

# Q1 2016 Outlook & Review

A QUARTERLY MARKET PERSPECTIVE FROM QMA'S ASSET ALLOCATION GROUP

## KEY POINTS

### Economic Outlook

Global growth has been sluggish and slowing for the past several years and it's unlikely to improve much in 2016.

The boom in emerging markets and commodities of the previous decade led to excesses and a painful hangover that is still a stiff headwind for growth in these countries.

The picture in the developed markets is brighter, but not hugely. The United States looks to be the strongest economy in the developed world, followed by the United Kingdom. Eurozone growth is still improving and Japan is growing again after flirting with recession.

Commodity price weakness is likely to be with us for some time but certain commodities such as oil appear to have overshot their equilibrium prices to the downside. Oil is likely to experience a wild ride in 2016.

Inflation trends are unlikely to force the Fed's hand as modest growth and ample slack should keep price pressures at bay. We think the Fed is likely to proceed at a measured pace and hike just twice in 2016.

We expect the trade-weighted US dollar to rise again in 2016. Ultra low rates globally and broken emerging market growth models mean the dollar's safe haven appeal has never been greater.

The advanced economies have made minimal progress in reducing the debt overhang since the financial crisis with total debt to GDP holding at record levels or even rising. Meanwhile the debt situation in the major emerging market economies has worsened in recent years.

### Investment Outlook

We approach investment strategy cautiously at the turn of the year. We are neutral on stocks relative to bonds and overweight real estate and cash relative to commodities.

We expect another unrewarding year in US stocks with increased volatility, mainly due to earnings challenges. But we do not expect a bear market.

We expect better returns in select markets overseas and would focus on Japan and Europe. We continue to underweight emerging markets equities.

Within US stocks, we favor large over small caps and we are agnostic on style (growth vs. value). We favor technology, financials, and health care and underweight and dislike telecom and utilities.

The bar to outperform government bonds is not high with the 10-year Treasury yield at 2.3%.<sup>1</sup> With Treasury yields so low, it will not take a big back up in yields to produce negative returns. Still, we believe these securities provide valuable diversification and tail risk hedging characteristics.

We see opportunities in fixed income risk assets given the widening in spreads. Non-commodity related high yield bonds are our favorite pick here. We are less enthused about emerging market debt as Fed hikes and poor growth prospects are likely to curtail investment appetite here. Within the emerging market debt space, we would focus on hard currency sovereign debt.

We believe MLPs will provide an entry point in 2016 that should provide robust long-term returns, but it's not time to bite just yet. Preferred stocks are still one of our favorite areas on a risk adjusted return basis.

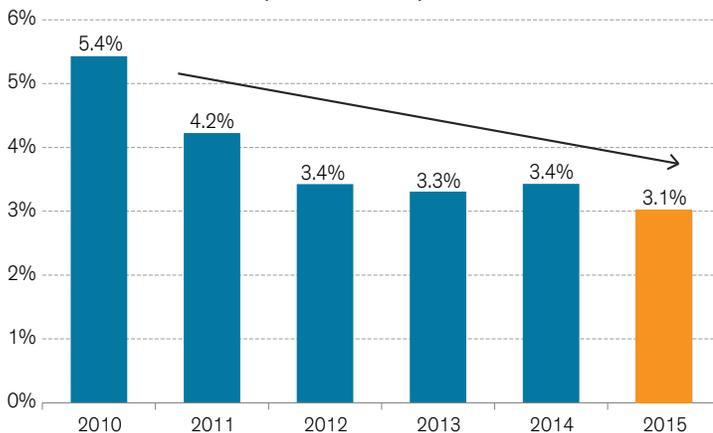
<sup>1</sup> As of 12/31/2015. Source: Bloomberg.

## Global Economic Environment: The New Mediocre Continues

For the past four years we have seen a sluggish rate of global growth that has trailed its long term average (Chart 1). In 2015, the rate of global growth is estimated to have been 3.0%, according to the Bloomberg consensus, trailing its 30-year average of approximately 3.5%. Reinhart and Rogoff warned that periods following financial crisis experience unusually tepid recoveries and it takes an average of about seven years to shake off the hangover of balance sheet repair. With financial markets having begun their recovery in 2009 and the global economy bouncing back in 2010, this should put us in the later part of that adjustment phase. So is 2016 finally the year that we achieve a much more robust global expansion? We don't think so and will explain why.

### 1 / GLOBAL GROWTH: STUCK IN A RUT

#### World Real GDP Growth (2010 – 2015)



As of 12/31/2015.

Source: QMA, International Monetary Fund (2010 - 2014), Bloomberg (2015 estimate).

It's important to note just how strong global growth was in the period before the financial crisis. During the 2003–2007 period the global economy expanded by a torrid pace of 5.1%, the fastest 5-year period in the International Monetary Funds' (IMF) 35-year data set. This was driven mainly by 7.6% growth in the emerging world over the same period.

