Disciplina Capital Management
September 2019 Quarterly Update

"An investment in knowledge pays the best interest." – Benjamin Franklin

Third Quarter 2019 Insights

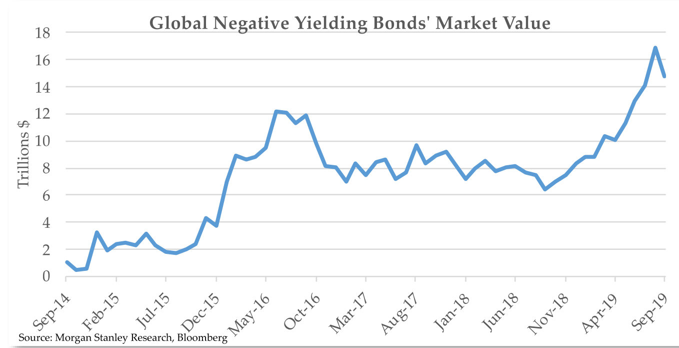
Mr. Franklin was a key figure in early American history. As one of America's founding fathers, he was known for his work as an inventor, author, and statesman. He was also known for his sense of humor and pithy quotes, such as the one written above. While we are not sure where interest rates were during his time (fun fact: the first U.S. government bond was issued to fund the revolutionary war and the U.S. treasury bond market came into being in 1917 to fund World War I), we would venture a guess that they were higher than present levels. In the current environment of zero and negative interest rates, Ben's advice is even more relevant now. With global bond yields at record lows, investors are suffering from a loss of income in meeting their return targets. Fixed income allocations also may not have the same "shock absorber" effect on portfolios as they previously did when equity markets turned south.

This quarter, we discuss the challenges record low (and negative) interest rates may create for institutions in meeting their return targets in the years ahead. In short, they need to make an investment in knowledge and investment expertise to meet their goals because the bond markets are not what they used to be.

ZIRP, NIRP and other Bond Market Oddities

The Global Financial Crisis (GFC) created new terms within bond market lexicon such as ZIRP (zero interest rate policy) and then NIRP (negative interest rate policy).

Over 10 years removed, and we are still dealing with the fallout as rates in many developed bond markets are negative and over $16 trillion in bonds are trading at negative yields. This is roughly one-third of all investment grade securities with sub-zero yields.



In layman's terms, this means that if you lend a European government money, you pay for the "privilege" to end up with less money than when you started if you buy a new bond and holding it to maturity. Bizarre yes, but sadly true. Back in the U.S., you still get paid to lend the government money, albeit at some of the lowest rates in at least 65 years. Massive global central bank stimulus, modest global growth and limited inflation have pushed rates to these levels and should continue to keep a lid on yields in the near term.

The Shocks are Broken

Historically, bonds have served two roles in a multi asset portfolio: providing income and diversification. Today, the income component is hard to come by, especially if you are investing outside the U.S. Bonds have also served as a "shock absorber" in volatile equity markets. In periods of meaningful equity losses such as the tech crash in 2000, GFC in 2008, and U.S. credit rating downgrade in 2011, the total return on the fixed income component of portfolios helped offset declines in the equity allocation as treasury yields declined and prices rose accordingly. Keep in mind that the starting point for

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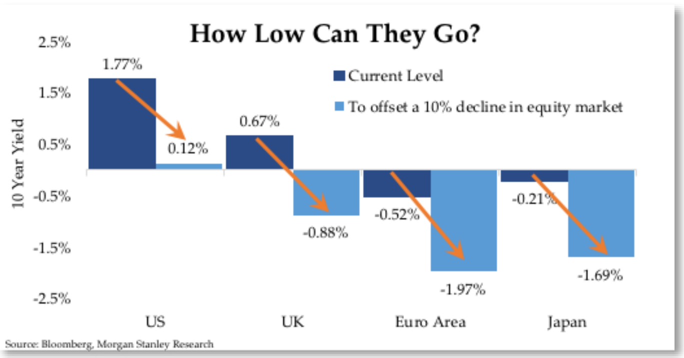
treasury yields was much higher leading up to these events. Prior to the GFC, the 10-year bond yield was 4.5% versus 1.8% today.

