

Global Economic and Market Commentary

Summary

- We expect synchronization in global growth for the remainder of 2017 and into 2018.
- Central bank policy remains accommodative and measures of financial conditions have loosened. The Fed will continue to tighten through 2018 and other DM central banks will begin removing QE, albeit slowly.
- The US equity market is the most expensive developed equity market based on historic average valuation metrics.
- We believe non-US developed global equity markets have begun a multi-year period of outperformance; however, the US dollar may appreciate in the short term.
- US core fixed income is unattractive due to our forecast for Fed tightening and Fed balance sheet shrinking. We favor short duration strategies.
- To control risk in the presence of richly valued markets and major geopolitical uncertainty, we favor quality stocks.

“The four most expensive words in the English language are
“This time it’s different.”

– *Sir John Templeton*

“Fixed investment in the AEs (Advanced Economies) has been growing at near double digit rates this year. If continued, this might represent an upside risk to the pace and length of the recovery.”

– *Gavyn Davies*

Global markets continued their march higher during the third quarter, with all major asset classes delivering gains. Emerging market (EM) equities led all markets, returning 7.89% for the quarter and 27.78% through September 30. Contrary to the first half of 2017, commodities posted gains and provided an additional tailwind to the already auspicious backdrop for EM equities (see Exhibit 1). Through the first three quarters of 2017, global growth has been synchronized and has exceeded post-Global Financial Crisis (GFC) trend growth rates. Coupled with a decline in the US dollar, upside growth surprises in Europe, Japan and China have led to outperformance by non-US developed and EM equities. The S&P 500 returned 4.5% for the quarter and 14.2% year to date, but lags the ACWI ex-US which stands at 21.1% through September 30.

Macro fundamentals have outweighed geopolitical events

Equity markets have been relatively indifferent to geopolitical events, particularly tensions with North Korea, and have focused instead on the positive macroeconomic data and earnings growth. Inflation pressures remain subdued

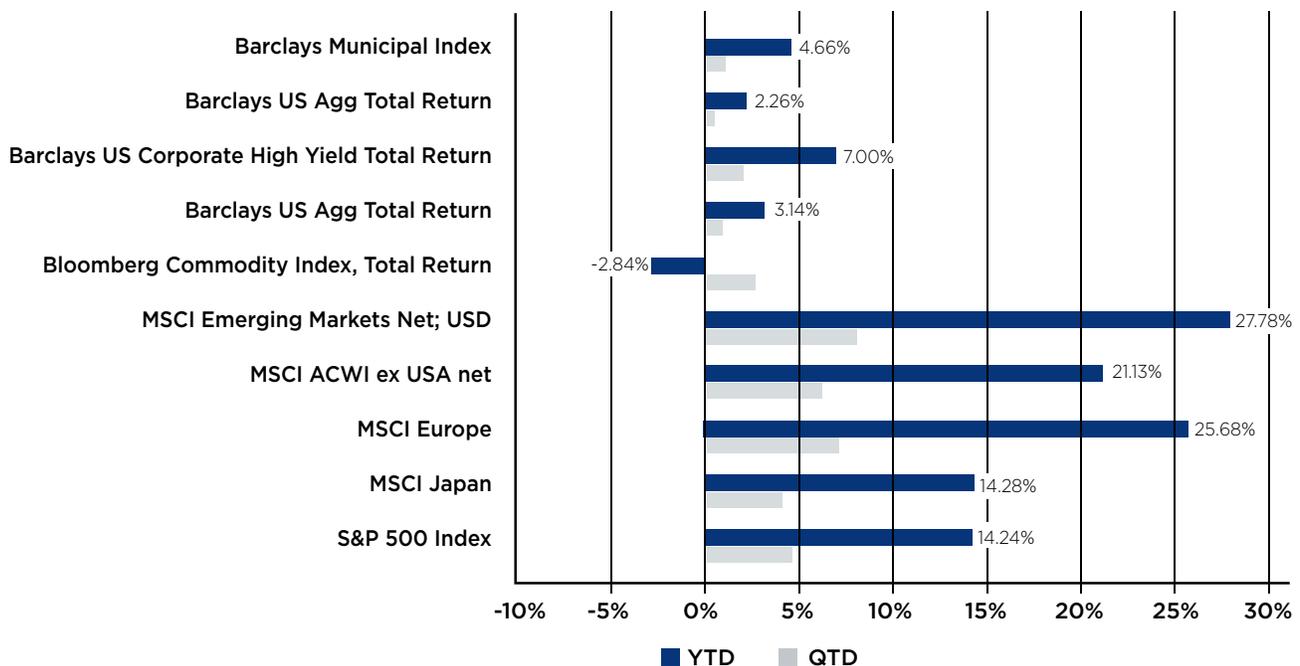
despite the pickup in growth and tighter labor conditions. Continued benign inflation will delay the need to remove the central bank “punch bowl;” however, we believe inflationary pressures may reemerge in the US in 2018. Recent language from FOMC members indicates that they also lean in this direction. Higher rates could impact profitability and improve the competitiveness of fixed income, so that asset allocation shifts away from equities. Outside of the US, we are less certain about the direction of inflation and believe central bankers will act conservatively, prolonging the constructive environment for non-US equities.

In fixed income markets, returns were modestly positive in the third quarter, and the Barclays US Aggregate Index has now appreciated 3.1% year-to-date. Over the quarter, US Treasuries were essentially flat as the Federal Reserve outlined plans to wind down its balance sheet over the next decade. Spreads on US high yield corporate bonds tightened further in the quarter as bankruptcy rates remain low and investors continue to search for yield. The Barclays US Corporate High Yield Index has returned 7.0% year to date. We see little room for further spread tightening and have maintained our conservative positioning in US corporate credit.

We are conservatively positioned to control risk

The trend of the low volatility melt-up across risk assets cannot last indefinitely, but global economic indicators point to continued growth with moderate inflation into 2018. Equity valuations are expensive, though not extreme, and the shadow of the great recession still looms large enough to tether markets to reasonable expectations. We remain invested in equities with increased vigilance, understanding that volatility can emerge from a variety of sources.

EXHIBIT 1: GLOBAL CAPITAL MARKET RETURNS YTD AND QTD THROUGH SEPTEMBER 30, 2017



Source: Bloomberg, live.barclays.com

Outlook for the US Economy and Equity Markets

The US economy continued to register positive growth in Q3. Despite the hurricanes, the rate of expansion in Q3 should be about 2.2% based on estimates using economic activity data. This is lower than the 3.1% growth rate in Q2 which followed the traditional weakness in Q1 where real GDP grew by only 1.4%. For 2017 as a whole, we anticipate that real GDP will grow by about 2.8% since there should be a rebound in demand and economic activity following the hurricanes. In 2018, we expect the US economy to continue to revert to its trajectory of an average growth rate of approximately 2%, underwhelming, but slightly above the potential GDP growth rate and consistent with the growth rate attained during most of the post GFC recovery.

In contrast to previous years, business spending, as well as consumer demand, have contributed substantially to US growth in the first two quarters.

The former is being supported by stabilizing industrial production associated with the recovery of energy prices and accelerating global growth.

Currently, improved international competitiveness associated with a weaker

dollar is stimulating exports and improving labor market conditions which support consumer demand. Still, the rate of US expansion is no longer substantially ahead of that of other advanced countries, which are at earlier stages of economic recovery. As the US output gap has diminished and the economy begins to settle at roughly the potential GDP growth rate, the cyclical recovery has firmed in the euro area, which should match the US growth rate in 2017 and 2018. The gap between the US and Japanese growth rates should narrow to less than one percentage point during 2017, which is well below the historic average.¹

The ongoing US expansion has not resulted in inflationary pressures, even though there is diminished labor market slack. At 2.9%, nominal wage rate gains have been less subdued than price increases, although recent readings for wage rate futures indicate some acceleration above this rate. The increase in the personal consumption expenditure (PCE) deflator and the core CPI remained below the Fed's 2% target, but there has been a significant increase in the headline CPI inflation in August and September on a year-over-year basis.² This is partly explained by higher gasoline prices since core CPI has remained roughly constant. There was a significant decline in the breakeven inflation rate, i.e., the difference between nominal and TIPS yields, in the first half of the year, but this was reversed in the third quarter.

