Stembrook
Asset Management

Stembrook Market Review — Third Quarter 2018

Rising interest rates in the United States continued to put downward pressure on bond returns in the third quarter of 2018. Since December 2015, the Federal Reserve has been "normalizing" short-term interest rates by raising the Federal Funds Target Rate, the interest rate at which banks lend to other banks. As interest rates rise, the value of existing bonds fall.

Over the course of the past year, short to intermediate-term yields in the U.S. Treasury Market have risen by approximately 1% (see center chart). During this period, the return on the 10 year Treasury was –3.0%.[1] Shorter-term Treasuries have outperformed longer-dated bonds, up 1.5% over the past year due to their shorter duration.[2] During this period of rising interest rates we have maintained a shorter duration within our fixed income portfolios and have also diversified away from Treasuries into high yield bonds, bank loans and corporate bonds. These positions contributed to portfolio performance over the year.

Higher interest rates tend to reward savers, while making it more expensive for individuals, companies and governments to borrow. Interest rates still remain low by historical standards and we expect the Fed to continue to raise rates as long as the economy maintains its momentum and inflation continues to grow. As events unfold, we will adjust our fixed income portfolios accordingly.

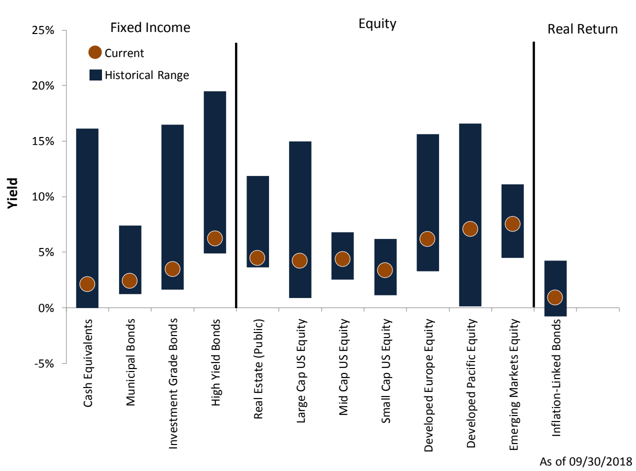
Our proprietary models forecast long-term pre-tax returns ranging from 2% to 3% for fixed income-like asset classes and 4% to 11% for equity-like asset classes (see table to the right). We continue to favor equities over fixed income for long-term investors, though fixed income and cash equivalents have become more attractive as rates have risen. Our more detailed observations and current portfolio positioning are outlined in the following comments.

Expected Market Returns and Risks
7-10 Year Horizon

	Pre-Tax Annualized Return	After-Tax Annualized Return	Volatility[1]
Inflation	2.1%	2.1%	3.1%
Cash Equivalents	1.8%	1.0%	3.5%
Municipal Bonds	2.3%	2.3%	4.4%
Inflation-Linked Bonds	2.9%	1.7%	5.6%
Investment Grade Bonds	3.2%	1.8%	6.7%
High Yield Bonds	3.1%	1.5%	13.2%
Real Estate (Public)	4.5%	2.4%	17.5%
Broad Market US Equity	8.0%	6.3%	16.9%
Developed Non-US Equity	8.6%	6.6%	21.4%
Emerging Markets Equity	10.7%	7.1%	29.6%

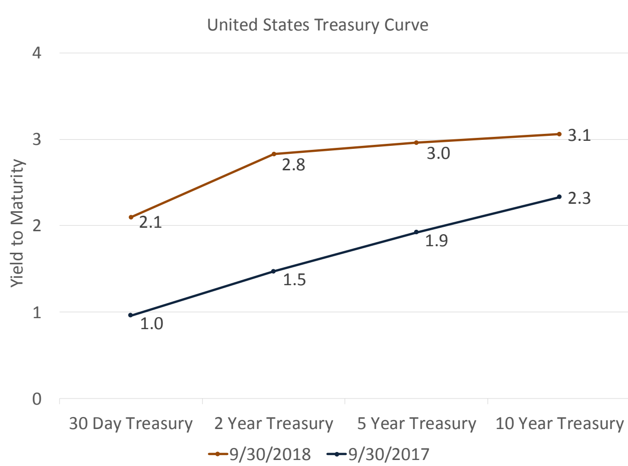
A sampling of return expectations produced by our models. Expected returns are projections and are not guaranteed.