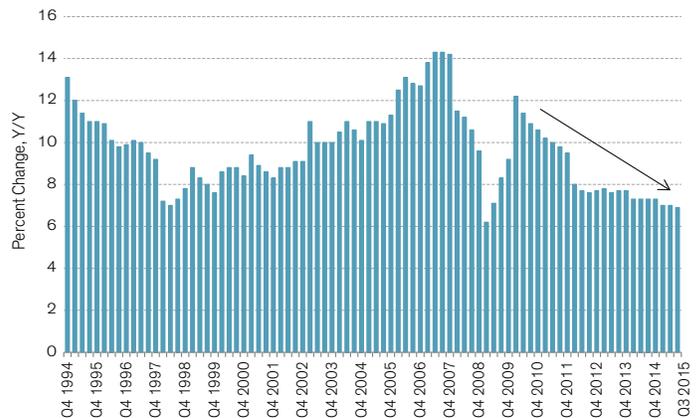
Why did emerging markets grow so rapidly in the 2000s and what is plaguing them now? The confluence of factors that caused emerging market growth to surge included political and economic reforms of the previous decade that bore fruit and China's 2001 entry into the World Trade Organization (WTO). China's rapid integration into the global economy and into the supply chains of multinational corporations turbo-charged Chinese growth and led to a decade long commodity bull market which had self reinforcing effects. What should have been regarded as a temporary golden age boom was mistaken for a multi-decade secular trend by investors. Strong growth in emerging markets juxtaposed against weak growth in the developed world led to a capital inflow bonanza which added further fuel to the fire.

The virtuous cycle turned vicious a few years back and the painful hangover began. China is in the midst of a long soft slowdown that should continue in 2016 (Chart 2). The commodity boom has gone

burst in a spectacular way. The reforms that set many of these countries on the emerging path in the first place lost momentum during the boom times. Periods following a capital inflow bonanza typically are times of economic fragility historically and the capital outflows have indeed begun. The new normal for emerging markets could look somewhat like the old normal as emerging market growth averaged just 3.5% in the 1980s and 1990s.

### 2 / THE GREAT STALL OF CHINA?

#### China Real GDP Growth (1995 – 2015)



As of 9/30/2015.

Source: QMA, Thomson Reuters Datastream.

Data: China Real GDP Growth ex. Hong Kong and Macau. Quarterly data, Y/Y percent changes.

The picture in developed markets is somewhat brighter, but not hugely. The United States economy looks to be the strongest among the major developed economies. The consumer sector looks solid with employment in a steady uptrend and wage growth likely to strengthen on the margin as the labor market tightens. Housing is still running below levels implied by demographics so improvement there can be expected as well. The UK should also remain one of the better performing economies but the threat of *Brexit* (British exit) is a cloud of uncertainty for 2016.

While the Eurozone still faces deep structural problems stemming from its internal balances, the shorter-term growth picture improved in 2015 and was notably stronger than 2014. Decent growth seems likely to continue given the encouraging trend in leading indicators and purchasing manager's indexes. Japan's economy seems to be bouncing back from recession type conditions in the middle of the year. Acute demographic problems (among other issues) in both Japan and Europe mean we need to have very modest expectations for longer range growth.

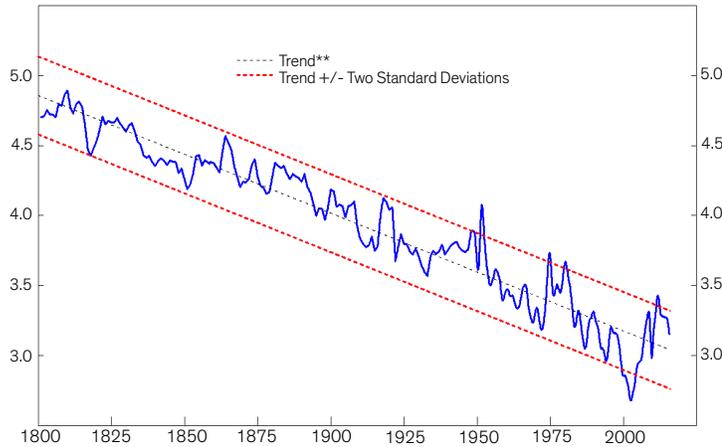
In general, the majority of countries have made minimal progress in reducing the debt overhang since the financial crisis with debt to GDP holding at record levels or even rising. In the United States, household and financial sector debt have declined notably, but government debt and more recently non-financial corporate sector debt has been rising. Overall, the US debt ratio appears to have stabilized for now at a high level. Meanwhile, the debt situation in all major emerging market economies has worsened in recent years.