The absence of the usual inverse relationship between the inflation and unemployment rates has put the Fed in a difficult position. Because of an abnormally depressed inflation rate when the economy is near full employment, the real federal funds rate is at -55 basis points. This is slightly below the Laubach-Williams (LW) estimate of the real equilibrium rate of interest, i.e., the real rate of interest that supports the economy and full employment maximum output while keeping inflation constant. However, the trailing four-quarter inflation rate, using the PCE deflator, is substantially below the Fed's 2% target. To better understand FOMC policymaking, the nominal Federal funds target is 9-59 basis points above that prescribed by the two modified Taylor rules with the GDP output gap measured either directly or through the unemployment rate. These Taylor rule variants are currently employed by the FOMC as a metric to evaluate and analyze monetary policy and as a normative guide to appropriate policy rate changes.³

Business spending in the US is on the rise

¹ Barclays Global Outlook: Too early to play defense. September 28, 2017. p. 12

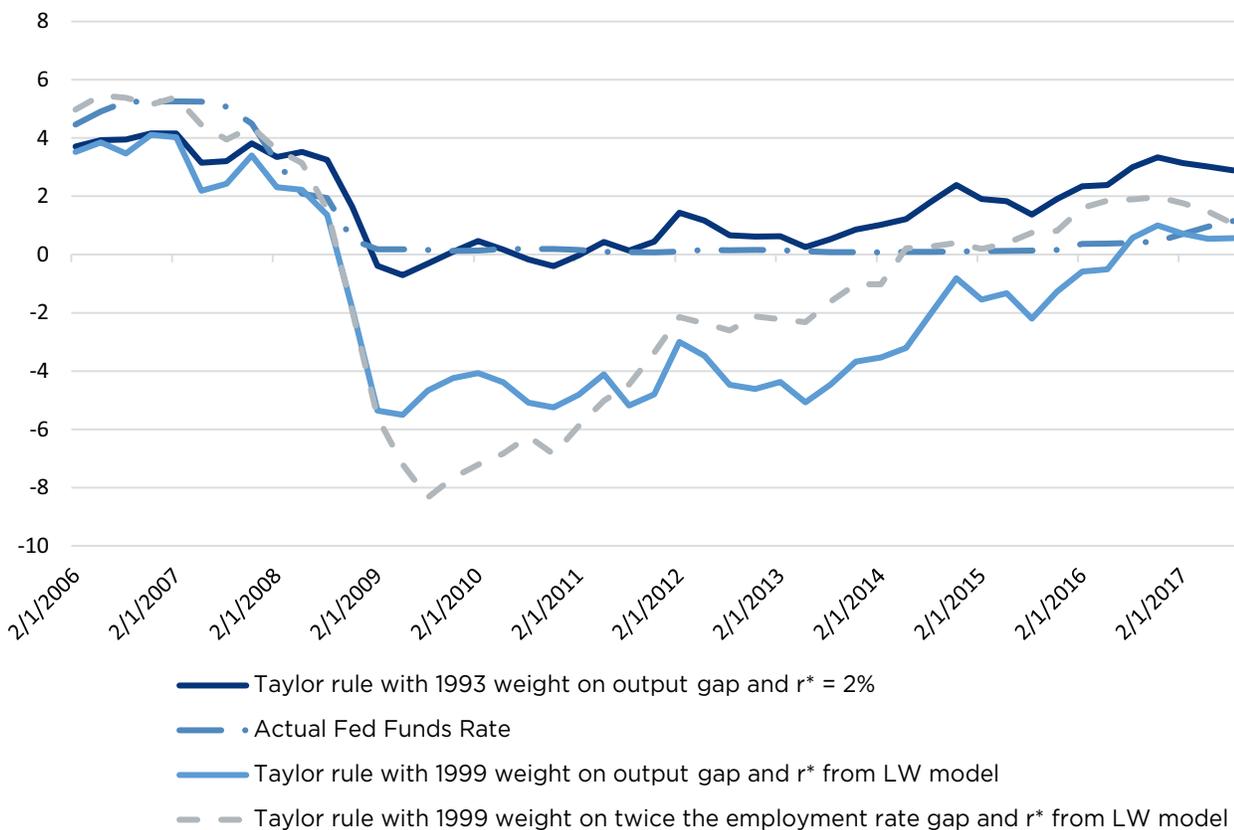
² Bureau of Labor Statistics

³ P. Asso, G. Kahman, and R. Lesson. "The Taylor Rate and the Practice of Banking." Federal Reserve Bank of Kansas City, Feb 2010.

The modified rules are based on the LW continuous estimates of the real equilibrium rate of interest, rather than the 2% real equilibrium rate assumed by Taylor in his original 1993 article. In Exhibit 2 we compare the policy rates prescribed by the original and modified Taylor rules with the actual Fed Funds rates.

To obtain a benchmark policy rate, the three Taylor rules adjust the equilibrium nominal interest rate by 1.5 times the inflation rate plus the percentage output gap or half of it in the case of the original 1993 rule. The Taylor rules are guides to how much the policy rate should temporarily deviate from the nominal equilibrium rate to allow a combination of the Fed’s inflation and output targets to be met within a reasonable period of time. For example, to achieve the 2% inflation target when output is very near full capacity and the inflation rate is between 1.3% and 1.70%, the nominal policy rate, according to the three Taylor rules, needs to fall below the nominal equilibrium rate temporarily since the present inflation rate is about 30-65 basis points below its target using the PCE deflator and core CPI.⁴

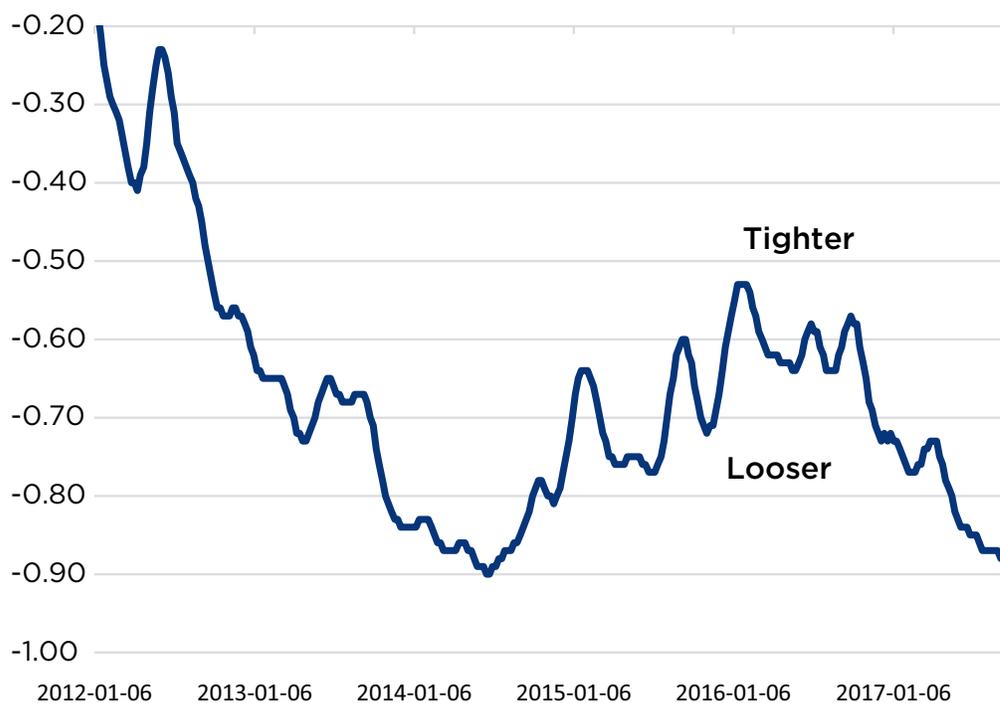
EXHIBIT 2: 1993 TAYLOR RULE POLICY RATE, MODIFIED TAYLOR RULE POLICY RATES AND ACTUAL FED FUNDS RATE FEBRUARY 2006-SEPTEMBER 2017



⁴ The latest releases for the core PCE deflator and Core CPI were 1.3% and 1.70% respectively.