With the starting point for yields now much lower, the bond math simply does not work, and it will be very difficult for bonds to offset equity market declines in a

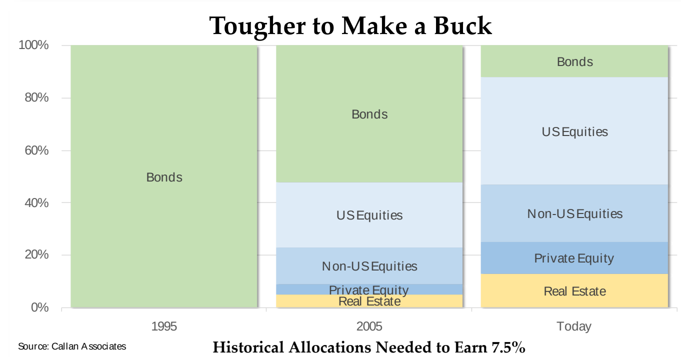


traditional 60% equity / 40% fixed income portfolio. As you can see in the chart above, <u>the yield on the U.S. ten-year treasury would need to decline to 0.12% to offset a 10% decline in equity markets.</u> The volatility seen in 2018 was a prime example of bonds not working as well as they have in the past to mitigate equity losses. With global equity markets down -9.4% in 2018, U.S. treasury yields actually <u>**rose**</u> during the year, leaving investors with losses in both the equity and fixed income allocations in their portfolios. Moving forward, investors must consider additional asset classes to provide a buffer during periods of market volatility.

Longing for the good old days

We have all heard our friends discussing how complicated life has gotten over the last 20 to 25 years. Managing portfolios has also gotten much more complex with a wider variety of asset classes to generate required returns to meet spending or pension liabilities and to compensate for inflation.

In 1995, a simple portfolio of U.S. treasuries could provide the 7.5% required return institutions needed. As yields have declined over time, additional asset classes should be considered to generate the same return with increased complexity in terms of asset allocation and manager selection to achieve the required return.



So, the "DIY" approach may no longer work and even when institutions outsource, outcomes can vary dramatically based upon the OCIOs' ability to source and evaluate investment managers in all traditional and alternative asset classes. This is especially true with alternatives, where performance differences between top and bottom quartile managers can be quite significant. Fortunately, our team is well positioned to navigate this complexity with over 20 years of experience managing multi-asset, multi-manager investment portfolios together. Even with return targets below 7.5% in the current environment, portfolio construction remains more complex and challenging.

Disciplina's Approach

Making the decision to use an OCIO firm is ultimately an investment in knowledge, especially in an era where a simple 60/40 portfolio may not generate required returns to fulfill an institution's mission. When looking across markets, we categorize asset classes into three categories:

- <u>Growth</u>: Global asset classes that are positively correlated to economic growth, such as public and private equity. These asset classes provide long-term growth and the highest expected returns, but also the highest risk of loss at any given point in time.
- <u>Diversifiers</u>: Asset classes which tend to provide stable, income-like returns with low correlation to the general economy. We view this as the "shock

absorber" for client portfolio that includes fixed income and hedge funds.

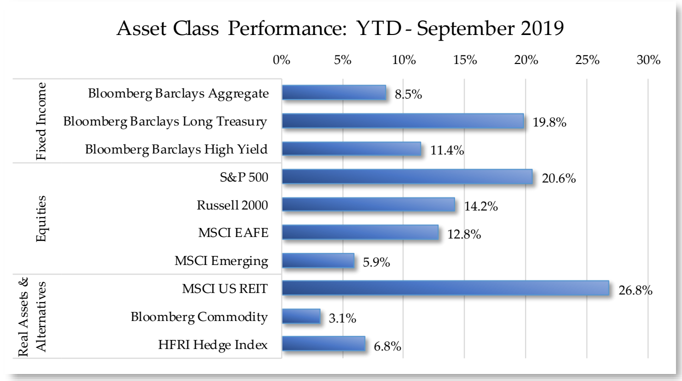
- Inflation Protection: Investment strategies that are positively correlated with rising rates and inflation, such as commodities, real estate and inflation protected bonds.

