July 2015

TIAA-CREF Asset Management

2015 Mid-Year Economic and Investment Outlook

Executive summary

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- Economic growth in the U.S. and China should pick up in the second half of the year as Europe's economy stabilizes at the fastest rate since 2010.
- With full valuations and high margins, U.S. equities will likely post limited gains over the medium term. Large-cap stocks offer better prospects than small- and mid-cap shares.
- Potential gains from international equities outweigh the currency risks, as Europe and the emerging markets offer the prospect of higher earnings growth and Japan continues to reform.
- For fixed-income investors, higher-yielding debt provides the best protection against rising rates at home, while international investors should focus on markets where currencies can weather a stronger dollar.

Asset class preferences

Equities ↑
Large Cap ↑
Mid Cap ↓
Small Cap ↔
Growth ↑
Value ↓
Developed Markets ↓
United States ↓
Europe ↑
Japan ↑
Emerging Markets ↑

Fixed Income ↓
Government Debt ↓
United States ↑
Europe ↓
Japan ↓
TIPS ↑
Munis ↑
Corporate (Investment Grade) ↑
High Yield ↑
Emerging Markets (USD) ↑
Emerging Markets (LC) ↓

↑ = overweight; ↓ = underweight. TIPS = Treasury Inflation-Protected Securities. LC = Local currency. Allocations based on an unhedged, U.S.-dollar portfolio. Please note the forecasts above concern asset classes only, and do not reflect the experience of any product or service offered by TIAA-CREF. These forecasts are for informational purposes only and should not be considered investment advice or constitute a recommendation to purchase or sell securities. Market forecasts are subject to uncertainty and may change based on varying market conditions, political and economic developments. Past performance is not an indicator of future results.

TIAA CREF Financial Services

Global asset returns

	Market Value ($tr)	Relative P/E (%)*	Dividend Yield (%)	Total Return (%) Second Quarter 2015 USD	Total Return (%) Second Quarter 2015 Local	Total Return (%) Year to Date USD	Total Return (%) Year to Date Local
Equities							
Global	**$37.9**	**2.3%**	**2.5%**	**0.5%**	**-0.4%**	**3.0%**	**4.6%**
World ex-US	18.4	-8.3	2.9	0.7	-1.1	4.3	7.8
Developed Markets	33.9	4.7	2.4	0.5	-0.5	3.0	4.5
United States	23.0	16.0	1.9	0.1	0.1	1.9	1.9
Large Cap	14.7	11.8	2.1	0.9	0.9	1.4	1.4
Mid Cap	6.4	31.6	1.5	-1.5	-1.5	2.4	2.4
Small Cap	1.9	53.7	1.3	0.4	0.4	4.8	4.8
Growth	11.6	8.3	1.5	0.3	0.3	4.3	4.3
Value	11.4	11.1	2.4	0.0	0.0	-0.5	-0.5
High Dividend	5.5	20.8	3.3	-0.9	-0.9	-2.7	-2.7
REITs	0.5	0.1	3.8	-9.3	-9.3	-5.9	-5.9
Europe	8.6	13.4	3.3	0.7	-3.6	4.3	7.7
Japan	3.0	-4.6	1.7	3.1	5.2	13.8	16.1
Asia ex-Japan	1.5	4.4	4.0	-2.4	-3.0	0.6	4.8
Emerging Markets	4.0	-3.6	2.6	0.8	0.8	3.1	5.8
Asia	2.8	-11.5	2.3	0.0	0.2	5.2	5.9
Latin America	0.6	35.1	2.8	3.6	3.3	-6.2	4.6
Europe, Middle East and Africa (EMEA)	0.7	8.4	3.5	2.0	1.3	4.1	7.1