Yet, as shown in Exhibit 3, the overall impact of the financial sector on the US economy, as reflected in the National Financial Conditions Index, NFCI, is already highly expansionary and becoming increasingly so. Thus the modified Taylor rule prescriptions, which call for greater easing through a lower Fed funds target, do not correct this situation and even exacerbate it. A steadily depreciating dollar, an increasingly extended stock market and further reductions in already tight credit spreads have already more than offset this year's Fed funds increases, as shown by the decline in the NFCI. The NFCI is at a level that risks generating dangerous asset bubbles and sets the stage for destabilizing inflation increases. Despite long term dis-inflationary trends associated with globalization and technology, a rise in inflation in the medium term is inevitable, given labor market tightness, as well as ultra-easy financial conditions. The increase in hourly wage gains appearing in the September employment report was substantial. The difference between wage and labor productivity growth is approximately what one would expect inflation to be and this is about 2% now, the Fed's target.

EXHIBIT 3: CHICAGO FED NATIONAL FINANCIAL CONDITIONS INDEX JAN 2012- SEPT. 2017



Source: Federal Reserve Bank of Chicago

Even if inflation were to rise only to its target rate, the appropriate Federal funds rate under the modified Taylor rules would increase by 90 basis points to a level 30-70 basis points above the present Fed funds target. In addition, the Federal Reserve Bank of Richmond provides compelling evidence that the LW estimate of the real equilibrium rate understates its true value. Since this is the intercept in the modified Taylor rule equation, the downward bias in the real equilibrium rate estimate has important implications with respect to the prescribed policy rate. Substituting the real equilibrium policy rate proposed by Lubik and Mattes of the Richmond Fed for the LW estimate would raise the appropriate policy rate under the modified Taylor rules by at least 50 basis points⁵. For these reasons, the FOMC could justify 80-120 basis points of preemptive rate increases, 30-70 basis points for assuming that the inflation rate is at its target level and 50 basis points for the upward

⁵ "A comparison of Two Alternative Approaches." Federal Reserve Bank of Richmond, 2015.

adjustment in the equilibrium rate. We expect the hikes to total 100 basis points over the next 15 months, with one 25 basis point increase to take place in December and the three others to take place next year in line with what the median FOMC member expects but significantly more than market expectations. These hikes would partly reverse the easing of the NFCI.

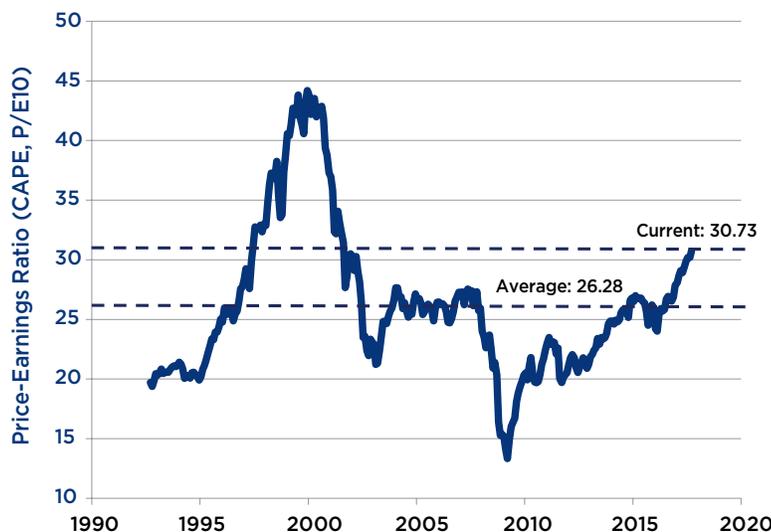
We believe that the hikes in the Fed Funds rate will be more important with respect to the effectiveness of monetary policy than the anticipated change in the Fed's balance sheet. The announced Fed balance sheet runoff will cause a decline in excess reserves totaling \$1.8 trillion over three years which may lead to a significant deterioration in the overall banking system's liquidity coverage ratio. At the same time, banks' stepped up purchases of Treasuries will absorb much of the Fed's runoff, preventing an abrupt increase in term premia because of a sudden increase in net supply. We also expect some easing of capital regulations, such as a decline in the supplemental leverage ratio, SLR, which should free up leveraged balance sheets.⁶ For these reasons, the gradual balance sheet normalization and the decline in excess reserves now scheduled by the Fed to start in October are not likely to pose an imminent threat to liquidity expansion and should result in annual increases in long term rates of less than 20 basis points per year through 2021.

We remain vigilant about the path of inflation

Despite positive economic prospects and strong corporate earnings performance, many investors believe that a significant correction or even a bear market is imminent. First, there is concern that the market advance has been excessive. The S&P 500 was up over 4% in the third quarter and has achieved eight straight quarters of gains, having gone 19 months since the last correction of 10%. This is extremely rare, occurring only five times since the S&P Dow Jones data began in 1928. The forward P/E ratio is 17.9 significantly above the long-term historic average of 15, according to Morgan Stanley. The spread between the cyclically adjusted P/E (CAPE) ratio at 31 and its historic average of around 16.8 is much greater. However, over the last 25 years, the average CAPE is 26 as opposed to 16.8 and the most recent CAPE exceeds it by only .75 standard deviations (see Exhibit 4).

Despite Fed tightening, financial conditions have eased

EXHIBIT 4: SHILLER CAPE SEPTEMBER 1992 - SEPTEMBER 2017



Source: Robert Shiller

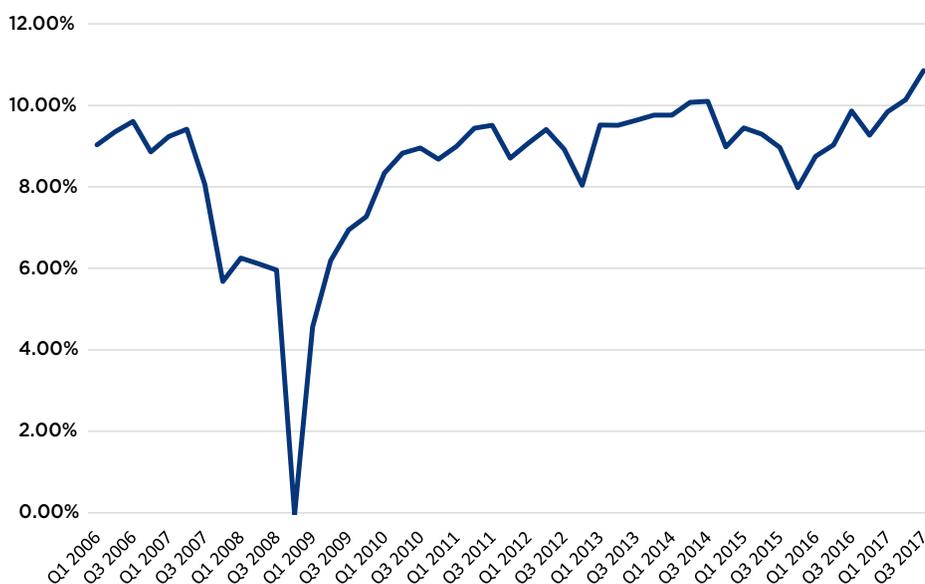
⁶ Barclays "The Great unwind for banks and rates markets." October 2, 2017

