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Does Macro Matter? Part 1: Bonds

by **Sandy McIntyre**, Capital Markets Strategist, CI Investments

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"Stocky" (the economy's manic Jack Russel terrier) panicked in December believing that we were on the verge of a global recession. While "Bondy" (the bond market) panicked in September believing that inflation was roaring back. What would have happened if you acted on these macro signals?

Consider the buyer of 10-year U.S. Treasuries at their lows in early October, who was pricing in a yield of 3.26%. That was the highest yield since the "Quantitative Easing 2" sell-off eight years ago. The odds are the seller was taking a loss, while the buyer received a "risk-free" security that would provide decent yield and a 5% capital gain. You can get into all sorts of macro reasons for trading, but one should always consider price and ask: does the valuation make sense?

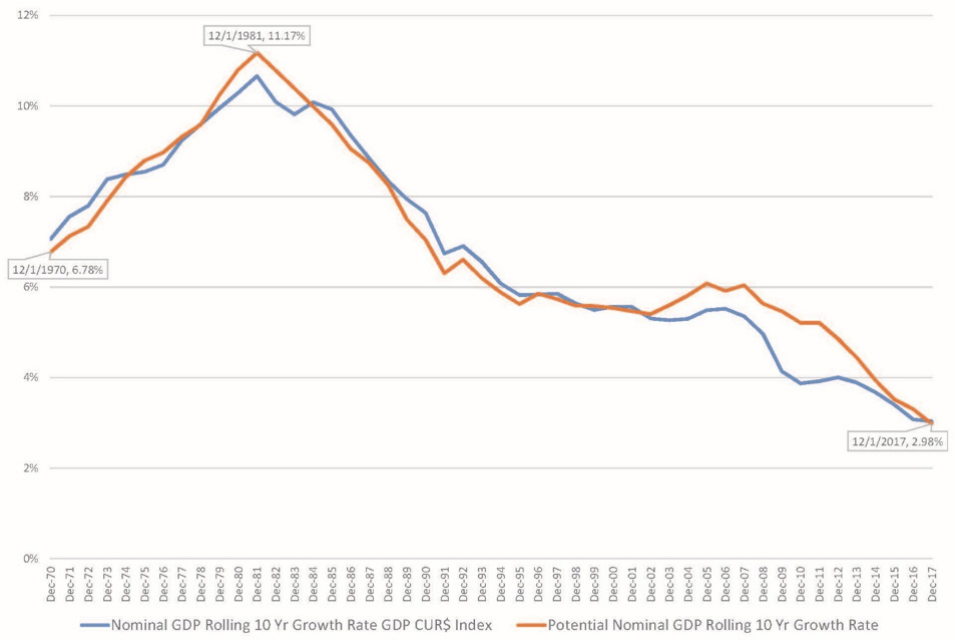
In March of last year, I wrote an article called "Fed Week 2018: Connect the dots", and indicated that the Fed was skewing more hawkish. The DOT plots for March and September confirmed this view. However, the DOT plot for December skewed dovish. Shortly, we will find out the Fed's current view. No matter what we hear, the Fed Funds rate is unlikely to be stable at 2.5% over the next 10 years. So, the question is whether the current yield of 2.67% for a 10-year treasury is appropriate? Does it adequately compensate you for inflation risk over the next ten years? The following is the lead-in paragraph from Connect the dots:

> *"I mentioned in my last note that I thought the time had come to talk about "rates" and lay out a potential path for short and long-term interest rates over the next couple of years. The media's fixation on the Federal Funds Rate has led many to assume that it is the only interest rate that matters. Sentry's CIO, James Dutkiewicz, likes to talk about "bond math". A buyer of a fixed term bond needs to have a view as to what the average short-term interest rate will be over the term of the bond. If they anticipate that the average will be less than the coupon on the fixed-term bond, they will buy certainty of return. Now that we are in an established Federal Reserve tightening cycle, it is clear the sentiment around two, five and 10-year maturities is being directly affected by the markets view on the shape of Fed tightening."*

My conclusion at the time was that the new neutral 10-year was 3%. Above that level and it made sense to be a buyer. While anything significantly below that level would suggest being a seller. I was calling for the yield curve to flatten around that level in 2019. Instead, in late 2018 and early 2019, it has been flattening below that level.

In the article I also discussed the potential nominal GDP and its impact. The chart below shows the correlation between potential and realized nominal GDP rates. The fit is very tight except for the period following the financial crisis of 2008-2009. By 2017 nominal GDP had returned to its potential growth rate.