	Market Value ($tr)	Duration (Years)	Yield (%)	Total Return (%) Second Quarter 2015 USD	Total Return (%) Second Quarter 2015 Local	Total Return (%) Year to Date USD	Total Return (%) Year to Date Local
Bonds							
Global	**$45.0**	**6.5**	**2.1%**	**-1.0%**	**-2.1%**	**-2.9%**	**-0.2%**
Intermediate (1–10 Years)	35.5	4.4	1.9	0.1	-0.8	-2.3	0.4
Long (10+ Years)	9.4	14.2	2.9	-5.4	-6.7	-5.1	-2.6
U.S. Universal	21.2	5.7	2.9	-1.4	-1.4	0.3	0.3
Treasury	6.3	5.6	1.6	-1.6	-1.6	0.0	0.0
Inflation-Linked (TIPS)	0.9	8.0	0.6	-1.1	-1.1	0.3	0.3
Agency	0.6	3.8	1.4	-0.6	-0.6	0.6	0.6
Municipal	1.3	4.9	2.4	-0.9	-0.9	0.1	0.1
Mortgage-Backed Securities	5.0	5.6	2.9	-0.7	-0.7	0.3	0.3
Corporate (Investment Grade)	4.2	7.1	3.4	-3.2	-3.2	-0.9	-0.9
High Yield	1.3	4.2	6.5	0.0	0.0	2.5	2.5
Pan-European	14.3	6.8	1.4	0.0	-4.0	-6.9	-1.1
Japan	6.7	8.2	0.5	-2.1	-0.1	-2.6	-0.4
Emerging Markets	2.1	5.3	6.2	0.1	0.1	-0.2	-0.2
Sovereign (USD)	0.4	6.9	5.8	-0.3	-0.3	1.7	1.7
Corporate (USD)	0.8	5.1	5.8	1.6	1.6	4.0	4.0
Local Currency	0.9	4.9	6.8	-1.0	-0.3	-4.9	2.3

	Exchange Rate	Change vs. USD (%) Second Quarter 2015	Change vs. USD (%) Year to Date
Currencies			
Euro	$1.11/€	3.7%	-7.9%
Pound	$1.57/£	5.9	0.9
Yen	¥122/$	-2.0	-2.0
Canadian Dollar	CAD1.25/$	1.4	-7.2
Swiss Franc	CHF0.93/$	3.9	6.3
Emerging Market Basket†	N/A	-0.1	-4.5

Data as of June 30, 2015. ACWI = MSCI All Country World Index. IG = Investment grade. EM = Emerging markets. All returns are in local currency unless otherwise indicated. Equity categories are for the respective MSCI index. Bond categories are for the respective Barclays index, except for emerging markets, which are for J.P. Morgan indexes. *Relative P/E compares current 12-month forward P/E (price/earnings) ratio versus median value since 1987 (except Latin America since 1992, EMEA since 1997, Small/Mid Cap and High Dividend since 1999, and Japan since 2000). † Weighted average of currencies in MSCI Emerging Markets and JP Morgan GBI-EM indexes. It is not possible to invest in an index. Performance for indexes does not reflect investment fees or transactions costs. Sources: MSCI, Barclays, J.P. Morgan and TIAA-CREF Asset Management.

The pause that refreshes

Year to date, growth across the globe has been somewhat mixed. While both the U.S. and China have decelerated from a strong second half of 2014, Europe and Japan have picked up speed. The reasons for these patterns are as varied as the regions themselves: Japan is undergoing structural reforms and extraordinary stimulus, which is pushing growth across its economy. China is also employing structural reforms to retool its economy from an export-oriented machine to one that caters to an increasingly wealthy domestic population. Meanwhile, Europe has finally succeeded in shedding its reservations about looser monetary policy and has moved into full-fledged pump-priming mode. The European Central Bank (ECB) is engaged in a massive quantitative easing (QE) program that, so far, appears likely to have the same economic impact as the Fed's program had on the U.S. Finally, here at home, a severe winter and labor unrest at West Coast ports are giving way to a reaccelerating economy and further improvements in job gains.

The second half of 2015 will see a pickup in the U.S. and Chinese economies, while Europe will slow modestly from its heady first-half performance. We anticipate GDP growth in the U.S. will accelerate to the mid 3% range for the final two quarters of the year, driven primarily by increased consumer spending and a rebound in business investment. China has made strides in liberalizing its capital account and monetary system, and there are signs this is already making an impact. Consumer spending is holding up, property markets appear to be bottoming, and areas of the economy that have slowed the most are seeing activity revive. Europe has shifted gears after narrowly missing another recession last year. With industrial activity growing and credit expanding across most of the region, Europe should end the year with growth close to 1.5% (see Figure 1).

