

Table of Contents

The Federal Reserve Bank

✓ The Fed Funds Rate	3
The Bond Market	
✓ The Bond Market	4
✓ Investing In Bonds	5
✓ The Inverse Relationship of Bonds	6
✓ Mortgage Bonds and Mortgage Rates	7
✓ The Junk Bond Market	9
✓ Interpreting the Bond Market	9
Technical Analysis	
✓ Technical Analysis	10
✓ Reversion to the Mean	14
✓ Timing is Everything	14
What To Do Next	
✓ What To Do Nevt	15

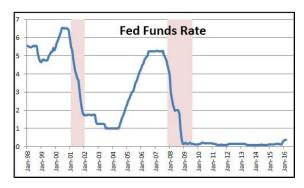


The Fed Funds Rate

The Federal Reserve Bank, also referred to as "The Fed", is the U.S. central bank. The objective of The Fed, established by Congress in the Federal Reserve Act of 1977, is to achieve maximum employment and stable prices. This is known as their dual mandate, and also includes the task of trying to moderate long-term interest rates. However, when you hear that "The Fed is raising interest rates", that is actually referring to the "Fed Funds Rate".

The "Fed Funds Rate" is the overnight lending rate for depository institutions (banks and credit unions) that lend to each other, and at times borrow from The Federal Reserve, in order to meet liquidity and reserve requirements.

Think of it as the benchmark rate at which "friends" lend money to each other for a short duration (length of time) without collateral - "Hey Jim can I borrower \$10 bucks I am a little short on cash, sure Joe pay me back tomorrow." Thus, when you hear someone say "The Fed is raising interest rates" they are talking about the Fed Funds Rate.



The "Fed Funds" is an important rate, but in the context of recent market conditions it has been mostly symbolic. To use the word "recent" is a bit ambiguous, but implies the last seven years of ZIRP (Zero Interest Rate Policy) during which time The Fed held the rate on the Fed Funds at 0%.

Source: numbernomics.com

The Federal Reserve Bank finally raised the Fed Funds above zero on December 16, 2015, as illustrated by the blue line in the chart on the left. As of August 2017, The Fed has raised rates three more times to the current range of 1 - 1.25%.

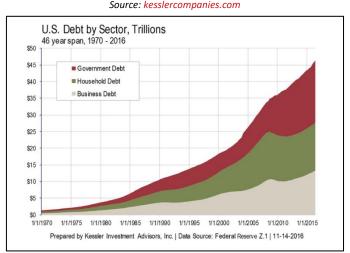
This emerging rate hiking cycle is the first step towards "normalization", or levels that more closely reflect historic averages. Given that the current economic expansion is one of the longest on record, the probability of a market correction is increasing with every passing quarter. Thus, the eagerness from The Fed to move off the zero bound (ZIRP) probably has less to do with normalization and more to do with "reloading their gun" so they have the ability to once again lower rates in the future should another financial crisis present itself.



The Bond Market

The relationship between bonds and mortgage rates is critical to understand, but first a basic knowledge of bonds is required. In general, bonds are an investment in debt. When you purchase a bond you are typically lending money to an institution or government that issues the bond. Therefore a "Bond Market", sometimes referred to as a "Credit Market", is made up of creditors (investors) and debtors (borrowers). Currently the global bond markets exceed \$100 trillion in debt issuance and in the past 15 years has more than tripled in size.

This current credit expansion has been considered by many, as the last breath of a long-term debt "Super Cycle". A Super Cycle trend can last decades, even multiple generations, and is then punctuated by a dramatic shift in the opposite direction. Given the length of the current Debt Super Cycle it has been suggested that a collapse in the credit markets may be forthcoming.



The US Bond Market alone exceeds \$40 trillion and is considered to be the "deepest" and most "liquid" market. This means that on just about any given day, in the majority of market conditions, there is a buyer for every seller. Thus, a bond trade or exchange can be made with limited volatility and impact on price.

Despite unsustainable levels, US Government Debt is considered by most market participants to be the "world's safest asset". This is partly because the US Dollar is the world reserve currency and the US is still the world's largest economy. This provides certain privileges whereas the market seems to simply forgive the fiscal profligacy of our government, allowing it to continue to expand the national debt to the highest levels of any government in the history of THE WORLD! Yet, even at these extremes a US default is considered unlikely since the US Treasury can issue more debt to pay current government liabilities.