**EMERGING MARKETS AND COMMODITIES: CONJOINED TWINS?**

Chart 3 shows that real commodity prices tend to decline over long periods of time due to technological progress and productivity gains. Some individual commodities have fared better, including oil, gold, and copper which have at least held their real value over time. Also, as is apparent on the chart, there can be decade long countertrend rallies. Sometimes investors can mistake these counter trend moves for a change in the long-term trend.

**3 / INNOVATION DRIVES FALL IN LONG-TERM REAL COMMODITY PRICES**

Real\* Raw Industrials Prices (In USD Terms) (1800 – 2015)



As of 9/30/2015.  
 \*Adjusted by US GDP Deflator; shown as a natural logarithm.  
 \*\*Time trend from 1800 to 2000.  
 Source: BCA Research.

A 20-year downdraft in commodity prices began around 1980 and concluded around 2000. This steady decline demoralized producers and provided little incentive for new investment. This led to a period of very lean capacity at a time when a positive demand shock was about to commence. China's entry into the WTO unleashed rapid and resource intensive growth in a country that was increasing its share of global GDP at a speed that was heretofore unprecedented.

But all good things eventually come to an end. China's export and capital spending led growth model finally hit diminishing returns and the long soft slowdown began. Not only has the rate of growth slowed dramatically, but also the composition of growth has changed in a manner that is less resource intensive as the country seeks to shift its growth engine towards consumption.

While commodity price weakness is likely to be with us for some time, certain commodities like oil appear to have overshot their equilibrium values by a substantial amount to the downside (see Chart 4). With OPEC having abandoned its role as swing producer, the US shale producer appears to be the marginal player. Most experts that we talk to estimate the average breakeven price for these producers to be \$55 per barrel, so that should be the medium term equilibrium price, unless technology brings those breakevens lower. But any number of things could bring prices above or below their equilibrium.

**4 / THE LONG VIEW ON OIL**

Real Oil Prices (In Today's \$) (1966 – 2015)



As of 12/31/2015.  
 Source: QMA, FactSet, Thomson Reuters Datastream.

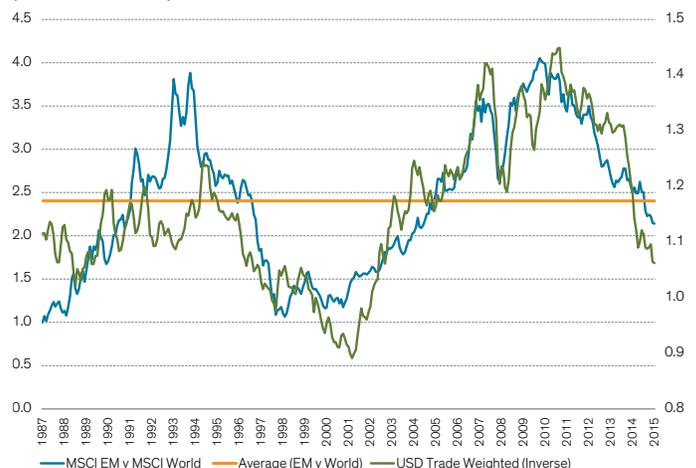
We don't know anyone who is consistently good at forecasting oil prices. But our best educated guess is that oil will experience a wild ride over the next twelve months. The general trend should be up with a potential wide range around its rough equilibrium value of \$55. However, we cannot rule out a scenario where oil experiences a cathartic capitulation toward \$20 in the early part of the year. The bear scenario could be brought about by Iran producing more than anticipated or storage capacity filling up, forcing oil to be priced on the basis of its short term supply demand dynamics.

**US DOLLAR: ADDING INSULT TO INJURY**

A host of fundamental factors are weighing on emerging markets and commodities as we have already described. Will a rising dollar add insult to injury? Chart 5 shows that bear markets in emerging markets relative performance go hand and hand with US dollar bull markets. Commodity prices and the US dollar exhibit a similar relationship.

**5 / USD STRENGTH AND EMERGING MARKETS UNDERPERFORMANCE**

Relative Performance: MSCI EM (USD) vs. MSCI World (USD) (1988 – 2015)



As of 12/31/2015.  
 Source: QMA, FactSet.

