Stembrook Asset Management

Stembrook Market Review — Third Quarter 2016

In the wake of Britain's decision to leave the European Union on June 23rd, global equity markets rallied 5.4% in the third quarter and global bonds finished the quarter up 0.7%.[1] Looking ahead, the upcoming U.S. presidential election and Federal Open Market Committee meetings in November and December will keep markets on edge in the fourth quarter.

As displayed in the chart in the lower center of this page, global equities would not be characterized as cheap, but are not at extreme valuations. They remain the most attractive investment in a world of low-to-negative cash and bond yields. Our proprietary models forecast pre-tax returns ranging from 0% to 3% for fixed income and 4% to 11% for equities (see table to the right). We continue to favor equity over fixed income and search for investments where prospects look most attractive. Our views are outlined in the following comments.

Economic Backdrop

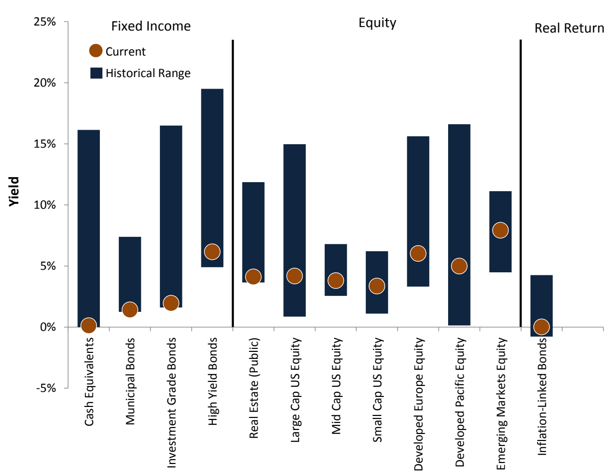
- Economic growth in G-20 countries continues to improve modestly, with the forecast for third quarter global GDP increasing to 2.7%.[2] Global inflation has fallen to 1.5% for the same group of countries.[3] Rising oil prices and extremely accommodative monetary policies around the globe will likely put upward pressure on inflation over the coming quarters.
- U.S. economic growth is expected to increase by 2.9% in the third quarter,[2] this comes after moderate GDP growth of 1.3% over the past year.[4]
- In the month of September, U.S. unemployment increased slightly to 5.0%, while the Civilian Labor Force Participation Rate increased by 1/10% to its historical average of 62.9%, both indicate that we are nearing peak employment.[5]
- Wage growth decreased by 3/10% to 3.3%, after reaching its highest level since January 2009 in June of this year.[6]
- The Eurozone continues its tepid growth, expanding at an annualized rate of 1.5%.[2]

Expected Market Returns and Risks
7-10 Year Horizon

	Pre-Tax Annualized Return	After-Tax Annualized Return	Volatility[1]
Inflation	1.5%	1.5%	3.1%
Cash Equivalents	0.3%	0.2%	3.3%
Municipal Bonds	1.3%	1.3%	4.4%
Inflation-Linked Bonds	1.5%	0.8%	4.7%
Investment Grade Bonds	1.7%	0.9%	6.7%
High Yield Bonds	2.7%	1.1%	13.7%
Real Estate (Public)	4.1%	2.1%	18.3%
Broad Market US Equity	9.1%	7.1%	17.5%
Developed Non-US Equity	8.5%	6.5%	22.4%
Emerging Markets Equity	10.5%	6.7%	30.6%

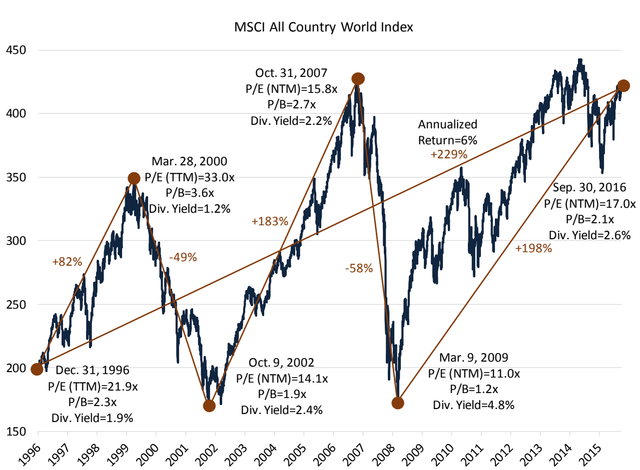
A sampling of return expectations produced by our models. Expected returns are projections and are not guaranteed.