Yields Across Asset Classes



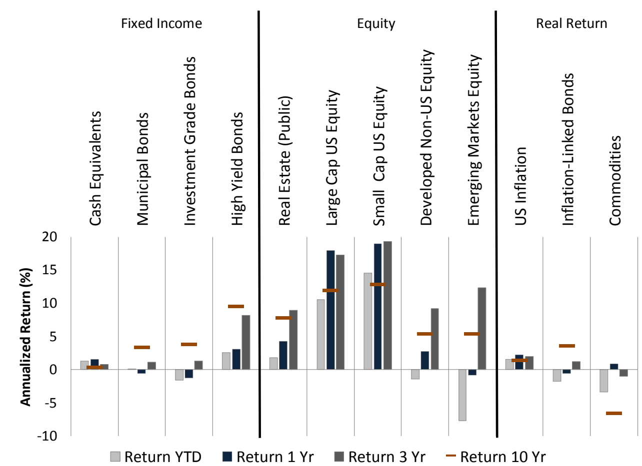
Yields are an indicator of future returns. Orange dots show current yields, blue bars show historical ranges. Yields are generally low versus their historical range.

The Yield Curve



Interest rates in the U.S. have increased over the past year. Shorter maturity yields have increased at a faster pace than longer-dated bonds, due to Fed tightening.

Historical Market Returns



Historical market returns as of September 30th, 2018. Note that looking backwards at recent returns is not a reliable method for predicting future returns.

Global Asset Class Returns

Asset Class Name	Last 10 Years	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Small Cap US Equity	Small Cap 8.6%	Inv Grd Bnd 5.2%	EM Eq 79.0%	Real Estate 28.6%	Infl-Indx Bnd 14.0%	EM Eq 18.2%	Small Cap 41.3%	Real Estate 31.8%	Real Estate 2.8%	Small Cap 26.5%	EM Eq 37.3%
Large Cap US Equity	S&P 500 7.0%	CPI 0.1%	HY Bnd 56.3%	Small Cap 26.3%	Real Estate 9.2%	Real Estate 17.6%	S&P 500 32.4%	S&P 500 13.7%	S&P 500 1.4%	HY Bnd 17.5%	Intl Eq 25.0%
High Yield Bonds	HY Bnd 6.5%	Infl-Indx Bnd -1.2%	Intl Eq 31.8%	EM Eq 19.2%	Inv Grd Bnd 7.8%	Intl Eq 17.3%	Intl Eq 22.8%	Inv Grd Bnd 6.0%	CPI 0.8%	S&P 500 12.0%	S&P 500 21.8%
Real Estate (Public)	Real Estate 6.4%	HY Bnd -26.2%	Real Estate 28.6%	Commod 16.8%	HY Bnd 4.5%	Small Cap 16.3%	HY Bnd 7.4%	Small Cap 5.8%	Inv Grd Bnd 0.5%	Commod 11.4%	Small Cap 13.2%
Investment Grade Bonds	Inv Grd Bnd 3.3%	Small Cap -31.1%	S&P 500 26.5%	HY Bnd 15.2%	CPI 3.0%	S&P 500 16.0%	Real Estate 1.9%	Infl-Indx Bnd 4.6%	Intl Eq -0.2%	EM Eq 11.3%	Real Estate 8.7%
Inflation-Linked Bonds	Infl-Indx Bnd 2.9%	Commod -35.6%	Small Cap 25.6%	S&P 500 15.1%	S&P 500 2.1%	HY Bnd 15.4%	CPI 1.5%	HY Bnd 2.5%	Infl-Indx Bnd -1.4%	Real Estate 8.6%	HY Bnd 7.5%
Developed Non-US Equity	Intl Eq 1.8%	S&P 500 -37.0%	Commod 18.9%	Intl Eq 7.8%	Small Cap 1.0%	Infl-Indx Bnd 7.2%	Inv Grd Bnd -2.0%	CPI 1.3%	Small Cap -2.0%	Infl-Indx Bnd 3.6%	Inv Grd Bnd 3.5%
Emerging Markets Equity	EM Eq 1.5%	Real Estate -39.2%	Infl-Indx Bnd 10.1%	Infl-Indx Bnd 6.5%	Intl Eq -12.1%	Inv Grd Bnd 4.2%	EM Eq -2.6%	EM Eq -1.8%	HY Bnd -4.6%	Inv Grd Bnd 2.6%	Infl-Indx Bnd 3.0%
Inflation	CPI 1.4%	Intl Eq -43.4%	Inv Grd Bnd 5.9%	Inv Grd Bnd 6.5%	Commod -13.3%	CPI 2%	Infl-Indx Bnd -9.4%	Intl Eq -4.5%	EM Eq -14.8%	CPI 1.8%	CPI 2.1%
Commodities	Commod -5.8%	EM Eq -53.2%	CPI 2.7%	CPI 1.5%	EM Eq -18.4%	Commod -1.1%	Commod -9.5%	Commod -17.0%	Commod -24.7%	Intl Eq 1.6%	Commod 0.7%

Returns are arranged in columns, by year. Each color represents a different asset class. Each year, the leaders and laggards tend to shift. Diversification across a range of asset classes can smooth returns and enhance growth.

