

UNDERSTANDING MORTGAGE INTEREST RATES

Introduction

Who sets mortgage rates? Why do rates change? How often do rates change? What is a Mortgage Backed Security (MBS)? These are some of the questions I am often asked by my clients and following is a brief explanation of the MBS market and how it works.

Mortgage loan interest rates, and the corresponding fees or points charged for various rates, are driven by the prices of Mortgage Backed Securities (MBS). While lenders, in effect, set their own mortgage rates, how those rates are set are derived in only one way, by the then current prices of Mortgage Backed Securities. MBS are actually pools, or groups, of mortgages packaged into securities for sale in the secondary market. One security may, for example, be made up of 500 loans totaling \$75,000,000. These MBS are traded in markets in a manner very similar to stocks and other fixed income securities, and what investors will pay for these drives interest rates.

Banks, Mortgage Bankers, Credit Unions and Mortgage Brokers originate loans, and Banks who have separate wholesale and correspondent divisions fund and/or purchase loans, from the aforementioned entities, most often with the intent to resell those loans into the secondary market, packaging them into MBS. So the going price in the secondary market for loans at various interest rates influences the rates and prices a Bank will offer to the public or a Mortgage Banker, Broker and/or Credit Union. Although wholesale rate sheets are typically issued no more than a couple of times each day, the value of the mortgages, or the price of MBS, and consequently the price (points) for a certain interest rate, is actually constantly changing.

Unlike purchasing or selling stock, where the price is whatever it is at the moment you make the trade, wholesale and correspondent lenders generally issue a rate sheet setting forth their rates and corresponding points/premiums for those rates, and honor those rates, until the change in MBS prices reaches a certain threshold, before passing new prices on to their customers in the form of a new rate sheet. Typically lenders will issue new rate sheets as prices move more than 4/32nds to 8/32nds, or 0.125% to 0.25% points.

A few other characteristics unique to the MBS market also distinguish it from equity and Treasury markets, but the overall operation is similar. A wide range of economic, social, and political factors leads to changes in the value of a MBS whenever new information is released. This tutorial serves as an introduction to these influences.

Background

Before looking at the factors that drive mortgage rates, it's helpful to understand a little about the process through which a mortgage passes from the originator to the final investor who will own it. In the early days of the mortgage industry, a typical transaction involved a bank originating a mortgage loan which would be held by the bank as part of its portfolio for the entire life of the loan. In this system, the bankers had to be very careful in evaluating the risk of each loan since they were the ones who suffered from making bad loans. The major downside to this approach was a lack of diversification in most portfolios. All of the loans were made in the same region to the bank's customers, so an economic downturn such as the oil bust in Texas in the 1980's might cause many of the loans to go into default at the same time.

As financial markets grew more sophisticated and financial institutions increased in size, new techniques were developed which helped alleviate the risks of concentrated loan portfolios. Through a process call securitization, pools of mortgages were combined together and sold as Mortgage Backed Securities. Mortgages from across the

country were packaged together so that a downturn in the prospects of one industry or region would affect only a small portion of the mortgages in the portfolio. This made investors, such as mutual funds and pension funds, much more willing to own mortgages as an investment. The greater demand resulted in higher prices paid and conversely lower mortgage rates.

The last remaining major objection by investors to owning MBS was that suddenly the bankers no longer had much incentive to scrutinize the quality of the loans they originated because they were selling them off immediately to someone else. Government Sponsored Enterprises (GSE) called Fannie Mae, Freddie Mac, and Ginnie Mae were created largely to address this issue. The credit standards created by them meant that investors no longer had to worry about the quality of the loans. Loans were also guaranteed by these agencies, removing nearly all the risk to investors of default. So when loans are underwritten to the GSE Guidelines, investors know there is a certain underlying credit quality for the MBS that they purchase.

To summarize, MBS are simply pools of mortgages backed by Fannie Mae, Freddie Mac, or Ginnie Mae which are traded in a manner very similar to Treasury bonds. The size of the MBS market is comparable to the Treasury market. Investors receive payments based on the level of interest and principal made by the consumers who obtained the mortgages. The calculation of the actual value of a MBS requires some extremely sophisticated mathematics, but most of the major factors can be easily understood. The main difference between MBS and other types of fixed income investments is that consumers have the option to prepay a mortgage. When a mortgage is paid off early, the expected stream of payments comes much sooner than expected. Predicting the effects of prepayments on the value of MBS is what requires the advanced mathematical models.