Investments across all categories can be captured through both public and private market investments.

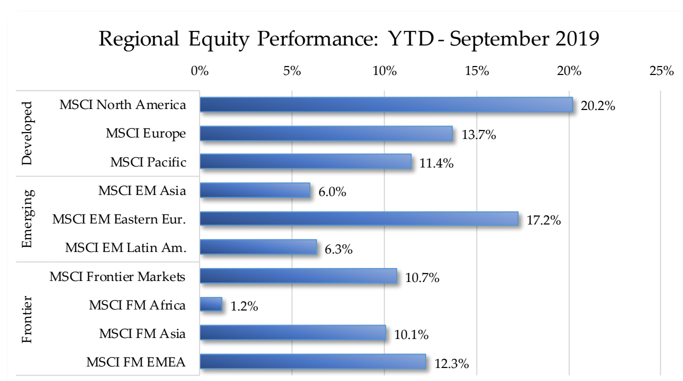
Managing multi asset portfolios is never easy, but the current interest rate environment makes it even more difficult for foundations, endowments and pension plans to hit their return targets and advance their missions. Partnering with a firm like Disciplina with expertise across multiple asset classes may pay very good interest.

Market Update

After a difficult August, most asset classes recovered in September despite dwindling optimism about central banks' ability to prolong or stimulate economic growth. Both the Federal Reserve and the European Central Bank cut interest rates during the third quarter. Yet, headlines about the ongoing trade war between China and the U.S. and continued political drama in the U.S. and the UK loomed over the outlook for the global economy. U.S. bond yields dropped significantly during the quarter and remained negative in Europe, leaving investors to seek income and returns in other sectors. For the quarter, long term treasuries were up +7.9% while the Bloomberg Barclays Aggregate index gained +2.3% for the same period.



Recovering from August, U.S. equities rebounded in September. For the quarter, the S&P 500 rose 1.7% with utilities (+9.3%), real estate (+7.7%) and consumer staples (+6.1%) as the top performing sectors. The energy sector experienced the largest quarterly decline at -6.3%. Small cap U.S. stocks underperformed as the Russell 2000 lost -2.4% for the quarter. International equity markets finished the quarter in negative territory with developed markets outperforming emerging markets (-1.1% vs. -4.2%). Real estate continues to benefit from low yields as the MSCI REIT index gained 7.7% for the quarter. Commodities struggled this quarter, losing -1.8%, driven by weakness in oil and agriculture. Losses were partially offset by gains in gold given investor's desire for a safe haven. For the year, the Bloomberg Commodity index is up 3.3%.



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U.S. equities and real estate have gained over 20% year to date. Despite much uncertainty about global growth, all asset classes have posted positive returns for 2019.