Potential Nominal GDP vs. Realized GDP: Rolling 10 Yr Growth Rates



Source: OECD Eco Outlook; St. Louis Federal Resreve; Bloomberg L..P.; CI Investments As of January 16, 2019

This is important because historically there has been a strong correlation between smoothed nominal GDP and the interest rate on 10-year treasury bonds. I'd like to update the chart, but due to the partial government shut-down the data is not yet available.

The red line in the following chart is the rolling 10-year growth rate in nominal Gross Domestic Product on a quarterly basis. The gold line is the quarterly closing yield for the 10-year treasury. You can see the 10-year yield has been quite volatile over the years, except for the post financial crisis period. They declined sharply in 2011 and stayed low until October of 2018.

US Nominal GDP Rolling 10 Year Growth Rate vs. 10 Year Treasury Yield

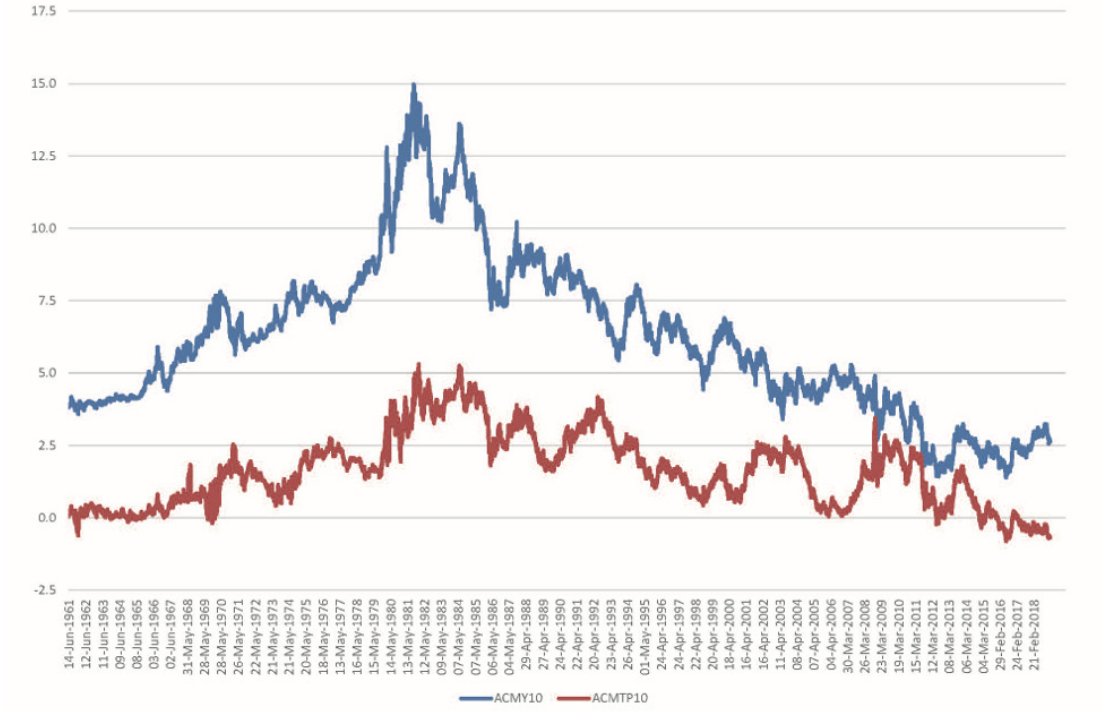
Source: Bloomberg L..P.; CI Investments As of Q2 2018

The grey line in the previous chart is a five-year smoothing of the 10-year yield. The smoothed yield was stubbornly below Nominal GDP until the early 1980s, then above it until 2002, when it again fell below and has remained ever since. In simple terms, bond investors under-estimated inflation in the 1960s and 1970s, refused to believe that inflation had been structurally reduced in the 1980s and 1990s and, since the financial crisis, appear to be ignoring inflation once again. In the 1980s and 1990s the fixed income investor was demanding a "term-premium" for committing their capital to a long-term investment.

