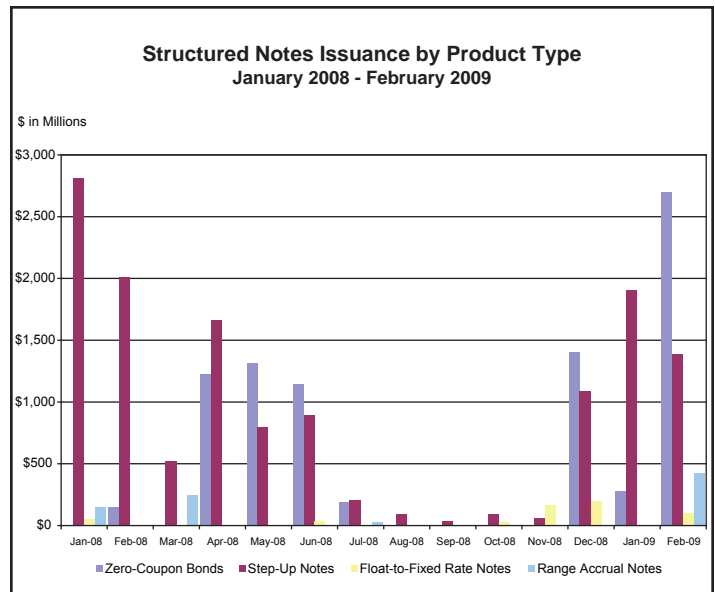


Figure 5

ruary 2009 have Bermudan call options (75 percent) with the remainder primarily structured with American call options (13 percent) and European (12 percent) call options.

Callable step-up notes comprised a relatively small portion of Fannie Mae's total callable debt issuance in 2008 and into 2009 (see **Figure 4**).

**Figure 4** illustrates the noticeable decline in step-up notes issuance after June 2008, along with overall callable debt issuance. In early July 2008, we began to experience significant deterioration in our access to the unsecured debt markets, particularly for long-term and callable debt, and in the yields on our debt as compared with relevant market benchmarks. These conditions became especially pronounced in October and November 2008, when yields on our debt compared with relevant benchmarks peaked and purchases of our debt by international investors fell. However, Fannie Mae experienced noticeable improvement in spreads and in our access to the debt markets in January and February 2009. In late 2008 and early 2009, both callable debt and step-up notes saw increased issuance. Step-up notes in particular increased in issuance during the months from December 2008 through February 2009. **Figure 5** shows that investors increased investment activity in callable step-up notes more than any other structured notes issued by Fannie Mae. Of the approximately \$23 billion in struc-

ured notes issued from January 2008 through February 2009, step-up notes comprised \$13.6 billion of the total, or 59.1 percent. The remaining \$9.4 billion in structured notes were comprised mainly of zero-coupon bonds (approximately \$8.4 billion), float-to-fixed rate notes (approximately \$580 million), and range-accrual notes (approximately \$425 million).

While a number of different investors have been purchasers of callable step-ups recently, the fact that these structures are relatively easy to analyze have made step-ups particularly attractive to municipalities. A municipality that holds a certain view in regards to future movements in interest rates could express that view through an investment in step-up notes. For example, an investor who invests in step-up notes may believe that interest rates are going to increase in the short-term. If this were the case, that investor would expect the security to remain outstanding throughout the life of the note, and, by purchasing a step-up note, that investor would be protected from mark-to-market risk in an environment where interest rates are rising. Alternatively, if an investor expects interest rates to remain largely unchanged in the near future, or even if the investor expects interest rates to decline, the investor could still elect to buy the callable step-up note based on the belief that the security may not be called in the near term. As a result, the investor would receive the enhanced yield relative to a comparable bullet security for the term before the security's call date. Alternatively, a municipality may have a certain target in terms of the coupon for a debt instrument, and in order to reach that coupon goal the investor may be willing to accept the risk that the security will be called, and if the security is not called, the investor will be able to achieve a higher rate of return after the coupon steps-up toward the end of its life.