Risks to this outlook are mostly manageable and unlikely to derail the current trajectory. Oil price declines since the summer of 2014 represent one of these risks. The reduction in oil prices has dramatically dampened industrial activity in the U.S. while boosting industrial demand for oil across the world. The drop has also helped push back the date of the first Federal Reserve rate hike because of the outsized role it has played in reducing business investment activity. The strong dollar has also added to the increasing uncertainty. Driven partly by the expectation of a Fed rate hike and partly by falling oil prices, the rising dollar's drag on the export sector has effectively begun the Fed's tightening process. Of the more intangible risks, an escalation of the conflict in Ukraine and the potential exit of Greece from the Eurozone represent potentially larger hurdles for global growth, although the likelihood of either of these risks remains in flux.

Meanwhile, the oxygen boost provided by the ECB's QE program drove international equities, bonds and the U.S. dollar to impressive gains through April of this year. The moves were based more on expectations than reality, however, as the ECB did not actually begin purchasing bonds until mid-March. By the end of April when the rally peaked, the bank had added just €62 billion ($69 billion) to its balance sheet, a small percentage of the expected €1.1 trillion ($1.2 trillion) total.

That the markets subsequently retraced a portion of these gains is not surprising. Eurozone GDP growth was no better in the first quarter of 2015 than in the last quarter of 2014. In the U.S., optimistic consensus forecasts at the beginning of the year for 3% GDP growth in 2015 have subsequently fallen to just 2.2%. Recent economic data has been better but has had the perverse effect of tempering markets further, as the Fed's commitment to slow and measured interest-rate hikes may yet be tested by rising wage inflation. Greece has helped to dampen enthusiasm even further.

The fundamental drivers from the beginning of the year remain in place, however. We expect the trajectory of returns we saw at the beginning of the year for many asset classes to resume, if not at the same pace, and the recent fall in asset prices makes for a more attractive time to invest.

Figure 1: Real GDP

	Real GDP, %		Real GDP, %, SAAR				
	2014	2015e	Q1 15	Q2 15e	Q3 15e	Q4 15e	Q1 16e
U.S.	2.4	2.2	-0.2	2.3	2.8	3.3	3.5
China*	7.4	6.7	5.4	6.6	7.4	7.4	6.6
Eurozone	1.0	1.5	1.5	1.8	1.6	1.6	1.5
Japan	0.3	1.8	3.9	3.0	4.0	3.0	3.5

*Quarterly estimates for China's seasonally adjusted annual rate (SAAR) do not correspond to officially published YTD figures. Sources: Haver Analytics, TIAA-CREF. "e" = estimate.

United States

Economy

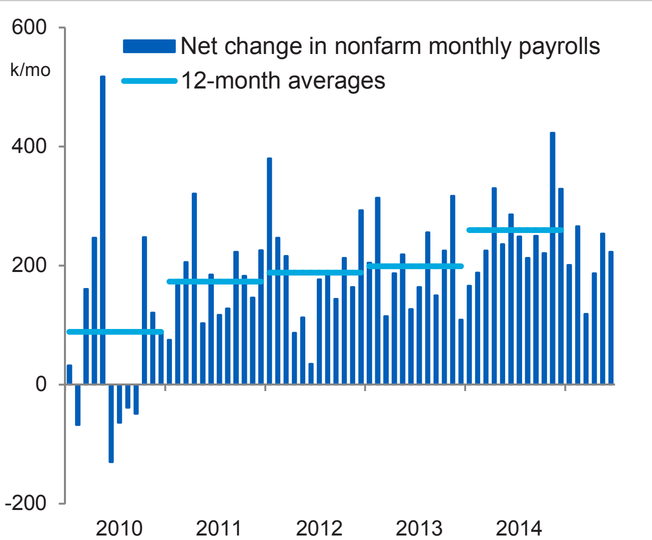
In a repeat of 2014, U.S. economic growth disappointed during the first quarter. Last year, extreme cold weather shut in much of the East Coast, impeding construction activity. This year, in addition to excessive snow and cold, a particularly difficult labor dispute involving 26 West Coast ports temporarily slowed imports and exports, as well as related manufacturing, sales and construction activities across the country. But also like last year, growth re-emerged during the second quarter. We expect that GDP will advance close to 2.3% during the quarter ended June 30, after falling 0.2% in the first quarter.

The real question is whether this is the year in which growth finally returns to normal. We seem to ask this question every year, and in recent years there has been increasing evidence to suggest that the economy is, in fact, healing. One-off events, however, whether unseasonably cold weather or gridlock in Congress, have always managed to disrupt economic progress. This year would seem no different, except there are now strong signs that labor markets are getting ever closer to full employment. Several wage indicators are finally on the move higher, and consumer spending over the past few months has increased above the recent trend. Similarly, annualized inflation rate movements during the second quarter imply that inflation will begin picking up during the second half of the year.