New York Federal Reserve economists Tobias Adrian, Richard Crump and Emanuel Moench (ACM) have done a major study of term-premiums over the decades. The data is known as ACM Treasury term premia. The spreads noted in the previous chart show up in changes in term premia, which they define this way:

> *"Treasury yields can be decomposed into two components: expectations of the future path of short-term Treasury yields and the Treasury term premium. The term premium is the compensation that investors require for bearing the risk that short-term Treasury yields do not evolve as they expected. Studying the term premium over a long-time period allows us to investigate what has historically driven changes in Treasury yields."*

ACM Term Premium vs. 10-Year U.S. Treasury Yield

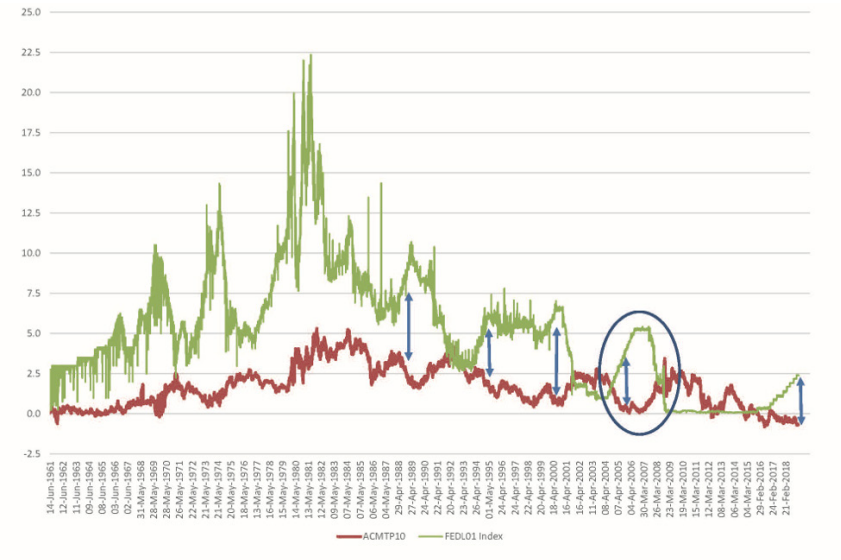


Source: Federal Reserve Bank of New York; CI Investments

As of February 2019

In the 1960s there was essentially no term premium demanded by investors. During the 1970s and into the 1980s term premium followed long-term interest rates higher, peaking in 1982 and 1984 at around 5.25%. It slowly declined with the secular decline in interest rates then collapsed during the 2004-2006 tightening cycle. This was Chairman Greenspan's conundrum (blue oval in chart below). The initial tightening had failed to result in any meaningful increase in long-term interest rates. When you compare term premium to the Fed Funds rate you can see that it has been normal for term premium to fall during tightening cycles (blue arrows) and to rise when the Fed is easing.

ACM 10-Year Treasury Term Premium vs. Fed Funds Rate



Source: Federal Reserve Bank of New York; CI Investments As of February 2019

This is clearer when you focus in on the last two tightening cycles. The ACM term premium is in red below, the Fed Funds Rate in green and the 10-year treasury yield is in blue.

ACM Term Premium 10 Year Treasury

Source: Federal Reserve Bank of New York; CI Investments As of February 8, 2019

The early flattening then inversion of the yield curve in the 2004-2006 cycle can be attributed to the elimination of term premium on the 10-year treasury. The pre-mature flattening of the yield curve in this cycle can be attributed to term premium going negative. Investors are willing to demand no premium for committing capital for ten years, they are betting that deflationary forces are more dominant than inflationary forces.

Let's assume that the Fed blinks in 2019 and eases. What happens to term premium? Typically, it rises when the Fed is easing. If it goes from current levels of -68 basis points to zero, that puts the 10-year at 3.35%. A return to the level of term premium that was in place in response to Quantitative Easing (QE) would likely push the 10-year yield into the high threes or potentially low fours. That would make me act very carefully with my bond portfolio.

There is a big debate coming in the United States over Modern Monetary Theory (MMT). It is being put forward by the left wing of the Democratic Party as a solution to the inequality of society. In their view there are no limits on the amount of debt a society can carry: just print more money.

I am no expert on the theory, but if I understand it correctly, monetarily sovereign governments (those that have their own currencies, central banks and no meaningful foreign currency debt) face no real budgetary limits. They can create the currency that is needed to fund essentially unlimited consumption of goods and services by government. The belief is that the currency created does not have to have an offsetting liability, meaning it does not have to be funded in debt markets.

Federal Reserve Chairman Powell was asked in his Congressional testimony on February 26, for his views on MMT. Like me, he could not fully define the concept. But he used the question to address Congress on deficits, debt and the unsustainability of growing debt faster than the economy. MMT is likely already influencing Fed policy.