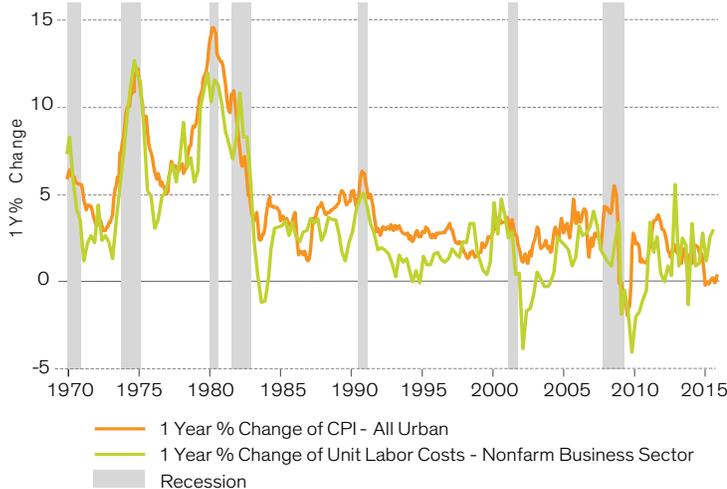
We believe the US dollar should rise again in 2016. It is reasonable to argue that the USD is overvalued relative to the Euro and Yen and that divergences in monetary policies should already be priced in. But fundamental values in currencies can remain imbalanced for years and momentum often carries the day. In a world of ultra low rates globally and broken emerging markets growth models, the safe haven appeal of the dollar has never been greater. The path of least resistance for emerging market currencies is clearly down in our view.

**INFLATION AND FED: FADE THE DOTS**

Inflation trends are likely to remain benign and are unlikely to force the Fed into an aggressive tightening cycle. First, the observed rate of inflation is still low with Core CPI and the Core PCE deflator running at a year-over-year rate of 2.0% and 1.3% through the end of November. Headline CPI is even lower at 0.5% due to the impact of falling energy prices.

All true inflation problems begin in the labor market as shown by the long term close correlation between inflation and unit labor costs (see Chart 6). But waiting for wage growth in the current cycle has felt a bit like *Waiting for Godot*.<sup>2</sup> We saw a hint of acceleration in the November payroll data, but would need to see more follow through before we would consider it a change in trend.

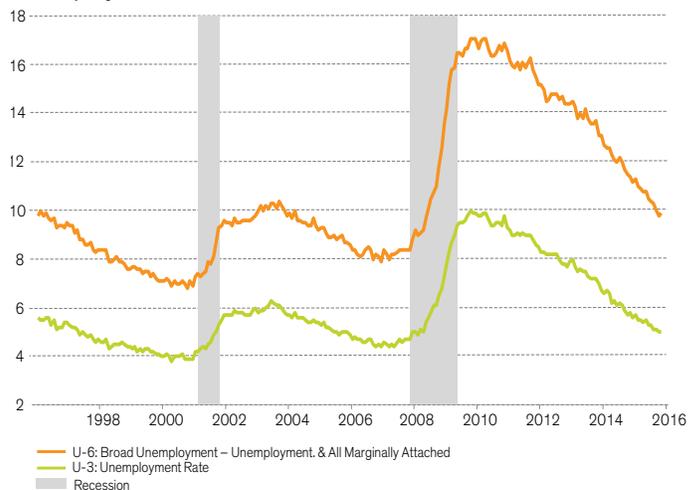
**6 / LABOR MARKET DRIVES INFLATION TRENDS (1970 – 2015)**



As of 11/30/2015.  
Source: QMA, Thomson Reuters Datastream.

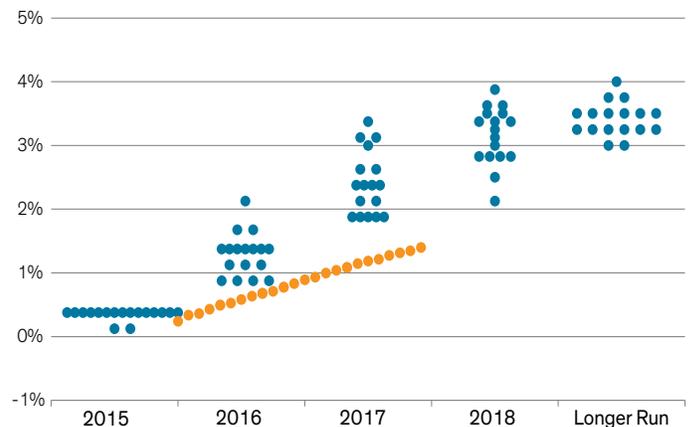
Modest growth and still ample slack should keep inflation trends tame. The official unemployment rate has fallen to 5% (an average level for the pre-crisis period), but a broader measure such as the U-6 unemployment rate measure is still at a level that could be considered recessionary (see Chart 7). There is a big disconnect between the market's expectation of where rates will head this year versus the Fed. We think market expectations are more likely to be correct (see Chart 8).

**7 / STILL AMPLE SLACK IN LABOR MARKET  
Unemployment vs. U-6 Rate (1996 – 2015)**



As of 12/31/2015.  
Source: QMA, Thomson Reuters Datastream.

**8 / FADE THE DOTS  
The Market Expects Rates to Rise Slowly**



Source: QMA, Federal Reserve's 1/6/2016 meeting economic projections (blue dots). Data shows midpoint of target range or target level for the Federal funds rate.

Source: Thomson Reuters Datastream (orange dots). Data as of 12/16/2015, the time of the Fed Meeting's release of dot chart. Orange dots show Federal funds futures as of 12/31/2015.