Sentiment surveys measure our mood about today and our expectations about tomorrow, and they have been telling us for some time that consumers are feeling good about their current and future prospects, and that businesses are seeing the need to increase employment as well as wages. If these surveys create expectations of higher incomes, spending and employment, so far it's only employment that has followed the expected path. Figure 2 charts monthly employment growth back to 2010, along with average growth for each year. Toward the end of 2014, the economy was creating jobs at an annualized rate of more than 3 million—a number that far exceeds the average turnover in the economy. And while that pace slowed early in 2015, annualized job growth during the second quarter has been reaccelerating, indicating a potential to return to last fall's impressive performance. At the same time, the length of unemployment has decreased and is once again approaching the level seen prior to the recession, while the duration of job postings is rising to levels also not seen for almost a decade. The number of people employed part-time for economic reasons (those working less than desired) has also continued to decline in recent quarters. Finally, the voluntary "quits rate" and the open position measures from the Job Openings and Labor Turnover Survey (JOLTS) suggest that businesses expect to step up their hiring, and that employees are finding new jobs at an increasing rate.

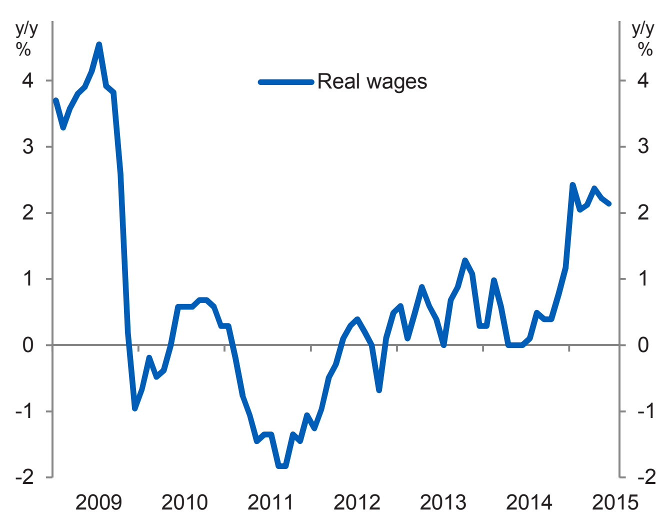
The slack in labor markets since the recession led to suppressed real wage growth,[1] but that picture is now changing (see Figure 3). The official unemployment rate, at 5.3%, also suggests that labor market conditions are returning to normal. That said, we have learned over the past several years that over-reliance on this one measure can be misleading. Fortunately, real wage growth is an unmistakable signal of the health of labor markets.

Figure 2: Employment growth



Sources: Haver Analytics, TIAA-CREF Asset Management.

Figure 3: Real wages



Sources: Haver Analytics, TIAA-CREF Asset Management.

We know wages will start to rise as the economy approaches full employment. In fact, a healthy economy will see real wage growth range from about 3% to 3.5% per year. We have noted a measurable pickup since 2014, but at the same time, wages have had trouble breaking above 2% for any sustained period of time. It will take a shift up toward 3% to translate into improved real incomes and ultimately, increased spending. Further, the speed at which real wages converge to that 3% level will determine the timing and pace of Fed rate hikes.

On the production side of the economy, businesses must decide whether to spend on labor or capital to meet an ever-increasing demand for output. Weak labor markets have made it relatively cheaper to hire employees since 2009, but that is now changing. As labor rates begin to rise, capital will become relatively cheaper, especially since borrowing rates have yet to materially increase. This will drive business investment in equipment and new construction as we move through 2016. Greater spending on capital will also address another ailment of the recovery: low productivity growth. With the labor/capital ratio tilted in favor of labor in recent years, there has been increased pressure on productivity (output per hour worked). This measure is used when calculating the potential growth rate of the economy.

If wages continue to rise and employment to grow, then ultimately so should consumer spending. We thought we were seeing this acceleration last fall, when spending growth topped 4% on an annualized basis. But that evaporated with the slump in growth in the winter as personal consumption expenditures fell by more than half—from 4.4% to 2.1%—between the fourth quarter of 2014 and the first quarter of 2015. Based on recent monthly retail sales figures and personal income and spending data, however, it appears that the drop may have been temporary. Spending growth in the second quarter of 2015 should come in close to 3.25%, and this should accelerate even more by the end of the fourth quarter.