Yields Across Asset Classes



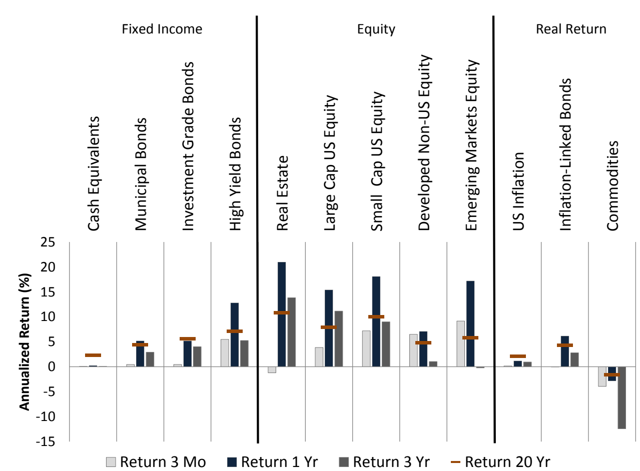
Yields are an indicator of future returns. Orange dots show current yields. Blue bars show historical ranges. Yields are generally low versus their historical range.

Total Returns and Valuations since 1996



Global equities have rebounded dramatically. As valuations remain in a normal range, long-term return prospects are attractive versus other investment options.

Historical Market Returns



Historical market returns as of September 30th, 2016. 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	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Small Cap US Equity	Small Cap 6.6%	Real Estate 36.0%	EM Eq 39.8%	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%
Large Cap US Equity	S&P 500 6.1%	EM Eq 32.6%	Commod 16.2%	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%
Real Estate (Public)	Real Estate 5.9%	Intl Eq 26.3%	Infl-Indx Bnd 11.6%	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%
High Yield Bonds	HY Bnd 5.6%	S&P 500 15.8%	Intl Eq 11.2%	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%
Investment Grade Bonds	Inv Grd Bnd 3.7%	Small Cap 15.1%	Inv Grd Bnd 7.0%	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%
Inflation-Linked Bonds	Infl-Indx Bnd 3.3%	HY Bnd 11.6%	S&P 500 5.5%	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%
Emerging Markets Equity	EM Eq 3.2%	Inv Grd Bnd 4.3%	CPI 4.1%	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%
Developed Non-US Equity	Intl Eq 2.6%	CPI 2.5%	HY Bnd 2.2%	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%
Inflation	CPI 1.6%	Commod 2.1%	Small Cap -0.3%	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%
Commodities	Commod -5.4%	Infl-Indx Bnd 0.4%	Real Estate -17.6%	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%

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.

- Japan's economy is expected to grow by 0.9%.[2] Growth is expected to remain slow, as the stimulative policies of Abenonics continue to battle the negative dynamics of an aging workforce, weak corporate governance and mounting national debt.
- Economic growth in emerging economies held steady at 4.1%,[2] despite the continued weakness in Argentina, Brazil and Russia. Relative strength in both China and India have helped to balance out emerging markets' economic growth.
- While it appears as though the United States Federal Reserve will soon begin the long awaited, complicated process of normalizing interest rates, other global central banks continue to pull out the stops to stimulate their economies. This includes the imposition of negative interest rate policies. The discount rate of the European Central Bank is -0.4% and the Bank of Japan Discount Rate is -0.1%.[7] Commitment to these polices in both regions remains strong, as measured by increased central bank assets.

Currencies

- The U.S. Dollar fell by -0.7% versus other major currencies in the third quarter and is down -3.5% year-to-date.[8]

Equities

- Stocks in the U.S. have lagged behind developed non-U.S. and emerging market equities. U.S. equities were up 4.0% in the quarter,[9] while developed non-U.S. markets climbed 6.5%, in the wake of Brexit.[10]
- Emerging markets continued to rebound, up 9.2%, in the third quarter as concerns about a slowing Chinese economy have begun to subside.[11]
- Large cap value stocks in the United States underperformed large cap growth stocks in the most recent quarter, but are still outperforming their growth peers by nearly 3% year-to-date.[12]
- Markets remained calm in the third quarter. The CBOE Volatility Index (VIX), a measure of fear versus complacency, remained below 20 during the entire period.[13]

Fixed Income

- Government yields in the U.S. increased across the maturity spectrum, with the exception of the short term, 30-day Treasury, which was down slightly.
- High yield bonds continued to rally, up 5.5% in the third quarter and 15.3% year-to-date as the headwinds of extremely low energy prices begin to fade in an index that is comprised of 14.7% energy-related issuers.[14]

Commodities

- Following a very strong start to the year, oil prices stayed nearly flat in the third quarter, oil remains up 30.2% for the year.[15]
- Gold prices also fell slightly in the third quarter, down 0.5%. But much like oil, gold prices are up 24.0% since the start of the year.[16]