For informational purposes only. There is no guarantee these projections will be achieved.

**2016: APPROACH WITH CAUTION**

How should we approach investment strategy in 2016? Very cautiously. We don't think the risk reward profile is such that it makes sense to overweight stocks. Government bond returns won't be great given the yield starting point, but these securities offer very valuable diversification benefits and tail risk hedging characteristics. While there are many structural factors at work in support of low rates, it's important to note that even a 30 basis point backup in rates for the Barclays US Treasury Index would likely generate a negative return.

<sup>2</sup> Beckett, Samuel. *Waiting for Godot*. New York: Grove Press, 1954.

We like US real estate on positive macro-fundamentals and decent valuation. Limited new supply growth in the years since the crisis and improving demand drivers including the solid labor market and the improvement in household formation make for an attractive supply demand backdrop in the context of what is still likely to be a low interest rate environment (even if rates rise on the margin). The underperformance of REITs relative to private real estate in 2015 has led to a situation where REITs are trading at roughly a 10% discount to underlying assets.

Cash yields are still paltry and are headed only marginally higher but cash provides very valuable optionality in the volatile trendless markets that we are expecting in 2016.

### US STOCK MARKET: ANOTHER UNREWARDING YEAR?

One notable event in 2015 was the death of Yankee great Yogi Berra. Yogi is widely recognized as one of the greatest catchers in baseball history but he is also famous for his “Yogi-isms.” Let’s just call them colorful phrases. So will it be “d  j   vu all over again” for the US stock market in 2016? We think it will largely in that the market will struggle to turn in even mid-single digit performance.

US earnings are likely to have not grown at all in 2015 and we expect this to continue in 2016. This was driven mainly by a collapse in energy sector earnings which fell by nearly 60%, and a rising dollar which was a headwind to overseas earnings (40% of S&P profits are earned abroad). So energy was not the only sector about to post negative earnings growth, as staples, materials, and utilities were also in the red.

Looking forward we expect earnings growth to improve but only on the margin. Energy sector profits are unlikely to be decimated again from current levels, but it’s difficult to say with any confidence that energy prices have bottomed. The rising dollar will likely still be a headwind. Profit margins are already very high and should not be expected to rise further. Subdued global economic growth should translate into subdued revenue growth for the S&P 500 Index. Finally, analyst consensus earnings growth expectations for the calendar year 2016 are currently slightly less than 8% and being revised downward. Those numbers almost always turn out to be too optimistic and are gradually revised as the year unfolds. Based on the average historic relationship we think reasonable expectations for S&P 500 earnings growth are in the 1-4% range. The P/E ratio is modestly rich and usually compresses during a Fed hiking cycle, so we doubt better returns can come from rising valuation.

So, we expect tepid returns in 2016 and greater volatility as the bull market ages. We would not be surprised to see one or possibly two 10% corrections in 2016, after experiencing the first one in 2015 since 2011. That said, we do not expect a bear market in 2016.

### US EQUITY STRATEGY: MIND THE CROSS CURRENTS

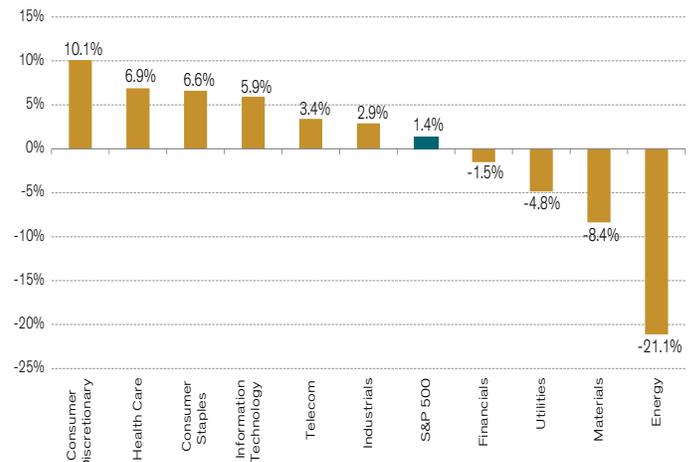
Growth stocks outperformed value stocks by an enormous amount in 2015. Are we in for a repeat performance in 2016? Momentum and scarce earnings growth should favor growth stocks, as steady growers are more prized by investors. But growth/value performance is heavily influenced by sector allocations with the value index heavily weighted in financials and energy, and the growth index heavily weighted in technology and consumer discretionary. Our sector preferences do not map cleanly to either style. Valuation is somewhat mixed depending on the measure but appears to favor value. In all, we are agnostic on style.

While there are cross currents here as well, we think small caps will underperform for the third year in a row. Despite the underperformance trend, small caps are still expensive relative to large caps. A domestic orientation should favor small, but better balance sheets in the context of tighter credit conditions and weak earnings growth should favor large caps.