Falling oil prices and the rising dollar

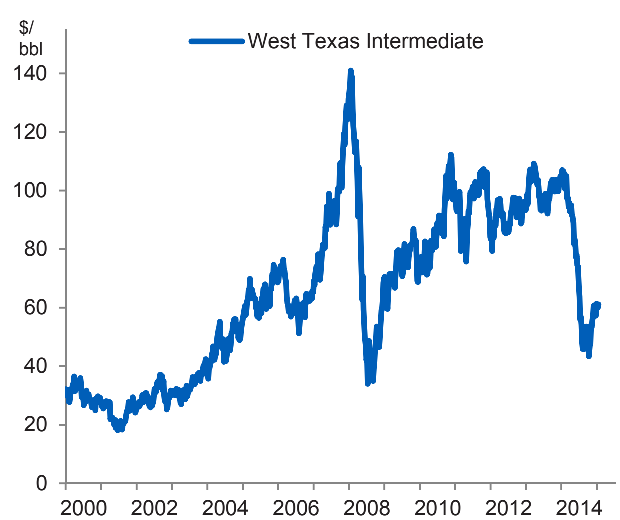
Since last summer, oil prices have fallen precipitously while the dollar has strengthened. The drop in oil prices was a new phenomenon because prices had held steady for several years, but the rise in the dollar was expected and well telegraphed. What was notable was how rapidly the dollar appreciated in such a short period.

The moves in oil prices and the dollar hurt the U.S. economy in the short run, although the long-term effects should ultimately turn positive. First to oil. Last summer's price plunge began when growth concerns emerged out of China and Europe while supplies continued to increase in the U.S. The slide in prices accelerated through January of this year, when the West Texas Intermediate (WTI) benchmark price fell from close to $100 per barrel to $44 (see Figure 4). This drop had an immediate effect on capital spending in the energy patch. While the energy sector makes up less than 10% of the U.S. economy, it has represented about 30% of capital spending in recent years. Thus, the fall in energy capital spending has had a material impact on the economy in 2015.

Oil prices have since bounced off the bottom and stabilized near $60 per barrel, which means investment within the energy sector can partly resume. We have already seen the oil rig count stabilize, while employment in Texas has stopped falling. Looking ahead, we believe that oil prices are more likely to rise than fall because the significant reduction in capital spending will lead to supply constraints beginning this autumn, which in turn will arrest the spending decline in the oil patch. Thus, as non-energy-related capital spending continues to increase with economic growth, energy-related spending will turn from a headwind to a tailwind later this year, further boosting the economy.

The steep rise in the dollar has also had a materially negative impact on the U.S. economy in the short run. A stronger dollar hurts earnings, and therefore spending, at large corporations. Perhaps more importantly, a stronger dollar reduces exports while making imports cheaper. This dampens growth in the near term as economies around the world adjust to the new dollar level. The effects, however, are positive for growth in the long run. The stronger dollar reduces costs across the economy, increases purchasing power, and facilitates lower borrowing costs.

Figure 4: Oil prices



Sources: Haver Analytics, TIAA-CREF Asset Management.

The fundamental reason for the dollar's appreciation is the divergence in monetary policy around the globe. While the Fed is on the cusp of raising short-term rates, most of the rest of the world is still engaging in easy monetary policy. This will continue to drive the dollar higher over the medium term. In our view, the dollar will rise moderately against the euro through the end of 2016. We also expect the commodity currencies to rebound somewhat along with oil prices but still remain modestly weaker against the dollar. The Australian dollar, for example, should further lose value this year and stabilize next year. (The Australian dollar is a proxy for the Chinese yuan, which would weaken if it were not pegged to the U.S. dollar.) Finally, the Brazilian *real* will continue to fall this year as Brazil works through domestic structural issues, before rebounding in 2016 (see Figure 5).