This is the equivalent of paying your bills with a credit card. It is also the basis for the reoccurring debate over raising the total debt allowed by federal law, known as the "Debt Ceiling".

Source: investmentpostcards.com

Even if there were no buyers for the newly issued bonds, the debt could be monetized by the central bank with money that is created out of thin air. This provides liquidity to the financial system, but also devalues the currency.

The Federal Reserve is actually a privately held bank with the power to "print money" in exchange for U.S. government bonds.



The interest on those bonds is then paid for from the income taxes collected on U.S. citizens. Therefore, as a result of the Federal Reserve Act of 1977, Congress has enslaved future generations by handing over control of our monetary system to a privately held banking syndicate. "Good Job!"

The idea that "money is debt" escapes most people. However, what should be understood is that without a comprehensive plan to reduce government expenditures, higher taxes are likely in order to manage the debt at current levels. The other option is inflation which is ultimately a tax on the purchasing power of a currency.

Investing in Bonds

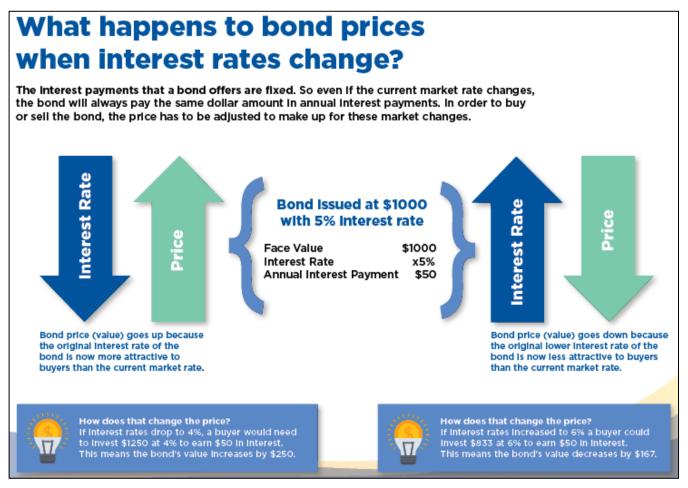
Because of how bonds are structured they are considered "fixed income investments". This means that interest income, or yield, is paid out on a fixed schedule. Therefore, bonds can provide a guaranteed income stream or "cash flow" on a regular basis. This type of investment tends to be most attractive for investors when riskier assets, such as stocks, are experiencing higher than usual volatility or are declining in value.

In addition, investors who are risk adverse or require a stable income stream, such as retirees, prefer bonds as a means to generate a safe return while limiting the risk of a principal loss. More simply put, bonds provide a safe place to park money during periods of high volatility, thus investing in bonds is often called a "safe haven trade".



The Inverse Relationship of Bonds

There is one more aspect of bonds we need to discuss and that is the **inverse** relationship between the price of a bond and its yield. The yield (rate of return) from a bond and the actual bond "coupon rate" can be different. The coupon rate is the periodic rate of interest a bond will generate when it is purchased at face value (par) and held to maturity. However, the more an investor pays above the face value of a bond the lower the yield. The following chart helps to visualize this relationship.



Source: fcnb.ca

The example above does not reflect other factors, such as inflation, which can also impact the value of a bond. When additional criteria are considered, bond math can get much more complicated than what is being illustrated. However, the inverse relationship between price and yield is still a core premise to keep in mind as we further discuss bonds and mortgage interest rates.

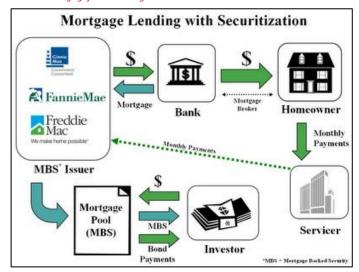
Up next we discuss the important relationship between mortgage bonds and mortgage rates...



Mortgage Bonds and Mortgage Rates

Now that we have covered some basic concepts of the Bond Market, we can begin to focus more specifically on "mortgage bonds" and the impact they have on *mortgage rates*.

Source: mortgagefraudinvestigation.com



In finance the term "security" is very general and can refer to most any tradeable financial asset, including both stocks and bonds. An "asset-backed security" is a bit more specific and as the name suggests is usually "backed" by some type of collateral.

In the case of a "mortgage-backed security" the collateral is securitized mortgage loans and their underlying real

estate. Mortgage-backed securities are also referred to as MBS and are the back-bone of mortgage bonds.