Economic Backdrop

- Real GDP growth for the third quarter is expected to stay roughly in line with second quarter growth at 3% for developed countries.[3] Inflation for the group is expected to pick up slightly to 3.1%, in the third quarter.[4]
- After a very strong second quarter in which the U.S. economy grew by 4.2%, real GDP growth in the U.S. is expected to grow at a 3% rate, in the third quarter.[3]
- U.S. employment continues to tighten, with the unemployment rate falling to 3.7% in September, its lowest level since December 1969.[5]
- The pace of growth in the Eurozone continues to slow. GDP growth for the country group is expected to increase by 1.9% in the quarter.[3]
- After a very strong second quarter in which the Japanese economy grew by 3%, GDP growth is expected to slow to 0.7% in the third quarter.[3]
- GDP growth in the emerging markets is expected to decelerate in the third quarter as the group of countries is expected to grow at a 4.7% rate.[3] Though slower than prior quarters, this rate remains significantly higher than growth in developed markets.
- The U.S. Federal Open Market Committee continued its pace of tightening in the third quarter by raising the Federal Funds Target rate to 2.25%, a 0.25% increase. Most economists expect the rate to reach 2.50% by the FOMC's final meeting of the year in mid-December and level out at 3.00% by the middle of 2020.
- Despite the recent slowdown in growth in some regions, sentiment remains positive, as the Global Purchasing Manager's Index remains at a level of 50 or above in all developed and emerging markets surveyed.[6]

Currencies

- The dollar continued its upward trajectory, up 0.7% in the quarter, now up 3.3% year-to-date.[7]
- The upward momentum in the U.S. dollar continues to be a short-term headwind for U.S. investors owning equities abroad.

Equities

- Large cap U.S. stocks and technology stocks had the strongest returns in the quarter, up 7.7%[8] and 7.4%[9] respectively. Small cap stocks trailed larger companies, up 4.7% after a very strong second quarter.[10]
- Non-U.S. equities continued to trail U.S. equities, in the quarter. Developed non-U.S. equities were virtually unchanged in dollar terms.[11] Emerging markets equities suffered greater losses from geopolitical unrest in some regions and the growing fear of trade tensions between the U.S. and China, down -1% in U.S. dollar terms.[12]

Fixed Income

- Rising interest rates put downward pressure on fixed income returns. Longer duration, rate-sensitive bonds, such as inflation protected bonds were the most adversely impacted by the rise in rates, down -1.2% in the quarter.[13] Credit sensitive fixed income investments continued to outperform with high yield bonds up 2.4% over the period.[14]

Current Positioning

- We maintain our recent shift to marginally **underweight large cap U.S. equities.** After years of holding an overweight position in an outperforming market, valuations have risen to above average levels and our models indicate that a reduced allocation to the U.S. market is prudent, despite strong recent relative performance.
- We also maintain our recent shift to **overweight developed non-U.S. and emerging market equities**, where valuations and long-term growth potential remain attractive.
- We favor **lower priced, value-oriented equities, both in the U.S. and abroad,** which tend to outperform the broad market over time, with less volatility.
- We remain **overweight municipal bonds** for taxable investors.
- Our fixed income portfolio continues to be positioned for a normalization of central bank policy. Given our significant concerns regarding a longer-term, secular rise in interest rates and the resulting negative impact on bond prices, we continue to **hold shorter maturity bonds**, while steering away from **U.S. Treasuries.**

We continue to focus our efforts on helping you meet your financial objectives by following our disciplined investment approach. Our approach uses time-tested return and risk models, incorporating fundamental valuations and tax-efficient strategies. This investment discipline is tailored to your individual situation in our continuing effort to craft and implement your customized investment solution.

As always, we thank you for placing your trust in our investment management and advice and welcome your questions and comments at any time.

Peter D. D'Agati, CFA   Thomas Kosinski

Endnotes and Sources:

Text:

(1) Bloomberg: Bloomberg Barclays U.S. Treasury: 7-10 Year Total Return Index. 9/30/17-9/30/18.
(2) Bloomberg: Bloomberg Barclays U.S. Treasury Bills: 1-3 Months Total Return Index. 9/30/17-9/30/18.
(3) Bloomberg, Stembrook Research: GDP measures are based on the most recent annualized quarterly, seasonally-adjusted data. Statistics are stated in inflation-adjusted terms. Aggregate Statistics are weighted by each country's GDP translated into USD. Where available, official estimates are used. Where official estimates are not available, GDP data is based on Bloomberg Contributor Forecasted GDP. Emerging Markets measures are based solely on Bloomberg Contributor Forecasted GDP. As of 9/30/18.
(4) Bloomberg, Stembrook Research: Aggregate inflation statistics are weighted by each country's GDP translated in to USD. As of 9/30/18.
(5) Bureau of Labor Statistics: U3 Unemployment Rate. As of 9/30/18.
(6) Bloomberg: Markit Global Purchasing Managers Index for Manufacturing and Service. As of 9/30/18.
(7) Bloomberg: Dollar Index. 6/30/18-9/30/18.
(8) Bloomberg: S&P 500. 6/30/18-9/30/18.
(9) Bloomberg: Nasdaq. 6/30/18-9/30/18.
(10) Bloomberg: S&P 600. 6/30/18-9/30/18.
(11) Bloomberg: MSCI EAFE. 6/30/18-9/30/18.
(12) Bloomberg: MSCI Emerging Markets. 6/30/18-9/30/18.
(13) Bloomberg: S&P U.S. 10-Year TIPS Index. 6/30/18-9/30/18.
(14) Bloomberg: Bloomberg Barclays U.S. Corporate High Yield Index. 6/30/18-9/30/18.