As a simple example, say current mortgage rates are 5.5% and there is a MBS made up of mortgages at 8%. The security would sell at a premium due to the high return, but not as high as that of a comparably yielding Treasury bond, due to concerns about prepayment. An investor would be reluctant to pay too large a premium for the security, because the mortgages are likely to be refinanced and paid off. In that scenario, the investor would receive the principal balance of the loans, but would never realize the higher return it paid a premium for. If the MBS offers a lower yield than the prevailing rates, it will be offered at a discount rather than a premium to compensate.

Factors

The major financial institutions in the mortgage industry are constantly trading in the MBS markets. They have the skill to evaluate the value of a MBS. They adjust MBS prices based on investor demand. The mortgage rates on the rate sheets reflect the rates required to produce a competitive return on the MBS. If investors can get a higher return in other markets, they won't purchase MBS. At its simplest, this is how mortgage rates are determined.

This means that the most obvious factor that affects the value is interest rates. There is not just one standard interest rate. The Federal Reserve controls the Fed Funds rate which is a short term rate that banks charge each other. The yield on a "risk-free" Treasury bond of 10 or 30 years is often used by investors as a benchmark for comparison. What matters is that all the other interest rates are alternate investment choices. When rates on the other fixed income securities go up, mortgage rates will likely go up as well, as investors will demand a higher return to continue purchasing mortgage backed securities. A higher rate means a lower price as investors will pay less for an existing security yielding 6% if suddenly there is a new security yielding 7%.

Price and yield always move in opposite directions for a fixed rate security. For example, if a \$100 security yields 9% it pays \$9.00 in interest per year. If you purchase the security for \$100, then \$9.00 is in fact 9%. However, if you can get a 10% return on another investment, you might purchase the same security for only \$90, then the \$9.00 in

interest is actually a return of 10% per year. So you purchased the security at a discount to make up for the lower return. This is exactly why discount points are charged on lower rate mortgage loans - to make up for the lower return. As the price goes down, the yield increases. This is the mechanism through which price changes for MBS determine mortgage rates.

The two factors with the most impact on interest rates are economic growth and inflation. The faster the economy is growing, the more demand there will be for capital, leading to a higher cost for borrowing money. That's why good news about the economy is often good for stocks but sinks bond and MBS prices. A higher inflation rate will also increase interest rates, but for a different reason. Inflation erodes the value of a dollar, so a lender will demand more dollars back at a later date to compensate for the lost purchasing power.

Any news which provides information about the level of economic growth or inflation will influence prices. Economic reports are released on a regular basis which contains measurements of the strength of the various parts of the economy and the amount of inflation. Some reports have more significance than others, therefore the degree to which they affect MBS markets can vary. As these reports come out, Wall Street analysts seek to discover from the data, how investors react to the results. Many events cause a similar reaction to economic reports because they give investors new information, most notably Federal Reserve meetings.

As with the price of any product, any factor which affects the supply or the demand will alter the price. In addition to economic news, there are other notable influences on the demand for MBS which often affect the price. Investors turn to MBS markets when they want an investment which is less risky than equities. In times of political instability the demand is greater for these lower risk instruments, so a terrorist attack, for example, may produce a rally in MBS markets. Foreign central banks may have motives for purchasing securities which are different from investors who are assumed to be seeking to maximize their investment return. To balance foreign exchange transactions related to imports and exports, they may be forced to buy or sell US securities regardless of what they consider to be the best investment.

Conclusion

As mortgage professionals, our business is greatly impacted by changes in mortgage rates. From a client relationship perspective, the implications are many. An unexpected increase in rates may cause you to change your mind about a loan you are considering, cause you to not qualify, result in dissatisfaction with your loan officer, or result in other problems. Or a loan officer may offer you a rate and point quote which you accept, only to find out prices have moved swiftly and suddenly, and those terms are no longer available from the lender. On the other hand, should there be a sudden improvement in rates, and if the loan officer has the capacity and knowledge that the possibility exists, and communicates this to the you, you will benefit greatly by receiving a lower rate.

From a risk management perspective, the mortgage professional who knows in advance that rates may increase, affords you the opportunity to lock your loan before lenders issue new rate sheets, therefore preserving a lower interest rate thus a lower overall monthly payment. Perhaps more importantly, the mortgage professional who knows rates are improving, affords you the opportunity to "float" or wait to lock your loan until a lender issues more favorable pricing, therefore enabling you to take advantage of lower rates, thus a lower overall monthly payment. This is not to be confused with "playing the market" and simply hoping rates improve. **It is simply about working with a mortgage professional who understands the markets and has the tools and resources to properly mitigate your risk during the loan process, with good, current, real-time prices and news about the MBS market, and making solid technical decisions based on that information.** In other words, you are acting only when it is to your advantage to do so.