Skeptical investors reason that with stocks priced to perfection based on a time series longer than 25 years, any unexpected event such as surprise weakness during earnings season can trigger a major market selloff. For example, such earnings or guidance disappointments despite low inflation might raise concerns about the viability of an economic expansion which is already long in the tooth. This is likely to “lead to a jump in volatility that may be compounded by political events that in turn will spark waves of selling.”⁷ We view such a market overreaction or other similar sequences of events as a low probability occurrence in Q4. This is true for three reasons: one, investors are skeptical by many but not all measures; two, standard valuation measures adjusted for inflation and interest rates often do not show excessive pricing and even show below normal pricing in some cases; and three, US economic growth continues to be led by consumers, which represents 69% of GDP. Significant strengthening of labor market conditions should persist in supporting consumption growth. Moreover, as Grantham has demonstrated, traditional “comfort factors” are now propping up stock market P/Es, at near historic highs. These factors include low inflation, high profit margins, stable economic growth and easy money. Market crashes rarely occur unless there has been a significant deterioration in one of these factors, which is unlikely to happen soon.⁸

A market overreaction seems unlikely due to “comfort factors”

It is argued that the S&P 500 should exceed 3000 in 2018 provided the rate of earnings growth is sustained. However, we believe that as the year progresses, equity prices will be increasingly determined by the outlook for 2019 earnings. It will become increasingly clear that rising interest rates and labor costs will reduce profit margins in 2019, and thus reverse the trend that has driven much of earnings growth that began toward the end of 2016.

EXHIBIT 5: S&P 500 OPERATING MARGIN 2006-THIRD QUARTER 2017 (PERCENT, QUARTERLY)



Source: Standard and Poor's

⁷ Goldman Sachs: US Weekly Kickstart September 6, 2017

⁸ Jeremy Grantham GMO Quarterly Letter Q2 2017.

As discussed in the outlook for the prior quarter, we anticipate that the only feasible corporate tax cut will involve a statutory rate which declines to 28%, not the 20% as Trump is proposing, and a fall in the effective corporate tax rate to 22% from its current level of 26%. To encourage domestic plant and equipment investment and make the corporate tax cut more deficit neutral, there will likely be a minimum tax on foreign earnings, a reduced tax on future repatriated earnings and a once and for all tax on past unrepatriated earnings.

In Exhibit 6, we show values for the S&P 500 earnings at the end of 2017 and 2018 in the base case where no reduction of the effective corporate tax rate occurs. In making adjustments to these values we consider two scenarios: one where a moderate corporate tax drop occurs in 2018 and one where it does not. We assume that investors in 2017 believe that the probability that such a tax cut will occur in 2018 is 40%.

EXHIBIT 6: PROJECTED S&P 500 INDEX EARNINGS AND VALUES UNDER DIFFERENT FISCAL SCENARIOS

	Effective Tax Reduction	No Tax Reduction
Base 2018 Adjusted Earnings	\$136	\$136
Base 2019 Adjusted Earnings	\$143	\$143
Earnings Gain from Tax Reduction-2018	\$7.35	
Earnings from Tax Reduction-2019	\$7.88	
Probability Weighted Additional Expected Earnings-2018	\$2.97	\$2.97
Probability Weighted Additional Expected Earnings-2019	\$7.88	\$0.00
Forward P/E End of 2017	17.6x	17.6x
Forward P/E End of 2018	17.1x	17.1x
Expected S&P 500 Value end of 2017	2446	2446
Expected S&P 500 Value end of 2018	2580	2446

“Effective Tax Reduction” assumes a 40% probability of a corporate tax reduction occurring in 2017 and 100% probability in 2018. “No Tax Reduction” assumes a 40% probability of a corporate tax reduction occurring in 2017 and 0% probability in 2018. Source: DMCA and Goldman Sachs for estimates of P/E multiples.

Our base case value for the S&P 500 is driven by 2018 and 2019 estimated earnings per share of \$136 and \$143, without a corporate tax cut, and declines in the forward earnings multiple to 17.6 and 17.1 in these two years as a result of higher interest rates as well as late cycle contraction. We expect that if a corporate tax cut is approved in 2018 and is made retroactive to the beginning of the year, it will be the moderate one described above and will result in an increase of adjusted S&P 500 earnings of 5.4% in 2018 and 2019 from the base case estimates. Our assumption of a 40% chance of a corporate tax cut occurring results in an expected end of year 2017 S&P value of 2445. With the certainty of no corporate tax reform, there is no estimated S&P appreciation next year and the Index remains at 2445 at the end of 2018. With the moderate tax cut certain, the Index rises to 2580 at the end of 2018.

**We have muted expectations
for US stock market returns
over the next 18 months**

We project annualized, 15 month total returns for the S&P 500 in the two scenarios which are (0.03%) with no tax cut and 4.01% with the moderate tax cut (see Exhibit 7). The expected total return with a 40% probability of a tax cut occurring and a 60% probability of it not occurring is 1.60%. This expected return is only nineteen basis points above the yield to maturity of a 15 month Treasury note at the end of the second quarter and indicates a very low equity risk premium. The current implied volatility of the stock market is about half its historic average of 20%. But even if the historic standard deviation for the equity market is reduced by 50%, the average investor is likely to demand at least 1.7% to 2.4% risk premium for holding equities rather than Treasury notes over a 15 month period based on long term historical estimates of the risk return tradeoff.⁹ These required risk premium estimates are based on coefficients estimated by Lundblad from 1836 to 2003. Thus under certain assumptions, the risk-adjusted return for an equity market portfolio is much lower than that of a Treasury note portfolio of comparable maturity.

With regard to the longer 10 year holding period, we have estimated that the risk premium is 60 basis points below the 10 year median for the implied risk premium for the S&P 500¹⁰ and 40 basis points below the historical risk premium calculated by Morgan Stanley.¹¹ Given an estimated equity duration of 18.3, this 60/40 basis point difference in risk premium would indicate the S&P 500 at the end of Q3 was about 11% to 7% above fair value for a long-term equity investor.¹² These results indicate that either the return on the S&P 500 over the next 10 years will be lower than normal or that returns on this Index will return to normal once a 7 to 11% correction occurs.

EXHIBIT 7: EXPECTED S&P 500 INDEX 15 MONTH FORWARD RETURN

	Effective Tax Reduction	No Tax Reduction
End Of 3Q2017 Value	2519	2519
15-Month Cumulative Dividend Payment	\$68	\$65
Estimated End Of 2018 Value	2580	2446
Estimated 15-Month Total Return, Annualized	4.01%	(0.03)%
Probability Of Scenario	40%	60%
Probability-Weighted 15-Month Return, Annualized	1.60%	

Source: DMCA

⁹ Christian Lundblad "The Risk Return Tradeoff in the Long Run: 1836-2003" Journal of Financial Economics 2007.

¹⁰ <http://pages.stern.nyu.edu/~adamodar/>

¹¹ <http://pages.stern.nyu.edu/~adamodar/>

¹² The equity duration estimate is obtained by multiplying 14.2 by the sum of .72 and .55. See tables II and VI of J. Broughton and B. Lobo. "Equity duration of value and growth indices." SSM.com 2015.