The Federal Reserve

We have focused heavily on labor markets and the consumer because we feel they are key to identifying when the Fed will begin to raise rates. Fed Chair Yellen has communicated consistently that labor market conditions will determine the timing of the rate "liftoff." From this perspective, if real wage growth continues to have trouble breaking out above 2%, then it will be unlikely to see the Fed raise rates by September, even if job growth sustains its current fast pace. On the other hand, if wage growth accelerates markedly from the pace seen since January and other conditions remain constant, then we would likely see that rate hike by September. In our view, the Fed will most likely raise rates in December.

Perhaps less important than the timing of the initial rate increase is the pace of subsequent hikes. This will depend greatly on the path the economy takes over the next few years. Here, we remain confident that growth can climb from its existing 2.25% annual pace to something closer to 3%. If the economy can achieve this rate of growth in 2016, we expect a pace of rate hikes of about 1% per year for the next two to three years.

Equities

In the face of static profit margins and rising interest rates, U.S. corporations (outside of the energy sector) have nonetheless managed to produce rising earnings this year. Consensus estimates are for year-on-year growth in net income in 2015 of just over 7%; growth in earnings per share (EPS) should be higher thanks to share buybacks. There are several risks to this prognosis, however. Earnings forecasts for the S&P 500 Index dropped sharply at the beginning of the year. The decline was initially concentrated in the energy and materials sectors, but more recently the deterioration has spread to the other sectors of the index; no sector has posted an increase in EPS forecasts since the beginning of June.

The primary cause for this downturn is, ironically, the strengthening U.S. economy. The first quarter's 0.7% decline in GDP has since been revised to a less severe contraction, and this may yet turn into positive growth as government statisticians adjust their seasonal factors. The latest data on retail sales, consumer sentiment and the housing market all point to a more vigorous economy. The data has led to rising market interest rates and bolstered those who believe the Fed will have to hike rates more often or more quickly than markets are currently forecasting.

As we have previously noted, equity markets generally advance even when the Fed begins a new tightening cycle, as long as the increase in interest rates reflects efforts to moderate stronger growth as opposed to bringing down inflation.[2] But it is nonetheless likely that whenever expectations for interest rates rise, equity markets will react negatively. That is to say, markets are still poised to rise over the next year, but at a slower pace than we expected previously.

The factors that threaten to temper gains in U.S. equities are well known and persistent. Margins remain elevated and are unlikely to rise further. Aggregate revenues can hardly expand faster than the modest increase expected in nominal GDP, which means that EPS increases have to

Figure 5: U.S. interest rates and foreign exchange rates

	U.S. Rates (%)	
	Year-end	
	2015	2016
Fed funds	0.25–0.50	1.25–1.50
10-yr Treasury	2.50–2.75	3.25–3.50
Consumer Price Index	0.5	1.5

	Foreign Exchange Rates*		
	Period-end		
	2014	2015	2016
Euro	1.21	1.05	1.00
Yen	120	130	135
Canadian dollar	0.86	0.84	0.90
Australian dollar	0.82	0.75	0.75
Brazilian real	2.65	3.40	3.00

*The euro, Canadian dollar and Australian dollar are priced in dollars per currency unit, while the yen and Brazilian real are priced in currency units per dollar.
Sources: Haver Analytics, Federal Reserve, TIAA-CREF.

come from improvements in productivity and/or share buybacks. The outlet of higher exports is blocked thanks to the strong dollar. This challenging earnings outlook is coupled with a comparatively high multiple of 16.8x forward earnings for the S&P 500 (compared to an average of 14.7x since 1987), with even higher relative multiples for mid-cap and small-cap indexes.

The other threat to corporate earnings growth is wage gains, which could lead to falling margins. The Employment Cost Index has risen sharply since March as the unemployment rate has fallen and companies have been forced to pay higher wages to attract or retain employees. While more income is clearly positive for workers, and indirectly positive for companies as the wages are likely to be spent on goods and services, if labor productivity does not increase at a commensurate rate, corporate profits will suffer. Whether productivity will actually improve is an open question. Average productivity growth has been just 1.1% since 2009, well below the post-World War II average of 2.5%, and in the last two quarters it has actually been negative. We expect that as labor markets continue to tighten and companies can no longer rely on abundant, inexpensive labor, companies will drive more output with existing resources. If they are not able to do so, however, the decline in margins and faster pace of Fed hikes mean that equity markets would be unlikely to sustain current levels.