Essentially, what the Fed and other global central banks are doing today is already following the path of MMT. QE injected liquidity by funding government spending through the direct purchase of government debt by central banks. In essence, the asset (currency) and the liability (government debt), cancel each other out. By crowding out price signals through quantitative easing central banks have managed to eliminate term premium in all major bond markets.

What happens to private debt when the public-sector pumps massive liquidity into the system? We do not know. We do know that the original injections of liquidity through QE resulted in increases in term premium in 2009 and 2010 (blue arrows in the previous chart). The next increase in term premium was in 2012-2013 with QE3 and then the removal of QE resulted in the Taper Tantrum (third blue arrow). The market responded badly to the introduction and removal of QE. So how will it respond to MMT? Positively? I doubt it.

So long as the injection of government spending does not give price signals through the increased consumption of goods and services, then MMT may indeed be benign. If the government is competing for scarce resources, then the increased consumption will be inflationary. I will likely be much more careful with my bond positioning if advocates of MMT achieve power in the U.S.

I think that in bond markets "macro" matters. It matters when the pricing mechanism for your investments is changed by central bank intervention in markets and it matters when governments change their approach to fiscal policy. These are long-term signals regarding the value of money.

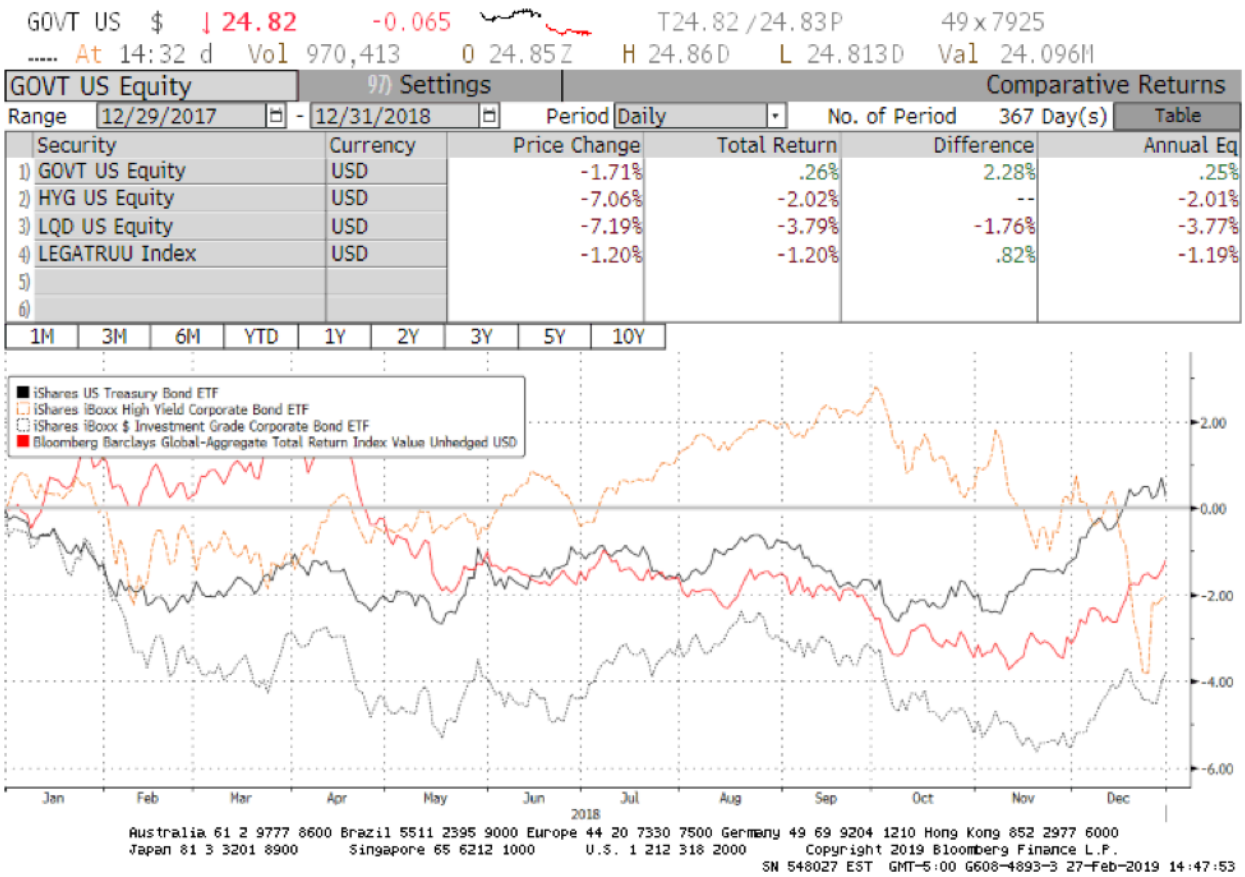
QE was a macro signal that had two impacts: it removed price signals and it dampened volatility in fixed income markets. Commonly, "Know your client" questionnaires tend to make every client an "volatility targeting" investor. By targeting specific volatility ranges that can only be achieved through blending fixed income and equity portfolios, investors are essentially forced to own fixed income despite the risks of cycle-end credit and the very underappreciated risk of a return to interest rate volatility during a period of suppressed yields. In the most recent post-QE environment, bond investments returned very little while adding volatility to portfolios.