Thus far in 2017, growth stocks have outperformed value stocks by a large margin, 10 percentage points. Although the relative performance of value has improved recently, as reflation trades come more into vogue, we do not expect value to outperform growth broadly in Q4 as the recent rally in oil is unlikely to persist. We do not expect strong outperformance by value stocks in 2018. Instead, similar performance between the two style categories is more likely. Admittedly, value stocks do well in rising interest rate environments. To some degree at least, this tailwind will be offset by an anticipated margin compression in 2019 which favors high sales growth stocks. Also, US GDP growth is unlikely to be high enough to favor cyclical stocks which have a high weight in the value index.

To reduce overall equity risk, we favor stocks of high quality companies that are insulated from internet price competition and have strong balance sheets and consistent earnings growth.

Europe and the UK

During the third quarter of 2017, the MSCI Europe ex-UK Index appreciated 6.9% and the MSCI UK Index appreciated 5.2%. Year-to-date, the indices have appreciated 25.7% and 15.7%, respectively. Better than expected economic growth and Euro strength contributed to Eurozone equity performance.

While economic expansion continues in Europe, political uncertainty remains a distraction for the growth outlook. After encouraging elections in several countries, especially France, in the first half of the year, the current ruling coalition government in Germany was thrown into some discord after a stronger than expected result by the Alternative for Germany Party which dealt a blow to Angela Merkel's control of the government. While the far-right party only managed to secure 12.5% of the parliamentary seats, there is a risk that they could have an outsize influence on German politics over the coming years, similar to the Tea Party in the United States after the 2012 elections. Additionally, at the end of September, Catalonians held a referendum for independence from the Spanish Government in spite of a strong effort by the government to suppress the election.

Multiple compression
is less likely in Europe

As we discussed last quarter, UK Prime Minister Theresa May's disastrous snap election result in June will hurt the UK's negotiating position with the EU. The country has avoided a recession thus far, but uncertainty surrounding Brexit negotiations will weigh on growth for several more quarters.

Despite the aforementioned political noise, the underlying fundamentals in continental Europe indicate the economic expansion should endure. Manufacturing and service PMI surveys continue to be expansionary, unemployment has improved in Spain and Italy, and the ECB remains accommodative. While Euro strength may hurt exporters, it also should suppress inflation enabling a cautious and methodical exit from QE. Profit margins in Europe have expanded from low levels, but likely have more room due to the slack in labor markets outside of Germany. Forward P/E estimates for the European Monetary Union ranged from 14.4x to 15x at the end of September.¹³ While these ratios are attractive compared to US markets, earnings growth will likely be slower than that of the US. The higher equity risk premium earned in European equities and lower probability

¹³ Yardeni, Ed, Abbott, Joe, Quintan, Mali; "Global Index Briefing: MSCI Forward P/Es," www.yardeni.com October 4, 2017; accessed 10/4/2017. JP Morgan Asset Management. JP Morgan Guide to the Markets; p. 41.

of margin or multiple compression support our current preference to be overweight in the region. However, we are aware the valuation gap is closing and European equities would likely underperform in a risk off scenario in both local and US dollar terms.

Japan

During the second quarter of 2017, Japanese equities, as measured by the MSCI Japan (net) Index appreciated 4.0%, and underperformed the MSCI EAFE (net) index by 140bps. For the year-to-date period, Japanese equities returned 14.3% compared to the 20% of the MSCI EAFE (net) Index.

For much of the year, the Japanese Yen has remained relatively stable against the dollar at around 112 JPY/USD. In our last letter, we mentioned that our base case was for continued stable inflation in Japan and a modest increase in the US, which would lead to a depreciation of the Yen. While inflation in Japan has remained stable as predicted, inflation in the United States continues to come in lower than our expectations. We still expect price levels to rise more quickly in the US than in Japan in the future, the timing remains uncertain.

Data released in August indicated that Japanese GDP had expanded 0.6% in the second quarter compared to 0.4% in the first quarter, the highest in the country since the first quarter of 2015. Encouragingly, personal consumption increased by 0.8% in the quarter, which was higher than expectations.¹⁴ We believe that the tight labor market in Japan should continue to drive consumption growth and GDP expansion in the coming quarters. However, while the unemployment rate in the country is at 2.8%, wage growth has not shown any meaningful increase over the last several quarters.¹⁵ Absent an increase in wage growth, it will be difficult for consumption growth to continue at the pace seen so far this year.

Our outlook for
Japanese equities
remains positive

The Nikkei Japan Manufacturing Purchasing Managers Index (PMI) as of September 30 was 52.6 compared to 52.4 at the end of the second quarter and 52.4 at the start of the year.¹⁶ A reading above 50 indicates expansion. The steady level of the PMI data indicate that the Japanese economy may continue a slow and steady expansion for several more quarters.

During September, the Bank of Japan (BoJ) made no changes to monetary policy, and continues to employ a combination of quantitative easing, yield curve control, and negative interest rates. The BoJ maintained its 0% target on the 10-year yield and a -0.1% target rate on excess reserves held at the bank.¹⁷ The central bank's position reflects its view that current policy is enough to push the inflation rate towards the 2% target from the current level of 0.7%. On October 22, Japan held a snap election in which the citizens reaffirmed Abe's mandate and provided the ruling coalition with a two-thirds supermajority. This consolidation of power will allow the government to pursue continued economic stimulus and opens the door to review the country's constitution.

¹⁴ Kyodo, AFP-JIJI. Japan Times. September 8, 2017. "Japan's quarterly GDP revised down to 0.6% growth in 2Q, but analysts see strong continued expansion."

¹⁵ JP Morgan 4Q Guide to the Markets; p. 47.

¹⁶ JP Morgan 4Q Guide to the Markets; p. 42.

¹⁷ Reuters; "BOJ Keeps Policy Steady, Newcomer to Board Dissents;" www.cnbc.com September 20, 2017; Accessed 10/4/2017

As Abenomics evolves, our managers continue to find attractive investment opportunities in the region. The forward P/E of the MSCI Japan Index was 14.3x at the end of the quarter¹⁸ allowing for multiple expansion. We believe that earnings growth will continue in Japan, and we anticipate positive returns in the absence of multiple expansion.

While our outlook for Japanese equities remains positive, we are monitoring several risks to our thesis. First, while inflation has remained positive and the labor market appears tight, the absence of significant growth in real wages may keep downward pressure on inflation levels. Over the last several years, central banks across the world have been ineffective in raising the general price level and it is far from certain Japan will succeed. Additionally, geopolitical risks in the region have increased over the last few months.

China and other Emerging Markets

Emerging markets (EMs) have continued to grow faster than developed markets and have produced higher returns this year, but we are still concerned about the sector's growth outlook. EM gross domestic product growth is around 4.5% year on year compared to developed markets at 2.25%, holding at its best level since the first quarter of 2015. However, we do not believe that the EM growth rate can be maintained, at a time when China is likely to slow.

The decline in exports to China, related to its commodity supply shortages and its high housing sector growth, is unlikely to be offset by higher DM import growth. The texture of growth in the DMs has been less EM friendly than the overall DM growth rate would suggest. The improvement in DM manufacturing and investment demand has lagged behind that in labor markets, housing and retail.