It is an oversimplification, but mortgage loans with similar characteristics (i.e. interest rate) are packaged and securitized into MBS. Then mortgage bonds are issued from these securities and the receivables collected on mortgage payments are distributed to the bond investors.

You may recall when the price of a bond increases the yield decreases. This **inverse** relationship between price and yield also holds true for mortgage bonds. When the price of a bond increases above its face value the investor is choosing to pay more for the same fixed amount of cash flow. Paying a premium above the face value of a bond reduces the yield (rate of return) of that bond, even though the original coupon rate does not change.

When bond prices rise mortgage companies advertise lower rates since the increase in investor premiums help to offset loan costs. Fundamentally mortgage rates do not actually fall, bonds simply become more expensive and thereby lower rates more affordable as a result of investor premiums being applied to loan fees. The opposite is true when bonds are less favorable. As the bond price falls the cost for lower rates is transferred to the borrower. This is often referred to as "paying points", but is more accurately called a "discount fee". Think of it as the investor getting the bond for less, or at a discount. This would then equate to a higher yield (rate of return) for the investor.



As previously discussed, bonds are referred to as a safe haven trade. Therefore, investors will typically look to the bond market in order to minimize risk. Although this "risk-off / risk-on" relationship between bonds (risk-off) and more volatile investments like stocks (risk-on) is not always perfect, the general theme will help you better understand the context of how we are able to make predictions about mortgage rates.



While continuing to explore the relationship between bonds and mortgage interest rates, keep in mind the "Law of Supply and Demand".

The more demand there is for bonds, the higher the price. In a "risk-off" environment more investors will be seeking the safety of bonds.

The increased demand will push the price higher and bond yields lower. The same would apply to mortgage bonds.

While this dynamic has many implications, a key takeaway is that as markets become more risky, and demand for bonds grow, there is a greater likelihood for lower mortgage rates. Perhaps a more simple way in which to summarize this concept is to state that an increase of risk in the markets = lower mortgage rates.



The Junk Bond Market

In addition to government and mortgage bonds, investors will diversify across different classes of bonds, such as corporate bonds, but not all bonds are considered safe. some bonds are actually referred to as "Junk Bonds" and usually offer a higher yield to investors because of the greater risk for default. As an example, most of the debt issued by companies which operate in the oil fracking industry are considered "junk". This is because the success rate of these types of enterprises is very low and is also very sensitive to the fluctuation in oil prices.

Because of the increased risk to the investor many of these businesses will need to pay higher interest on their bonds, this is why they are also referred to as "High Yield" bonds. However, due to ZIRP and the low interest rate policies from central banks around the world, investors have been forced into more risky assets like junk bonds in order to generate expected returns.

Interpreting The Bond Market

While usually providing a safe haven, bonds can act as a barometer for market conditions and how investors feel about the economy. For example, lower bond yields suggest that market sentiment is negative, or "bearish", since more investors are reducing risk by

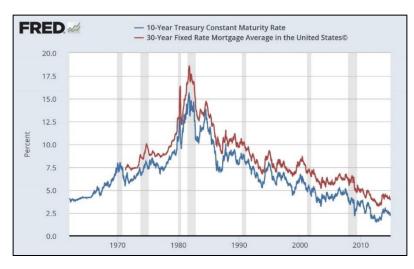
Bull & Bear
Thrusts
up
Swipes
Down

investing in bonds. However, if the general market sentiment is "bullish", or optimistic about the future, then investors will be more likely to sell bonds.

There are any number of factors which can influence market sentiment, thus impacting the price of bonds, and vice versa. The unexpected results of the US election is a perfect example, but a quarterly GDP report, or a noteworthy change in the monthly unemployment rate can be just as influential.

In addition, economic growth can cause inflation and an increase in the price of certain goods or services. This erodes the value of money and is typically a catalyst for higher interest rates. Therefore inflation is referred to as being "bond unfriendly" since higher rates also means falling bond prices. As a result certain market conditions which may be good for the overall economy are actually considered bearish for bonds. This ties back into the theme that an "increase of risk in the markets = lower mortgage rates" or in the case of an improving economy, the potential decrease of risk in the market likely means higher mortgage rates.





The 10 Year U.S. Treasury Bond is considered the benchmark for most bonds in the United States, and is therefore more closely monitored by the market as a proxy for investor sentiment.