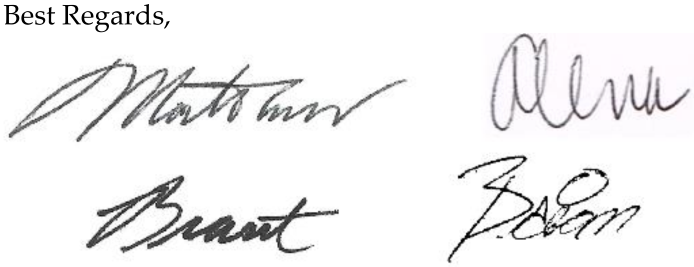
Firm Update

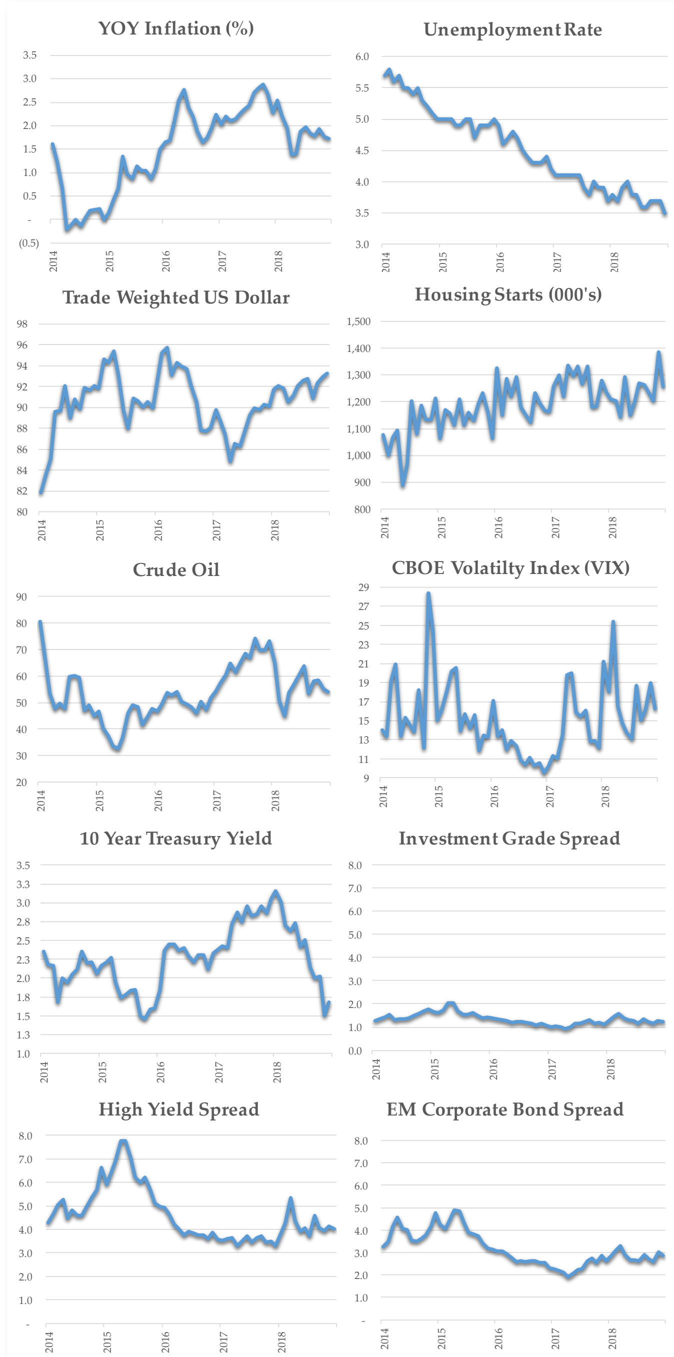
Our client portfolios posted year to date returns in the low to mid-teens based upon our broad diversification approach and their respective risk tolerance. Our cash plus strategy remains on track to post solid mid-single digit returns over the course of 2019.

Our team remains quite active on the business development front. We are very happy to announce that we added a new client based in the Washington D.C. area for a full discretion mandate. We are excited to partner with them on what we consider an amazing mission. Additionally, Matthew and Brian were featured in two separate publications: 1) the merits of non-profits using OCIO search firms to navigate the OCIO market and 2) an article discussing how Brian and Matthew met during their days on the baseball field at Seton Hall University. Links to both articles can be found here http://www.disciplina.com/press/.

Lastly, thanks to all who provided us with introductions to new institutions which should help advance our business in 2020.

Best Regards,





* Sources: BofA Merrill Lynch; US Departments of Labor, Commerce & Energy; CBOE; Federal Reserve Bank of St. Louis, Board of Governors of the Federal Reserve System