The Bloomberg definition of historical volatility is:

> *"The realized volatility of a financial instrument over a given time period. Generally, this measure is calculated by determining the average deviation from the average price of a financial instrument in the given time period. Standard deviation is the most common but not the only way to calculate historical volatility."*

In 2018, rapidly rising "rates" injected volatility into government bond portfolios. From current levels each 50-basis point move in the 10-year treasury yield is a 4.25% move in capital value, which represents 1.6 years of interest. Fixed income managers had to react to two major moves in rates in 2018. The 10-year yield rose from 2.41% at the start of January to 3.11% in May. That was a 6% hit to capital. They then fell to a range between 2.8-3.0% before hitting a new high of 3.26% on October 9, which was a 7% hit to capital. The 10-year then rallied strongly hitting 2.55% on January 3, 2019. As the treasuries rallied, credit spreads widened sharply. The 71-basis point decline in yield is a 6% gain in capital value for the 10-year, but a loss on credit portfolios.

Bond Comparisons – 1 year



Source: Bloomberg L.P. February 27, 2019

For 2018, iShares US Treasury Bond ETF (an ETF that held a portfolio of government bonds), returned 0.25% with realized 30-day volatility that peaked at 4.7 and averaged 2.9. The volatility was consistently higher than the return. A bond manager had to explicitly manage duration in their rates portfolio to mitigate the volatility in rates. When they extended duration, they had to reduce credit exposure as spreads began to widen sharply. A passive ETF approach simply does not work in a period when rate volatility is returning.

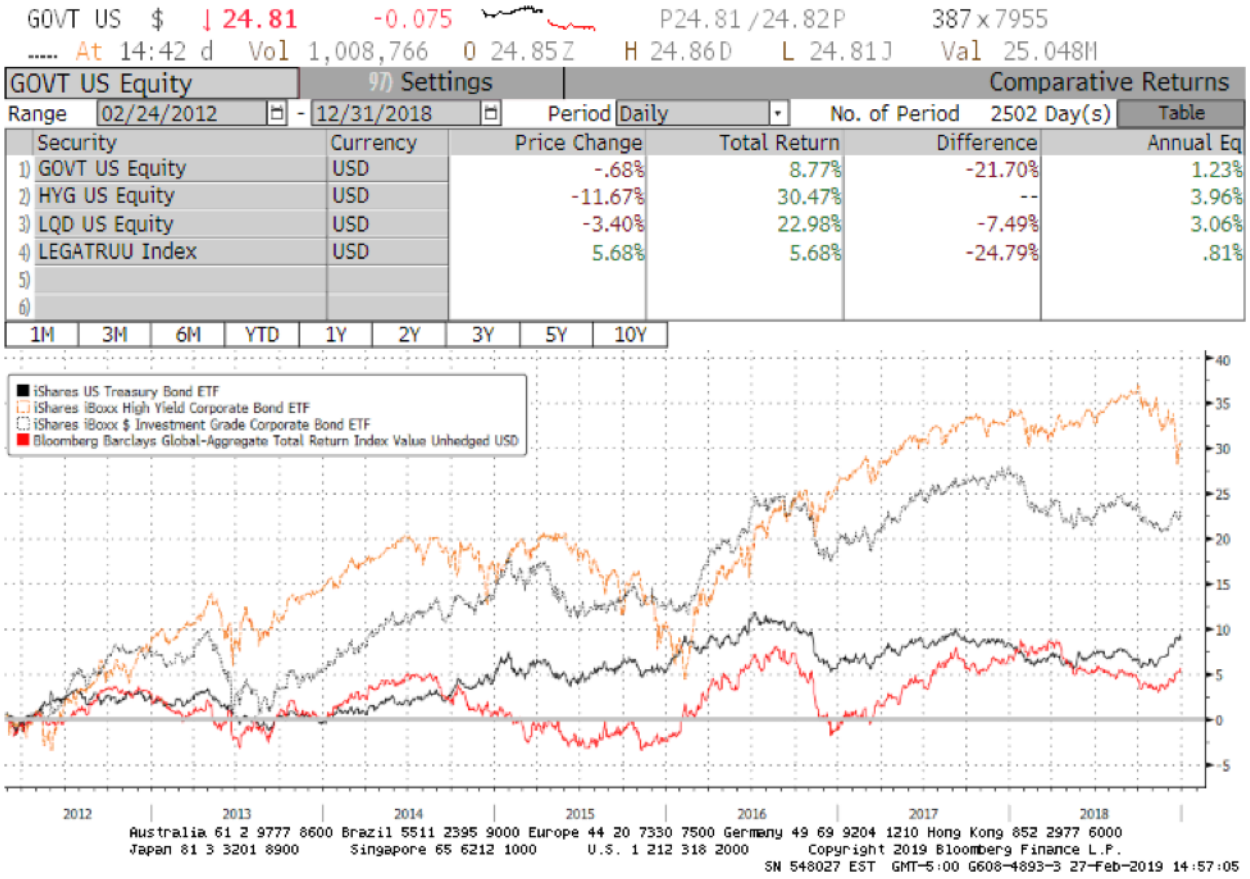
For high yield, each 100-basis point change in spread relative to the benchmark treasury is approximately 5% in capital value. That is three quarters of a year of interest. The ICE BofA Merrill Lynch Cash Pay US High Yield Index started 2018 at 5.80%, hit a low in yields of 5.59% in early January, then blew out to 8.07% in late December. If the investor chose high yield as their fixed income solution, they would have seen a capital decline of almost 9% then a rebound of close to 6%.