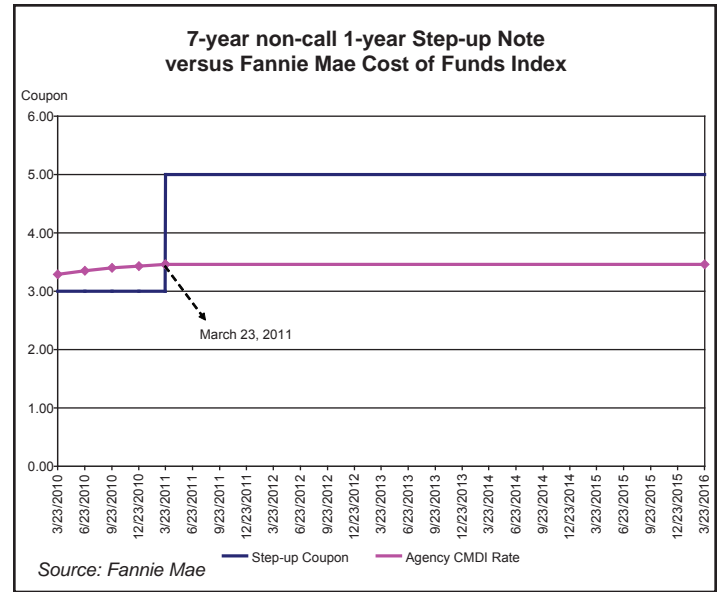


Figure 6

Whether or not an investor will purchase a callable step-up note may depend, to an extent, upon where the investor believes long-term rates will be heading going forward, and whether or not the investor believes rates that occur in the future will be consistent with projected forward rates. **Figure 6** displays a 7-year non-call 1-year Canary callable step-up note (CUSIP: 3136FHEM3) issued on March 23, 2009 that pays interest quarterly. The step-up note's coupon payments have been plotted and compared to the Fannie Mae CMDI curve, which represents Fannie Mae's cost of funds at any particular time. The CMDI curve's demarcations represent the call periods throughout the life of the step-up note. If interest rates increase as predicted by forward rates, it stands to reason that Fannie Mae would likely not call the step-up note during the first two years of the security's life because Fannie Mae's cost of funds would be greater than the coupon paid on the note. On or around the March 23, 2011 call date, if forward rates occur as projected, this bond would likely be called due to the fact that Fannie Mae will be able to borrow funds at a rate lower than the coupon on the step-up note. In this hypothetical scenario, the 7-year non-call 1-year Canary step-up note may be an attractive investment to a person who believes this security will be called and is looking for a higher yield to a bullet security of comparable maturity.

## Zero-Coupon Callable Securities

Driven, in large part, by demand from insurance companies and other fixed-income investors, issuance of zero-coupon callable securities has increased over the last fourteen months. From January 2008 to February 2009, Fannie Mae issued 43 zero-coupon callable securities, for a total of over \$8.4 billion. The average size of these issues of zero-coupon callable securities during this time period was approximately \$195.5 million. The most common structure was the 30-year noncall 1-year zero-coupon callable security with a Bermudan call option. In fact, all of the \$8.4 billion that was issued in zero-coupon callables during this time period had a tenor of 30-years. The investor appetite for these longer dated callables may be, in part, attributed to the need to offset longer dated liabilities held by investors (as discussed below). In addition, the Bermudan call option embedded in the security, which gives the issuer the ability to call the bond periodically in the future, allows the investor to obtain a slightly higher coupon than if the investor had structured a zero-coupon callable security with a European call option.

Investors may show interest in longer dated zero-coupon callables for several reasons. An insurance company, for example, may have a desire to match the longer dated cash flows that the company will have to pay out in the future for insurance claims that are projected to be filed in out years. The company may project that they have to pay out death benefits in the future based on their actuarial projections. Because zero-coupon callable bonds have discrete cash flows, these securities could be viewed as a mechanism

to offset those insurance payments as they occur in the future. In this way, the insurance company could have the ability to structure a security that reacts in similar ways to changes in interest rates as do the liabilities that the insurance company holds on its balance sheet (i.e. the future life insurance death benefit payments). In addition, because the zero-coupon callable is issued at a discount and matures at par, the investor does not have to worry about reinvesting the coupon payments for the callable security, which would expose the investor to reinvestment risk.

## Conclusion

In this edition of *FundingNotes*, we examine three different debt security types that Fannie Mae issues: floaters, callable step-up notes, and zero-coupon callables. We also examine some of the reasons why these structures may be appealing to investors, based on their investment needs and their views of future interest rates. As always, Fannie Mae remains committed to structuring our debt securities to meet the needs of various investor segments.



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*FundingNotes* is published by Fannie Mae's Fixed-Income Securities Marketing Group

Gregorio T. Druehl, CFA  
Director, Fixed-Income Securities Marketing  
(202) 752-5659

Christian B. Allen  
Financial Analyst  
(202) 752-7998

Website: <http://www.fanniemae.com>  
E-mail: [fixedincome\\_marketing@fanniemae.com](mailto:fixedincome_marketing@fanniemae.com)  
Helpline: (888) BONDHLP

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## Recent Benchmark Notes Transaction

Benchmark Securities	Size/Cusip	Lead-Managers	Co-Managers	Pricing Date and Spread	Geographic Distribution	Investor Type Distribution
5 year 2.750% 2/5/2014	\$7.0 billion 99	Citigroup Goldman Sachs J.P. Morgan & Co	Barclays Deutsche Bank Morgan Stanley UBS Securities	February 3, 2009 +93 basis points 1.750 1/31/2014 U.S. Treasury	U.S. 65.6% Asia 19.8% Europe 9.7% Other 4.9%	Fund Manager 53.0% Comm. Banks 6.6% Insurance 13.8% Retail 0.2% Central Banks 23.3% State & Local 2.3% Corp/Pensions 0.8%
2 year 1.750% 3/23/2011	\$15.0 billion 94	Barclays J.P. Morgan & Co UBS Securities	Banc of America Deutsche Bank Goldman Sachs Williams Capital	February 26, 2009 +68 basis points 0.875 2/28/2011 U.S. Treasury	U.S. 76.1% Asia 11.8% Europe 9.0% Other 3.1%	Fund Manager 58.5% Comm. Banks 17.4% Insurance 4.8% Retail 0.2% Central Banks 14.7% State & Local 2.6% Corp/Pensions 1.8%