Sector performance for 2015 cannot be cleanly characterized as either defensive or cyclical (see Chart 9). We expect that will be the case again in 2016. We are neutral on many S&P sectors but there are some worth emphasizing and de-emphasizing.

### 9 / IDIOSYNCRATIC SECTOR PERFORMANCE

#### S&P 500 2015 Sector Returns



As of 12/31/2015.  
Source: QMA, Thomson Reuters Datastream.

We like technology, financials, and health care. Technology exhibits good momentum, solid value, and significant balance sheet flexibility. Both technology and health care exhibit superior sales and EPS growth. The general trend of increased spending toward health care also supports revenues for this sector. Financials exhibit reasonable value and should benefit directly from rising interest rates as their net interest margins, a main driver of the bottom-line, increase when firms take advantage of charging higher rates to borrowers. We dislike utilities and telecom, which we view as overvalued bond proxies which would be vulnerable to rising rates.

## BETTER RETURNS OVERSEAS, BUT BE SELECTIVE AND AVOID EMERGING MARKETS

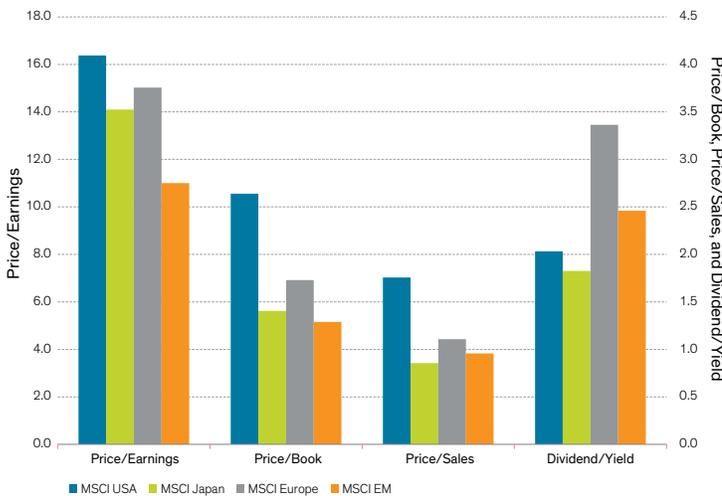
We think better returns will be available to equity investors in select places. We would focus on Japan and the Eurozone and continue avoiding emerging markets.

European equities should outperform US equities in 2016. The key here is that profits are still cyclically depressed and that profitability should continue to improve along with the economy. Eurozone GDP improved significantly in 2015 (with forecasts increasing during the year) and is expected to accelerate in 2016, as there are signs that quantitative easing is boosting the domestic economy. Monetary growth has accelerated meaningfully and should lead to improved business confidence.

The expansion in money supply has followed through to increased bank lending. Faster revenue growth and a continued slowdown in the growth of unit labor costs should lead to margin expansion which should further underpin profit growth (unlike the US where margins are already very high by historic measures). Finally, European equities are cheaper than their US counterparts.

### 10 / US MARKETS ARE RELATIVELY PRICEY

Valuation Metrics for Global Indices



As of 12/31/2015.

Source: QMA, MSCI, FactSet. Shown for illustrative purposes only.

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Japan is the one major market that saw robust earnings growth in 2015. What's going on? While the country's macroeconomic challenges remain, equity investors are benefiting from a revolution in Japan's corporate governance. Even as Japan's GDP growth stagnated in the second and third quarters of 2015, the earnings of listed companies in the TOPIX grew by 12%. Dividends and share buybacks have seen robust growth as corporate management is increasingly focused on capital stewardship.

Japan's Abe government has reconsolidated power and remains very pro-business with an emphasis on privatization, trade openness, and

deregulation. While many have been disappointed with the third arrow of "Abe-nomics" (structural reform), progress has been incremental and should accelerate. For example, Japan is expected to be one of the bigger beneficiaries of the recently negotiated Transpacific Pacific Partnership (TPP).

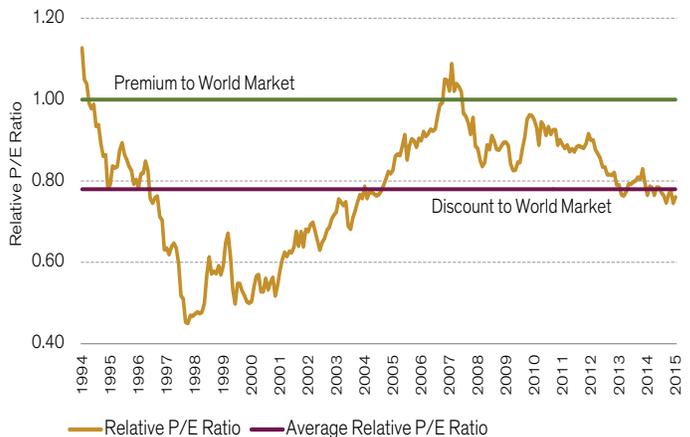
We continue to like Japanese equities. Solid earnings growth could continue in 2016 and valuation looks cheap relative to its own history and relative to the United States. In the case of both Europe and Japan we like these markets in their local currencies. So we recommend hedging exposure to the currency as we think the Euro and especially the Yen could see further depreciation in 2016 relative to the US dollar.