While the price volatility was high, the higher yield offset much of the volatility. A high yield ETF, iShares iBoxx High Yield Corporate Bond ETF, returned -2.01% but with realized 30-day volatility that peaked at 10.6 and averaged 4.6. In a year where the dominant narrative was the Federal Reserve tightening cycle and a flattening yield curve. Higher yield did not offset higher volatility.

Also consider that the Bloomberg Barclay's Global-Aggregate Total Return Index lost 1.19% in 2018. Weak bond markets were a global issue. Within the U.S. market the worst performing area was investment grade, losing 3.77%. This can be attributed to very weak performance by the BBB rated bonds that now comprise approximately 46% of the "investment grade' universe.

For a longer look at performance, let's look back eight years to the last time the 10-year treasury had meaningful term premium: the after-math of QE 3. The broad bond market (Bloomberg Global-Aggregate) has provided a total return of 0.81%. It was contributing volatility without return for six years. If you stuck to treasuries you returned 1.23%, well below coupon. You had to go up the risk spectrum to improve on the index returns. QE forced investors into weaker credits, but they were rewarded with returns of 3.06% for investment grade and 3.96% for high yield. These are equity correlated asset classes with higher volatility than a pure government bond portfolio. Late cycle liquidity weakens, and volatility rises. That's where active management can shine.

Bond Comparisons – 8 year



Source: Bloomberg L.P. February 27, 2019

Short-term headline macro rarely matters over the long-term. If the headline macro materially affects price, get out your calculator and calculate the potential return for taking the other side of the trade. The headline macro for late December was "imminent recession." Corporate bond yields spiked, spreads blew out for high yield and investment grade bonds, while long-term treasury yields collapsed. It was a buying opportunity for credit. In a still decent economy, investors were discounting too high a default rate for high yield and for the lower end of investment grade. The reason given was a rapid flattening of the yield curve. The cause? A flight to safety trade caused a rapid decline in term premium driving the 10-year yield into the levels for short-term interest rates. When rates converged in 2006 the 10-year followed the Fed Funds Rate higher during the late stages of that tightening cycle. This time the Fed blinked. The March meeting will be interesting. Economic data remains sound, the market may well have predicted yet another phantom recession.

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CI Investments

2 Queen Street East, Twentieth Floor, Toronto, Ontario M5C 3G7 | **www.ci.com**

Head Office / Toronto	Calgary	Montreal	Vancouver	Client Services
416-364-1145	403-205-4396	514-875-0090	604-681-3346	English: 1-800-563-5181
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