Charts:

Expected Market Returns and Risks, 7-10 Year Horizon: As of 9/30/18.
Source: Stembrook Research.
(1) Volatility is measured in terms of Standard Deviation. Standard deviation is the statistical measurement of dispersion about an average, which depicts how widely a stock or portfolio's returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that is most likely for a given investment. When an investment has a high standard deviation, the predicted range of performance is wide, implying greater volatility. If an investment's returns follow a normal distribution, then approximately 68 percent of the time they will fall within one standard deviation of the mean return of the investment, and 95 percent of the time within two standard deviations. For example, for a portfolio with a mean annual return of 10 percent and a standard deviation of two percent, you would expect the return to be between 8 and 12 percent about 68 percent of the time, and between 6 and 14 percent about 95 percent of the time. Source: Morningstar.

Yields Across Asset Classes: As of 9/30/18.
Sources: *Cash Equivalents Yields* since March 1976. Ibbotson, Federal Reserve Bank, Thomson Reuters, *Municipal Bond Yields* since March 1988. Barclays Capital, Charles Schwab, BofA Merrill Lynch, Standard & Poor's/Investortools Municipal Bond Indices, *Investment Grade Bond Yields* since March 1976. Barclays Capital, *High Yield* since December 1984. BofA Merrill Lynch, Barclays Capital, *Real Estate (Public) Earnings Yield* since March 1976. NAREIT all Equity, *Large Cap U.S. Equity Earnings Yield* since March 1976. Standard & Poor's, BARRA, *Mid Cap U.S. Equity Earnings Yield* since June 1991. Standard & Poor's, BARRA, *Small Cap U.S. Equity Earnings Yield* since December 1993. Standard & Poor's, BARRA, *Developed Europe Equity Earnings Yield* since March 1976. MSCI Europe, Standard & Poor's Europe 350, *Developed Pacific Equity Earnings Yield* since March 1976. MSCI Pacific, S&P/Citi PMI Asia Pacific, S&P Asia 50, *Emerging Market Equity Earnings Yield* since December 1998, *Inflation-Linked Bond Real Yield to Maturity* since March 1997. Citi Yield Book, Federal Reserve Bank. Note: Yields are not perfect predictors of future returns and should not be used in isolation.

The Yield Curve As of 9/30/18.
Source: The Federal Reserve

Historical Market Returns: As of 9/30/18.
Source: Bloomberg, Stembrook Research.
Indices: Bloomberg Barclays U.S Treasury Bills 1-3 Month Total Return, Bloomberg Barclays Municipal Bond 5 Year (4-6) Total Return, Bloomberg Barclays U.S. Aggregate Bond Total Return, Bloomberg Barclays U.S. Corporate High Yield Total Return, FTSE All Equity REIT Total Return, S&P 500 Composite Total Return, S&P SmallCap 600 Total Return, MSCI EAFE Total Return, MSCI EM (Emerging Markets) Total Return, Consumer Price Index – U.S., S&P 10 Year U.S. TIPS Total Return, Bloomberg Commodity (Total Return) Index.

Global Asset Class Returns: As of 12/31/17.
Source: Thomson Reuters, Bloomberg, Stembrook Research.
Indices: Consumer Price Index – US, U.S. 30-Day Treasury Bills, Bloomberg Barclays U.S. Treasury Bills: 1-3 Month Index, Citigroup Inflation-Linked Index, S&P 10 Year US TIPS Index, Bloomberg Barclays U.S. Aggregate Bond Index, BofA Merrill Lynch U.S. High Yield Cash Pay, Bloomberg Barclays U.S. Corporate High Yield Index, Dow Jones Wilshire REIT Index, FTSE All Equity REIT Index, S&P 500 Composite Total Return, S&P SmallCap 600 Total Return, MSCI EAFE Index, MSCI EM (Emerging Markets) Index, Dow Jones AIG Commodity (Totl Ret) Index, Bloomberg Commodity Index.

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Additional information is available upon request.