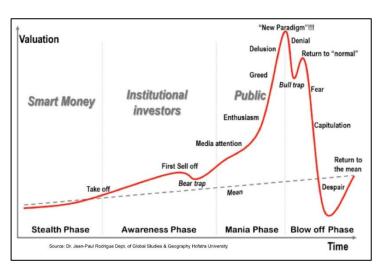
Because mortgage bonds offer a similar type of "risk-off" investment they tend to closely mirror the path of U.S. Treasuries.

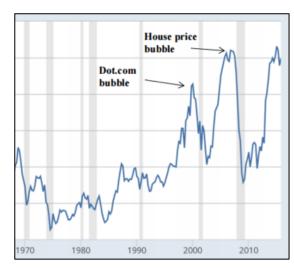
By assessing global market conditions, and the impact they might have on investor sentiment, we can start to build a case for which direction bond yields, and thus mortgage interest rates, might be headed in the future.

Technical Analysis

The trading methodology of "Technical Analysis" analyzes market data, usually in the form of a line graph, with the purpose of determining if a familiar pattern, trend, or other relationship exists.

An investor who uses technical analysis is often referred to as a "chartist" and will formulate market opinions by identifying certain patterns within a chart, or series of charts. One of the most famous chart patterns, yet somehow frequently overlooked by investors, is associated with market bubbles and is characterized by a mania phase where prices increase rapidly in a short period of time.

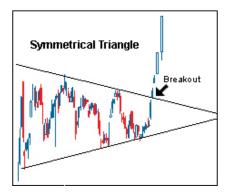




Source: network54.com Source: @hedgeye



There are many technical patterns such as the "side-ways triangle", also known as a wedge or pennant. Side-ways patterns are usually highlighted by a defined break out, and the start of a new upward or downward trend.



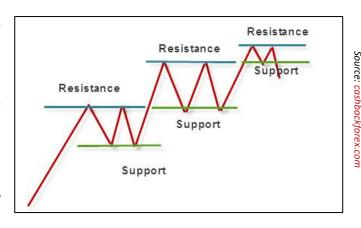




Source: investopedia.com

The horizontal lines used to illustrate different technical patterns are often referred to as "support" and "resistance". These invisible boundaries give the impression of containing a trend from breaking out in a new direction.

We typically think about the lower line as support and the upper line as resistance.



However, this perception is based on the viewpoint of the trader. If an investor is hoping that prices will move lower, normally referred to as "shorting" the market, then the upper line would be considered support and the lower line would be seen as resistance.

Although technical analysis can be helpful for identifying market trends, the reoccurrence of patterns similar to those which developed in the past does not necessarily confirm the results will be the same in the future. Perhaps Mark Twain put it best when he said, "history doesn't repeat itself, but it often rhymes". No matter how you phrase it the point is the same; there is definite value in observing when market conditions are reminiscent of times in the past, even though some type of divergence in the outcome is to be expected.

If you are looking for some heavy reading on the topic try "This Time is Different" by Reinhart and Rogoff.



The book title is also referenced as an inside joke to mock when a trend, reminiscent of the past, is repeatedly ignored by the market despite the high probability of a similar and potentially negative outcome.

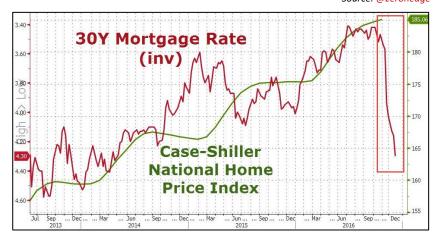
Take for example the S&P 500 index which represents the market capitalization for 500 of the largest companies with common stock that is publicly traded on exchanges like the New York Stock Exchange (NYSE) and the NASDAQ. The charts below compare the present day market cap of the S&P 500 with different timelines from the past. The closer the correlation the more compelling the argument that there will be a similar result. As you will notice things did not end well. In the year 2000 there was a stock market crash following the "Dot.com" bubble and the 1937 crash was during the "Great Depression"...but hey, maybe "this time is different".



The punchline, although in the end not funny for most investors, is that the results are rarely different. However, timing is everything, so it becomes less a matter of "if" and more a matter of "when".

Source: @zerohedge

In the same way tightly correlated data can provide insight into what markets may do next, the divergence among trends which are usually in sync can also act as a warning sign, foreshadowing changes that may soon come.