We would continue underweighting emerging markets equities looking forward. While it's possible these markets may find a bottom in terms of underperformance in 2016, we remain skeptical. The structural macroeconomic problems differ among the countries: commodity price bust (Russia and Brazil), domestic credit excess (China), and large current account deficits and vulnerability to capital outflows (Turkey and South Africa). In general, poor productivity and profit growth are observed across the entire complex. Weaker trend growth in China should exacerbate problems in the countries that have relied on exports to China (both commodity and non-commodity). Further, emerging market equities usually have difficulty outperforming during periods of commodity price weakness and dollar strength.

This gets to the question of whether emerging market equities are cheap? Not really, we believe, and certainly not if one looks beneath the surface. On an aggregate basis, since earnings have been declining sharply, valuation is at average historic levels compared to developed markets (Chart 11). Further, lower absolute multiples are due to the higher representation of energy, banks, and other areas with a heavy presence by sovereign entities that are cheap for good reason. The P/E multiples on a sector neutral basis are in-line with developed markets when we think a discount is appropriate.

### 11 / EMERGING MARKETS EQUITIES: NOT THAT CHEAP

Relative P/E Ratio: EM / World



As of 12/31/2015.

Source: QMA, Thomson Reuters Datastream.

Data: EM / World Forward P/E Ratios using Thomson Reuters Datastream Indices.

## GENTLEMAN PREFER BONDS: IS 3 THE NEW 6?

While US stocks should provide meager returns, the bar to outperform government bonds is not high with the 10 year Treasury yield at 2.3%. We don't expect great returns here but Treasuries provide great diversification benefits and tail risk hedging characteristics in that they have tended to do well when risk assets are doing poorly (at least in recent history).

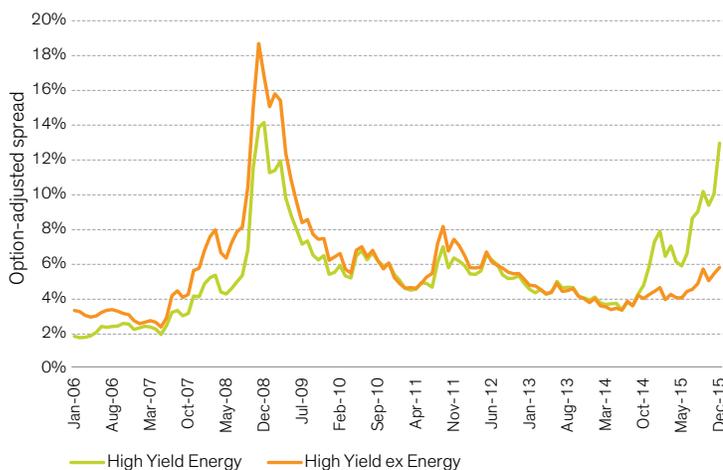
Long rates may rise along with short rates in 2016 but we don't expect the rise to be dramatic. We think "3 will be the new 6," as Ed Keon described in a 2015 paper.<sup>3</sup> There are many structural factors at work in keeping rates low including low growth, low inflation, high levels of debt and the end of the "debt super cycle," low policy rates, and lingering risk aversion from the financial crisis. In another recent paper,<sup>4</sup> we focused on the role of demographics as a key reason why low rates are likely to be sustained. We still believe these statements to be true.

## ATTRACTIVE SPREADS IN FIXED INCOME RISK ASSETS

One notable market development in 2015 was the re-pricing of fixed income risk assets. We think attractive opportunities are developing in the US high yield space as spreads have widened significantly and current yields look attractive (Chart 12). We would stay focused on non-commodity segment of this space for now where we believe the level of spread is discounting a worse default rate than is likely to occur. We would not jump into the resource oriented names just yet as we expect a large spike in defaults here and our outlook for commodity prices is still highly uncertain.

### 12 / TIME TO ENTER THE JUNKYARD?

#### High Yield Option-Adjusted Spread (2006 — 2015)



As of 12/31/2015.  
Source: QMA, Barclays.

We are less enthused about emerging markets debt given our negative view on the macro fundamentals of most countries. Within the space, we would focus on the highest quality securities: sovereign bonds in hard currency, as we expect emerging markets' currencies to continue their decline and the greatest rise in leverage has been in the corporate sector. While yields, spreads, and momentum in emerging markets sovereign hard currency debt are reasonable, poor growth prospects and rising US rates should curtail investment appetite for emerging markets debt.