Current Positioning

- We invest in **lower priced, value-oriented equities**, which tend to outperform the broad market over time and have outperformed in the first three quarters of 2016.
- We remain **overweight U.S. equities and developed non-U.S. equities.**
- We **eliminated our overweight allocation to Japanese equities**. The Japanese position added value, outperforming our core developed non-U.S. equity benchmark during the holding period. Confidence in the future outperformance of the Japanese equity market has diminished, but we continue to monitor Japan for future opportunities.
- We remain **overweight emerging market equities**, where valuations and long-term growth potential remain attractive. This investment is implemented through an actively managed, value-oriented strategy.
- We remain **overweight municipal bonds** for taxable **and** tax-deferred investors, as prospective returns relative to other fixed income sectors remain attractive.
- Given our significant concerns regarding a longer-term, secular rise in interest rates, we continue to **hold shorter maturity bonds**, while steering away from **U.S. Treasuries** and investing in **corporate bonds, high yield bonds and floating rate bonds**.
- As a hedge against inflation and a diversifier in the portfolio, we continue to hold **commodities**, after adding to our position in January.

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

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Endnotes and Sources:

Text:

(1) Bloomberg: MSCI ACWI Total Return, J.P. Morgan Global Aggregate Bond Index 6/30/16-9/30/16.
(2) 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 in to 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 9/30/16.
(3) Bloomberg, Stembrook Research: Inflation data as of 9/30/16. Aggregate statistics are weighted by each country's GDP translated in to USD.
(4) Bureau of Economic Analysis (BEA): Change in real GDP growth 6/30/15-6/30/16. Release date 9/29/16.
(5) Bureau of Labor Statistics: Total unemployed as a percentage of the civilian labor force (U3), Civilian Labor Force Participation Rate. As of 9/30/16.
(6) Bloomberg: Atlanta Federal Reserve Wage Growth Tracker, 3.3%. As of 8/31/16.
(7) Bloomberg: European Central Bank Deposit Facility Announcement Rate, Bank of Japan Policy-Rate Balance Rate. As of 9/30/16.
(8) Bloomberg: Dollar Index 6/30/16-9/30/16, 12/31/15-9/30/16.
(9) Bloomberg: The S&P Composite 1500 combines three leading indices, the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600 to cover approximately 90% of the U.S. market capitalization.
(10) Bloomberg: MSCI Europe, Australia, Far East Total Return Index.
(11) Bloomberg: MSCI Emerging Markets Total Return Index.
(12) Bloomberg: S&P 500 Value versus S&P 500 Growth. 12/31/15-9/30/16 total return 9.36% versus 6.38%, 6/30/16-9/30/16 total return 2.94% versus 4.76%.
(13) Bloomberg: CBOE Volatility Index (VIX).
(14) Bloomberg: Bank of America/Merrill Lynch U.S. High Yield Master II Index. Total returns 6/30/16-9/30/16, 12/31/15-9/30/16. Index weighting as of 10/7/16.
(15) Bloomberg: West Texas Intermediate Spot Prices 6/30/16-9/30-16, 12/31/15-9/30/16.
(16) Bloomberg: Gold Spot Price measured as U.S. Dollars per troy ounce 6/30/16-9/30/16,12/31/15-9/30/16.

Charts:

Expected Market Returns and Risks, 7-10 Year Horizon: As of 9/30/16.

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 9/30/16.

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.

Total Returns and Valuations since 1996: As of 9/30/16.

Sources: JP Morgan Asset Management, Stembrook Research. MSCI ACWI Prices and Fundamentals—Bloomberg.

For the first two observation dates, December 21, 1996 & March 28, 2000, trailing twelve month (TTM) earnings are used in the calculation of the price-to-earnings ratio (P/E), as next twelve months (NTM) earnings are not available.

Historical Market Returns:

Source: Bloomberg, Stembrook Research.

Indices: BofA Merrill Lynch 0 to 3 Month US Treasury Bill Index, Barclays Capital Munis 5-Yr Index, Barclays Capital Aggregate Bond Index, Merrill Lynch U.S. High Yield Cash Pay, FTSE All Equity REIT Total Return, S&P 500 Composite Total Return, S&P SmallCap 600 Total Return, MSCI EAFE Index, MSCI EM (Emerging Markets) Index, Consumer Price Index – US, S&P 10 Year US TIPS Total Return, Bloomberg Commodity (Total Return) Index.

Global Asset Class Returns:

Source: Bloomberg, Thomson Reuters, Stembrook Research.

Indices: Consumer Price Index – US, U.S. 30-Day Treasury Bills, Citigroup Inflation-Linked Index, S&P 10 Year US TIPS Index Barclays Capital Aggregate Bond Index, BofA Merrill Lynch U.S. High Yield Cash Pay, 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.