Market sectors and styles

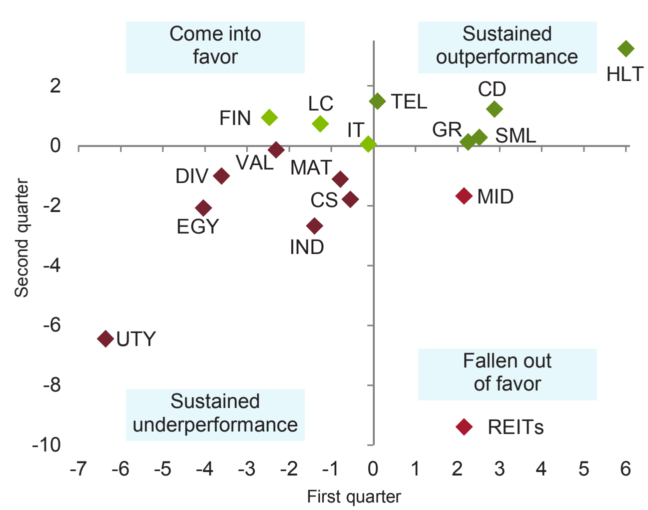
The different economic environment in the first quarter of 2015 versus the second (contraction versus expansion), along with the contrasting trajectory of interest rates (25 bps decline in the 10-year Treasury yield versus a 43 bps gain), means the relative performance of certain parts of the market has shifted (see Figure 6). Health care and consumer discretionary outperformed the overall Russell 3000 Index in both quarters and remain sectors we favor. We expect mergers and acquisition (M&A) activity in the health care sector will continue following the recent Supreme Court decision affirming the Affordable Care Act, while rising wages and consumer sentiment should support consumer stocks.

Interest-rate sensitive sectors such as utilities and REITs (real estate investment trusts), by contrast, have lagged, as their yields look ever less appealing compared to Treasuries. Sectors we expect to stay or move into the favorable camp include technology (low valuations compared to other sectors and a beneficiary of investment to boost productivity) and energy (on expectations of a continued recovery in oil prices thanks to stronger growth in the U.S. and Europe). Though rising interest rates will boost the net interest margins of banks, and the outlook for investment banking revenue is good thanks to steady M&A activity, the financials sector has historically tended to underperform during the first stages of a tightening cycle. Other overhangs for the sector include comparatively high valuations, ongoing regulatory scrutiny and low trading volumes both for equities and fixed income.

We would recommend those looking for relative opportunities in U.S. equities by size or style to first focus on large-cap indexes compared to mid- or small-cap indexes. While export-oriented multinationals have clearly been hampered by the swift rise in the dollar, this does not mean they will inevitably underperform domestically focused companies. Multinationals gain as well as lose from a stronger dollar as their imported inputs become cheaper. As productivity and share buybacks become an ever more important source of earnings gains, the advantage of large-capitalization companies is likely to grow, as they are better able than smaller companies to achieve both. Valuations for mid- and small-cap indexes are quite high relative to large-cap indexes, suggesting they are set for a period of relative underperformance.

The high multiples on value stocks today suggest there is less scope to find unloved and undervalued companies than in the past. The heavy weighting of the financials sector in the Russell value indexes, albeit slightly lower following the recent rebalancing, is likely to be a drag on performance. In contrast, the outlook for technology and consumer discretionary stocks—sectors with large weights in the growth index—is better.

Figure 6: Relative returns, 1Q 2015 versus 2Q 2015



Data as of June 30, 2015. Total returns relative to Russell 3000. LC = Russell Top 200, MID = Russell Midcap, SML = Russell 2000, DIV = MSCI USA High Dividend Yield, GR = Russell 3000 Growth, VAL = Russell 3000 Value; Russell 3000 Sectors: EGY = energy, MAT = materials, IND = industrials, CD = consumer discretionary, CS = consumer staples, HLT = health care, FIN = financials, IT = information technology, TEL = telecommunication services, UTY = utilities, REITs = real estate investment trusts. Sources: Factset, TIAA-CREF Asset Management.