We do not believe the recent outperformance in EM will continue

There is little evidence that EMs, excluding China, can achieve enough domestic demand growth to sustain their economic activity. There needs to be an increase in credit and investment since EM growth thus far has been driven by trade with China. Up to now, the credit impulse and increases in capacity utilization, capital goods imports and investment do not show that such an acceleration is occurring. For example, the EM investment cycle has historically been very strongly correlated with the global trade cycle. In the latest upturn, however, few countries have seen an improvement in investment even as exports have rebounded. EM credit is not expanding at a higher rate nor is capacity utilization falling.¹⁹

Following its strong, above expectation growth in both Q1 and Q2, softer data over the summer and a slightly weaker GDP growth rate in Q3 suggest that China's growth has peaked. Increases in short-term interest rates and regulatory tightening since earlier this year have started to slow credit expansion, which has propelled a sharp rebound in activity since mid-2015. As the credit impulse reverses, broader activity indicators are likely to soften in the coming quarters, likely led by some cooling in the property sector. In addition, the government's more forceful action to address overcapacity and pollution is weighing on mining and some heavy industries. We expect the economy's growth rate to decline from 6.8% in 2017 to 6.2% in 2018. The decline could be even

¹⁸ Yardeni, Ed, Abbott, Joe, Quintan, Mali; "Global Index Briefing: MSCI Forward P/Es;" www.yardeni.com October 4, 2017; accessed 10/4/2017

¹⁹ UBS EM Economic Perspective: "EMs by the Numbers, the EM Goldilocks Moment: Can it Extend?" pp. 3-7, September 2017.

greater if the Chinese October National Party Congress decides on deeper reform efforts and reduced focus on achieving high headline growth rates. This involves commitment to maintain high official growth rates which will also ultimately increase inflationary pressures and make its financial fragility even more apparent.²⁰

While China is likely to experience a slowdown, the probability of a full blown financial crisis has diminished. One of the concerns has been the massive increase in debt, especially corporate and government debt. With inflation increasing (helping to inflate away earlier debt) and credit growth slowing, the debt to GDP ratio for the nonfinancial sector is stabilizing.²¹

The anticipated decline in Chinese growth and import demand is material with respect to non-China EMs. Not only does China represent a large share of these countries exports, particularly those involving industrial commodities, it accounts for 29% of the MSCI EM Equity Index. A large percentage of the appreciation in this Index year to date has been attributable to the appreciation in the Chinese market (see Exhibit 8).

EXHIBIT 8: CUMULATIVE RETURN OF THE MSCI CHINA (NET) INDEX AND THE MSCI EM (NET) INDEX (JANUARY 2009 - SEPTEMBER 2017)



Source: Drexel Morgan Capital Advisers, Zephyr

²⁰ Barclays Global Outlook: "Too Early to Play Defense," September 28, 2017.

²¹ Gabriel Wildau, "Beijing Efforts and Inflation Push Down Debt Load," Financial Times, September 29, 2017.

Other factors that may put downward pressure on the EM earnings and stock price outlook are higher US interest rates and a stronger dollar. As already indicated, our base case scenario calls for the Fed balance sheet to run off in an orderly manner, with only a gradual rise in bond yields resulting from it. As long term dollar-denominated rates rise, emerging market equities could see declines in the present value of future cash flows. More importantly EM equity prices could be depressed because dollar denominated external debt has become more expensive to service. This creates a balance of payments constraint on growth which will reduce capital inflows into EM economies.

We believe that the US dollar has reached a major bottom and will stage a multi-month rally. For one thing, the People's Bank of China is taking steps to allow the dollar to appreciate vs. the yuan. For another, the euro's recent rally has faded thanks to Angela Merkel's underperformance in the German elections. A stronger dollar vis-à-vis emerging market currencies will cause commodity exports to be more expensive for consumers in the US and China. This will have a depressing effect on EM economies dependent on commodity exports, especially those in Latin America. EMs with extensive dollar denominated, external debt will also be adversely affected.

It is argued that EM equities will be supported by low valuations in relation to the expected weakness in fundamentals. However, low valuation is an illusion. Admittedly, the average trailing price-earnings ratio for the MSCI EM index is still approximately 16, compared with 21.7 for the S&P 500 index. However this is largely because the EM equity index is dominated by state owned enterprises with low earnings multiples. Private sector companies, which are which are closely associated with middle class growth story trade at P/Es above 20. 10

year bond yields are substantially higher in the EM economies. Thus, even though the cyclically adjusted EM earnings yield is 7.3% against 3.9% for the US, it is not as enticingly high as it appears. The equity risk premium, earnings less real bond yields at 3.5% is only 20bps above that for the US and 1.9% below that for Europe according to Morgan Stanley data.²² The implied equity risk premia for Europe, Japan and the US are as close to the median level as that for the EMs based on observations for the last 20 years. This suggests that mean reversion of the equity risk premia will be limited and will not affect relative risk premia for EM or DM equities. Since fundamental deterioration is more likely in EMs over the next 15 months than it is in the DMs, EMs are overvalued relative to DMs, if anything.

Additionally, technology stocks have a higher weighting in the EM index than they do in the overall DM index. Thus, if the EM index were to have the same technology weighting as the DM Index, its relative P/E ratio would be lower. However, the EM Index has a much higher weighting in mining and materials and other sectors which tend to have lower P/Es. When a full sector weight adjustment is made, the P/E discount of EM equities in relation to DM equities falls from 20% to 13%. If we make sector weights comparable in each regional category, the risk premium of EM equities is probably even lower than the risk premia of EAFE and US equities stated above. Given that the volatility of EM equities for the last 10 years has been 52% higher than US equi-

EM equities are
less undervalued
than they appear

²² Morgan Stanley Research Cross Asset Strategy: Global in the Flow: Cross Asset Valuation. October 2, 2017.

ties and 24.6% higher than that of EAFE equities, the risk-adjusted excess return of EM equities appears to be substantially lower than that of DM equities.²³

For this reason and because earnings growth rates are likely to diminish starting in Q1 2018, average valuations are hardly compelling. We remain underweight EMs, and we do not believe that recent outperformance will continue beyond 4Q 2017. We expect value to recover versus growth. Our EM managers tend to underweight information technology, and this strategy should be rewarded since IT earnings growth is expected to decline in 2018 by at least 75%.²⁴ EM Indices are dominated by tech companies with greater political risk than US technology companies. Other new economy companies represent an opportunity for longer term growth. These tend to be in the accommodation, transportation and retail sectors.

Fixed Income

Tepid inflation data have confounded economists amidst an environment of low unemployment, above trend growth and surging equity markets. Technological changes as well as baby boomer demographics likely have had an impact on the slope of the Phillips curve and inflation measurements, but as we have discussed, inflation will likely show some signs of life in 2018. A 4.2% unemployment rate and mounting anecdotal evidence indicate that the labor market is very tight. Also, nonresidential fixed investment has turned up following a disappointing 2015-2016. If a fiscal stimulus package eventually materializes, this may be enough to ignite inflationary pressures. Against this backdrop, the Fed adopted a more hawkish stance in 2017 by staying ahead of an uptick in the inflation rate and avoiding a catch up scenario. We believe the Fed will raise the overnight rate in December and three times in 2018 coinciding with a moderate uptick in inflation to 2-2.25%. This will accomplish two things. First, the Fed will have more ammunition to ease in the event of a downturn. Second, moderately higher short term rates should mitigate inflationary pressures keeping long maturity yields low and investor risk taking high.

We also believe the runoff in the Fed's balance sheet will have a limited effect on longer dated maturities in the near term due to global demand for relatively attractive US Treasury yields. One potential risk to higher US yields is related to central bank policy and yield curves in Europe.

The ECB will begin slowing asset purchases in 2018 and will likely increase the overnight funding rate which remains below zero. Transparency during this process is critical to avoid a European "taper tantrum" which will also affect US Treasury yields. Through 2018, we expect further flattening of the yield curve, with short term rates rising more than long term rates.

**We expect a flattening
of the yield curve**

²³ MSCI EM Index trailing 10 year standard deviation: 23.15%. MSCI EAFE trailing 10 year standard deviation: 18.58%. Trailing 10 year standard deviation of S&P 500: 15.15%

²⁴ UBS, op. cit., page 29.