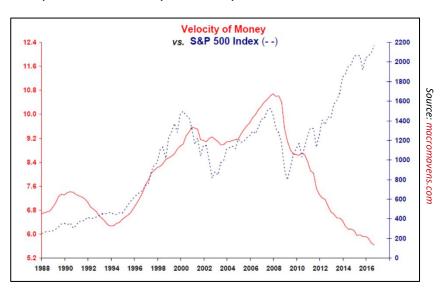




Take for example how the November 2016 spike in mortgage rates (inverted) has resulted in an extreme divergence when compared to the popular Case-Shiller Index that measures home values. This chart clearly suggests that one, or the other, will likely change its present course. Regardless of how this unfolds, we can clearly see how leveraging technical analysis can put us ahead of new trends before they happen.

The following is another example of an extreme divergence between two trends which are normally tightly correlated. This chart compares the velocity of money with the S&P 500 Index.

The "Velocity of Money" is used to measure the rate at which money in circulation is actually being used for the purchase of goods and services. It is calculated as a ratio of GDP and is a key factor in determining levels of inflation, thus helping to gauge the health of an economy.



When considering the historic relationship between these two sets of data we might build a case for why inflation is destined to move higher along with a spike in the velocity of money. Conversely we might argue that the stock market is poised for a significant correction, and investors should prepare for lower prices.



Reversion to the Mean

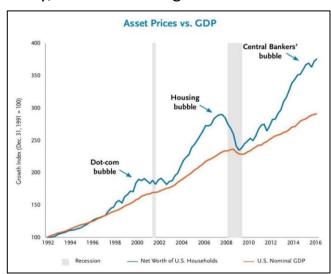
There is one more concept I want to introduce which is "reversion to the mean". The term "mean" in mathematics is simply the arithmetic average. Add up each unit of measurement, divide by the total number of units, and you get the mean or average.

The mean, when referencing a particular market, is the average price or return of that market over a specific period of time. Thus, the idea of "reversion to the mean" implies that when a current trend, or set of data, deviates from historic averages it should eventually return to a level that is closer to the mean.

The statistic known as "standard deviation" is a measurement used to summarize the amount by which certain values vary, or stray away, from the averages within a broader

set of data. When being applied to investing, a larger standard deviation may suggest the greater likelihood that "reversion to the mean" will soon occur.

Notice in the chart on the right how abruptly markets returned to the mean as the deviation from historic averages becomes more extreme.



Source: cointelegraph.com

Timing is Everything

As previously mentioned timing is critical. Even when things pan out as technical analysis suggests, timing can be difficult to get right. Therefore, having a longer time horizon can be beneficial and is one of the reasons we recommend preparing a "Strategic Refinance Plan" in advance so you are already positioned to take advantage of forecasted outcomes before they occur.



WHAT TO DO NEXT...

The next step is for you to contact the personal mortgage consultant who provided you with this reference guide and schedule a time to discuss preparing your own customized "Strategic Refinance Plan". The consultation is FREE and has zero obligation. Together we can help you achieve the peace of mind and prosperity you deserve.

Warm regards,

Jonathan E. Kutsmeda

Jonathan E. Kutsmeda, CEO NMLS# 374680



DISCLAIMER:

This message and any related attachments are for the sole use of the addressee and are privileged, confidential, and exempt from disclosure. If you are not the addressee or previously authorized recipient please delete this publication and destroy any copies. However any person that is in possession of this publication due to "Opting In" or as a result of any other form of distribution solicited or unsolicited, will be held to the terms set forth within. Copying, dissemination, or distribution of this communication without express written consent is strictly prohibited. In publishing research, analysis, and investment recommendations, The Introduction to Mortgage Rates, including its authors and its partners, is not soliciting any actions based upon it. This publication contains material based upon publicly available information, obtainable from sources that we consider reliable. However, this does not represent that it is accurate and it should not be relied on as such. Opinions expressed are current opinions only as of the date appearing on the publication. All forecasts and statements about the future, even if presented as fact, should be treated as judgments, and neither its authors nor its partners can be held responsible for any failure of those judgments to prove accurate. Without limiting the foregoing, there shall be no liable for any loss or damage of any kind resulting from, or alleged to result in any way from, the use of its research. It should be assumed that, from time to time, the authors and its partners will hold investments in securities and other positions, in equity, bond, currency and commodities markets, from which they will benefit if the forecasts and judgments about the future presented in this document do prove to be accurate. Past performance is not indicative of Future Results. To request specific usage or other related permissions please visit:

www.AmericanMortgageWest.com

Seven Waterfront Plaza, 500 Ala Moana Blvd., #400 Honolulu, HI 96813

NMLS# 375788