## SEARCHING FOR OPPORTUNITIES IN SMALLER CORNERS: MLPs & PREFERRED SHARES

We think a great opportunity will emerge in 2016 to buy MLPs at valuation levels that will produce robust long-term returns—but we are not ready to bite just yet. The sector is in the midst of a vicious cycle, but we do not believe there has been permanent asset impairment. Lower breakeven prices among shale producers brought about by increased productivity and efficiency, and the lifting of the oil export ban by Congress are long term positives, but we have to make it to the long-term first. We believe energy prices will need to find a durable bottom before the sector can begin to find its way out of the wreckage.

Preferred stocks were very strong performers in 2015 and we expect this to continue in 2016. These are fixed income securities that are classified as equities given their lower position in the capital structure. The exposure is dominated by financials, most prominently banks, where we think the balance sheets are very solid and the yields are attractive at levels near 6%. A big back up in interest rates would hurt preferred securities, as they are long duration securities, but given modest upward drift that we are expecting, returns in the space should be competitive with US equities but with much lower risk.

## RISKS ARE TILTED TO THE DOWNSIDE

What we have laid out as our base case is a muddle through scenario for the global economy. While it is stuck in a rut, weighed down by structural problems, it avoids a major crisis. Against this backdrop risky assets don't perform particularly well, but they don't do horribly either. We admit that the risks are tilted to the downside and worse outcomes should not be dismissed.

<sup>3</sup> Keon Jr., Edward. "Is 3 the New 6?: The Importance of Active Management in a Low Returns Environment." QMA Insights, May 2015.

<sup>4</sup> Keon Jr., Edward. "The Turbulent Teens at Halftime: Will Low Rates and Slower Growth Continue?" Turbulent Teens 2016 Outlook, November 2015.

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## Special Risks

Foreign investments may be volatile and involve additional expenses and special risks, including currency fluctuations, foreign taxes and political and economic uncertainties. Emerging and developing market investments may be especially volatile. Investments in securities of growth companies may be especially volatile. Due to the recent global economic crisis that caused financial difficulties for many European Union countries, Eurozone investments may be subject to volatility and liquidity issues. Value investing involves the risk that undervalued securities may not appreciate as anticipated. Small and mid-sized company stock is typically more volatile than that of larger, more established businesses, as these stocks tend to be more sensitive to changes in earnings expectations and tend to have lower trading volumes than large-cap securities, creating potential for more erratic price movements. It may take a substantial period of time to realize a gain on an investment in a small or mid-sized company, if any gain is realized at all. Diversification does not guarantee profit or protect against loss.

Emerging markets are countries that are beginning to emerge with increased consumer potential driven by rapid industrial expansion and economic growth. Investing in emerging markets is very risky due to the additional political, economic and currency risks associated with these underdeveloped geographic areas. Fixed-income investments are subject to interest rate risk, and their value will decline as interest rates rise. Unlike other investment vehicles, U.S. government securities and U.S. Treasury bills are backed by the full faith and credit of the U.S. government, are less volatile than equity investments, and provide a guaranteed return of principal at maturity. Treasury Inflation-Protected Securities (TIPS) are inflation-index bonds that may experience greater losses than other fixed income securities with similar durations and are more likely to cause fluctuations in a Portfolio's income distribution. Investing in real estate poses risks related to an individual property, credit risk and interest rate fluctuations. High yield bonds, commonly known as junk bonds, are subject to a high level of credit and market risks. Investing involves risks. Some investments are riskier than others. The investment return and principal value will fluctuate and when sold may be worth more or less than the original cost.

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The **Barclays US Aggregate Bond Index** is composed of US investment-grade fixed-rate bond market, including government and credit securities, agency mortgage pass-through securities, asset-backed securities, and commercial mortgage-based securities. Source: Barclays.

The **Barclays US Treasury Index** measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. The US Treasury Index is a component of the US Aggregate, US Universal, Global Aggregate and Global Treasury Indices. The US Treasury Index was launched on January 1, 1973. Source: Barclays.

The **S&P 500 Index** is an unmanaged index of 500 common stocks, weighted by market capitalization, representing approximately 75% of the New York Stock Exchange. The value-weighted index represents about 75% of the NYSE market capitalization and 30% of the NYSE issues.

The **MSCI USA Index** is designed to measure the performance of the large and mid cap segments of the US market. With 633 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

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The **TOPIX**, also known as the **Tokyo Stock Price Index**, is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange. The index is supplemented by the subindices of the 33 industry sectors.

The **10-Year US Treasury note** is a debt obligation issued by the United States government that matures in 10 years. A 10-year Treasury note pays interest at a fixed rate once every six months and pays the face value to the holder at maturity.

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