As seen in Exhibit 9, our estimate of the present equilibrium ten-year Treasury yield has increased to 2.78% from our June estimate of 2.57%. Based on our model, which uses the geometric mean forward Fed Funds rates, the ten-year zero coupon yield is expected to rise to 2.95% in 12 months against a current rate of 2.45%. On balance, risks are weighted towards higher yields, and we maintain our positioning in shorter dated, higher yielding fixed income strategies.

EXHIBIT 9: ESTIMATED EQUILIBRIUM YIELD FOR FIVE AND 10 YEAR TREASURIES GIVEN LIKELY HIKES IN THE POLICY RATE

	Now	End of 2017 Assuming 25 bp incr in last quarter of 2017	End of 2018 Assuming 75 bp incr in 2018	End of 2019 Assuming 75 bp incr in 2019	End of 2020 Assuming 0 bp in 2020	End of 2027 Assuming 0 bp in 2027	End of 2028 Assuming 0 bp in 2028
DMCA Estimated Nominal Fed Funds Rate*	1.06%	1.31%	2.06%	2.81%	2.81%	3.31%	3.31%
Subtract Projected Inflation	1.84%	1.85%	1.95%	1.95%	1.95%	1.95%	1.95%
Real Fed Funds Rate	-0.78%	-0.54%	0.11%	0.86%	0.86%	1.36%	1.36%
Average Short-Term Rate		1.19%	1.69%	2.44%	2.81%	3.31%	3.31%
Yields Constructed Using Product of Nominal Fed Fund Rates for Each Year	5yrs	2.51%					
	10 yrs	2.78%					
	10y 1y fwd	2.95%					
	5y 1y fwd	2.73%					
10 year Treasury Strip (Actual yield, Bloomberg):		2.45%					

Data as of June 30, 2017. Source: Bloomberg, Federal Reserve Bank of St. Louis

* Fed Funds rate shown is the average of the day before and day after.

Municipal bonds returned 1.06% for the quarter despite a -0.51% return in September. The Bloomberg Barclays Municipal Index has returned 4.66% year to date through September 30. The unveiling of the Republican tax reform proposal led to higher US Treasury yields, but the Muni/Treasury ratio was largely unchanged on the news. According to the current proposal, the municipal tax exemption will not be affected and demand should not materially change based on the proposed tax brackets. We are very skeptical about many items in the current proposal and foresee numerous iterations prior to its approval. We believe most of these changes will benefit municipal bonds, including the additional of a fourth tax bracket for high earners.

Spread Product

Through September 30, the Bloomberg Barclays High Yield Index has returned 7.0% and the Investment Grade Index has returned 5.19%.²⁵ US corporate credit markets (with the exception of single B or lower quality issues) are fairly valued and the backdrop is constructive for credit. The ECB is still expanding its balance sheet and demand from yield seeking investors has not waned. Looking forward, we foresee the majority of returns coming from coupon carry. Material spread tightening or widening is unlikely through year end. We prefer allocations to BB and BBB rated bonds vs. riskier credits and floating rate loans. At current spreads, the additional yield in CCC rated credits does not compensate us enough for default risk and the higher correlation to equity indices.

Emerging market bonds performed well in the third quarter with the JP Morgan Emerging Market Bond Global Diversified Index (EMBI) returning 2.63% for the quarter and 8.99% through September 30.²⁶ Similar to high yield corporates, a low volatility environment benefits EM bonds. Additionally, EM currencies appreciated vis à vis the US dollar. Sustained to slightly declining EM growth estimates and lower inflation have led to an improved fundamental outlook overall, but country selection will be important in coming quarters. Geopolitical tensions, normalization of G-3 central bank policy and commodity price volatility give us caution at current spread levels. Our global bond managers have kept their allocation to EMs static but retain the ability to rotate into DM bonds and currencies or other EMs.

Conclusion

Virtually all risky assets have had a strong performance thus far in 2017. There is no doubt that there are fundamental underpinnings for this advance. Monetary policy has continued to be very accommodative and inflation and interest rates have remained low. Earnings growth rates in most economies are substantially higher than they were in 2016. Synchronized growth across countries has been increasing. The United States is pretty much at full employment with firms expressing growing difficulty in finding skilled labor. Europe and Japan are growing significantly above potential and unemployment is moving down rapidly in Europe and remains at very low levels in Japan. For these reasons, global GDP is growing at a substantially higher rate (3.6%) than that of the last year (3.2%) and global trade is growing at an even higher rate, according to IMF and World Trade Organization estimates. A majority of investors have a strong conviction about the sustainability of recent strong growth and earnings data.

Despite the strong economic backdrop, some investors are worried that risky assets are highly momentum driven, subject to the whims of overly exuberant market participants and more vulnerable to a major decline than normal. These worries may be excessive. To begin with, there is the concern that the US economic recovery is already eight years old and thus has a high probability of ending. However, expansions do not die of old age. There is substantial evidence that the probability of a recession in the subsequent year changes very little with the age of the recovery.²⁷ One reason expansions die is because sharp central bank tightening follows excessive

²⁵ Bloomberg.

²⁶ Bloomberg.

²⁷ Rudebusch, Glen. "Will the Economic Recovery Die of Old Age." Federal Reserve Bank of San Francisco, Economic Letter, February 4, 2016.

credit expansion or excessive inflationary pressures. None of these seem to be present now. There is the concern that there will be a global monetary tightening because US quantitative easing is being reversed. The Fed believes that it can allow a balance sheet runoff because the US economy is already at or close to full employment and the need for monetary accommodation has diminished. This is not the case in the rest of the world. Thus global QE will still continue at least for a while. The ECB will still be purchasing throughout 2018, albeit at a slower pace and the BoJ shows no sign of reducing its pace of purchasing.

Near-term catalysts or systemic risks that might bring the combination of synchronized growth and monetary ease to a rapid end have been a major source of concern in the past couple of years. The first of these potential catalysts centered around the risk of deflation in certain advanced countries. As growth has picked up in Japan and Europe, deflation fears have eased. The second catalyst was the high probability of a financial crisis in China. This stemmed from its debt to GDP ratio rising by more than 30% in the last five years and reaching a level above that that has precipitated financial crises in other countries.

Higher export growth, a stronger yuan, reduced excess capacity and financial sector reforms have reduced the probability of a Chinese financial crisis by stabilizing the debt to GDP ratio and stemming capital flight. The third potential catalyst involved the risk of a European breakup, which has diminished substantially as a result of the French elections. The fourth involved the possibility of a loan default by the US, resulting from a debt ceiling crisis. This seems to have dissipated.

The expansion in world equity markets has been driven by earnings expansion and not by higher corporate earnings multiples. In the US, P/E ratios have remained roughly constant, albeit at elevated levels. They have actually fallen in non-US advanced markets. The high forward earnings multiples presently observed have occurred in the past when inflation was as low as it is at present. A forward projection of the total return on stocks indicates that US equities are moderately overvalued, although equities in general are more attractive than other risky asset classes. For example, the difference between the equity risk premium and the high-yield bond risk premium is well above its historic average, indicating equities are cheaper than high-yield credit instruments.

The current expansion shows few signs of abating

EXHIBIT 10: TRAILING 12 MONTH PRICE TO EARNINGS RATIOS BY REGION USING ACWI SECTOR WEIGHTINGS

	US	Europe ex-UK	Japan	Emerging Markets
PE (TTM) using ACWI sector weights	21.7	21.3	14.6	18.1

Source: Bloomberg, MSCI

Based on conventional metrics, there is not a strong case that US equities are more expensive than EAFE or EM equities. There is little difference in implied risk premium or P/E ratios with equal sector weights across the US, EAFE and EM markets (see Exhibit 10). While the unadjusted forward P/E for Europe is roughly at its 25 year mean, the unadjusted forward P/E for the US is only half a standard deviation above its 25 year mean. The unadjusted P/E for the US is 19% higher than Europe but this can be justified by the fact that the projected

2018 growth rate is 24% higher than that of Europe.²⁸ However, there is greater probability of multiple compression in the US in 2018 than in Europe, Japan and the EMs due to higher interest rates. A profit margin decrease in the US is more likely to occur earlier than in other advanced countries or the EMs due to US wages accelerating at a higher rate than elsewhere. For these reasons, other advanced economy equities are more attractive than US equities, although the case for EMs is less compelling. In Exhibit 12 on the following page, we show our proposed asset allocation by asset type and region.

EXHIBIT 11: GLOBAL EARNINGS AND VALUATIONS

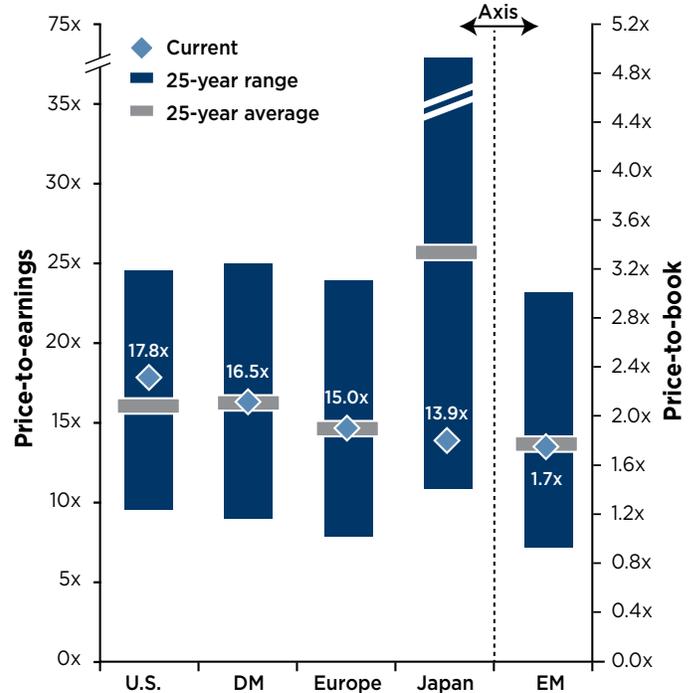
Global Earnings

EPS, U.S. Dollar, NTMA, Jan 2009 = 100



Global Valuations

Current and 25-year historical valuations



Source: FactSet, MSCI, Thomson Reuters, Standard & Poor's, JP Morgan Asset Management.

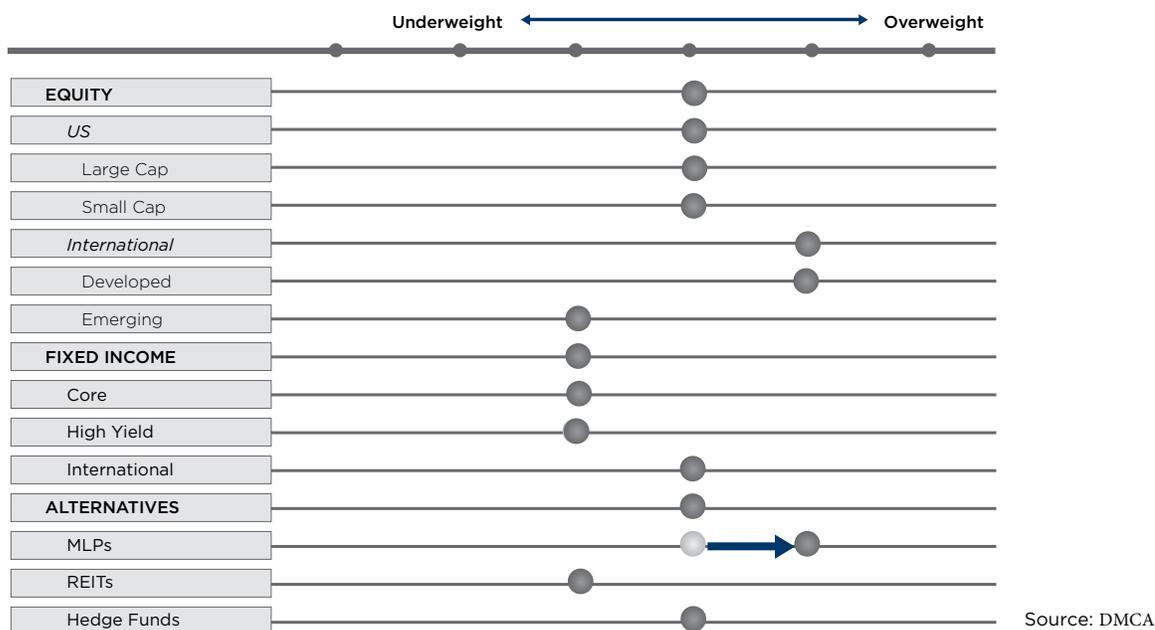
* Valuations refer to NTMA P/E for Europe, US, Japan and Developed Markets and P/B for emerging markets. Valuation and earnings charts use MSCI indices for all regions/countries, except for the US, which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe includes the Eurozone as well as countries not in the currency bloc, such as the UK, Switzerland, Sweden and Norway (which collectively make up 46% of the overall index).

Guide to the Markets – US Data are as of September 30, 2017.

J.P.Morgan
Asset Management

²⁸ A 28% difference refers to US earnings growth projected at 10.6% calculated from data from Exhibit 6 assuming \$7.35 is added to the base 2019 earnings assumption of \$143. European data from "Performance Derby: MSCI Regions/Countries Earnings & Revenues Growth 2018E/ 2017E/ 2016A." Yardeni, Ed., Abbott, Joe. 2017.

EXHIBIT 12: DMCA ASSET CLASS VIEWS AS OF SEPTEMBER 30, 2017



Some of the left tail risks to our outlook are as follows:

- Geopolitical risks have increased since our last quarterly report. The world is full of strong leaders, with the belligerent US president and the unpredictable North Korean dictator being the most obvious examples. While Kim Jong-un may be all bark and no bite, it is difficult to determine what a trapped North Korean leader might do. Thus far, market pricing is suggestive of its assuming that the probability of a major conflagration is negligible because of its unimaginable cost. Escalation involving military options or widening sanctions beyond North Korea, to for example China, would result in lower EM asset prices, especially in Asia and even a broad market selloff.
- The Fed’s efforts to reverse quantitative easing, QE, may be much more disruptive than we have anticipated.
- The equilibrium or neutral rate of interest, which we expect to be stable, may be increasing worldwide, “Meaning that monetary policy has to move more in order to stand still,” according to Mark Carney, Governor of the Bank of England.²⁹
- The credit cycle may already be at a stage where a major deceleration in the US expansion will occur soon. Currently, the mood of the credit market is bullish, i.e., credit spreads are atypically tight and the share of high-yield bond issuance is elevated. Under these circumstances, historical evidence indicates that the US economy may endure an abrupt tightening of credit and a seizing up of growth.³⁰
- A Chinese debt crisis occurs which will have a pronounced negative effect on EM economies. This would put downward pressure on developed market equities as well as EM equities.
- There is an American-led trade war. This would have a negative effect on global growth and commodity prices. Export led economies such as Taiwan, Korea and Germany would be the most affected.

²⁹ The 2017 Michael Camdessus Central Banking Lecture, IMF 2017.

³⁰ L. Lopez Salido, J. Stein, and E. Zakrajsek. “Credit Market in a Financial and Economic Meltdown: Sentiment and the Business Cycle.” Quarterly Journal of Economics Advanced Edition, May 2, 2017.

IMPORTANT INFORMATION

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