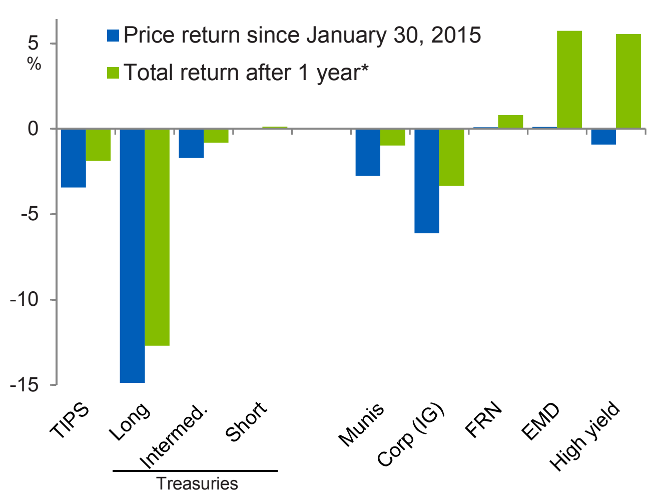
Fixed income

The long-awaited, long-predicted and long-feared turnaround in Treasury bond yields seems to have finally begun during the second quarter as the date of the first Fed hike comes into investors' sights. Unlike previous market selloffs that were soon followed by a renewed plunge in yields, this time yields have stayed elevated even in the face of worries about Greece. But for all the gains in yields since the end of January, the current yield is still well below the average of 2009–2010, suggesting there is room for them to rise further. The increase will nonetheless be moderated by ongoing demand from Europe and Japan, as their respective central banks pursue QE to keep their bond yields low.

In an environment of rising rates, the challenge for investors is to minimize losses and to look for risk-adjusted yields that can offer protection against principal declines. Figure 7 highlights the reasons for our preference for low-duration bonds and high-yielding bonds. Long-duration bonds and U.S. investment-grade bonds have suffered since the end of January as they offer yields too low to offset steep price declines. High-yield spreads, by contrast, are still over 100 bps above their average from 2005 through mid-2007 and appear reasonable as the U.S. economic expansion is solid.

With inflation expectations moving up, Treasury Inflation-Protected Securities (TIPS) would be expected to outperform similar-duration Treasuries and investment-grade corporate debt, though returns are likely to still be negative.

Figure 7: Fixed-income index returns since 2015 10-year Treasury low



Data as of June 30, 2015. *Note: Adds yield as of 1/30/2015 to year-to-date price return. Sources: Barclays, TIAA-CREF Asset Management.

Europe

The European economy has seen a rather remarkable turnaround since last fall, when industrial production was declining, inflation was decelerating, consumer spending was flat and credit growth was still negative. That changed in January when the ECB announced its quantitative easing program. Since that point, almost all growth metrics have turned positive, and first-quarter GDP growth came in at 1.5% on an annualized basis. Fundamentals suggest the second quarter will be even stronger. Just as the U.S. economy "borrowed" future growth during the early stages of the Fed's QE program, however, we expect a modest slowing of growth in the region over the next couple of quarters. This still means the Eurozone will have shifted direction from moving toward recession in 2014 to 1.5% growth by the end of 2015, a startling about-face and fastest annual growth rate since 2010. Fundamentals suggest this growth momentum will continue into 2016.

Equities

Whether Greece remains a member of the European Union (EU) and the Eurozone is ultimately not significant for European equities beyond the short-term volatility that the uncertainty around its membership has generated. Greece is a small member of the emerging-markets index, and its GDP accounts for just 1.3% of EU GDP. While the same could be said about Lehman's share of the S&P 500, Lehman exemplified the malaise of the entire U.S. economy, whereas Greece's malaise is its own. The broader implications that Greece raises for the integrity of the Eurozone are certainly important, but these will only become apparent over time.

The euphoria that greeted the ECB's decision to embark on its own quantitative easing program began waning by mid-April. At that point, Eurozone equities had gained over 23% year-to-date, significantly outpacing the 4% gain in earnings forecasts, and thus were due a period of retrenchment. The renewal and subsequent breakdown of negotiations with Greece only added to the downward pressure. Despite the ensuing volatility, the outlook for the region's equity markets remains positive and valuations have improved, due both to the fall in prices and the gain in earnings.

The two key drivers of market appreciation from here will be the value of the euro and the ability of corporations to continue expanding margins. The benefits of QE are spread via several channels: bolstered confidence, low interest rates, increased bank lending and a weaker currency. The correlation of the currency and the market has been quite high, and if the euro does not begin weakening again, it is difficult to imagine equity markets rebounding (see Figure 8). As in Japan, stimulative monetary policy is widening interest-rate differentials with the U.S., which should lead to a renewed bout of currency weakness, if not at the same rate as before.

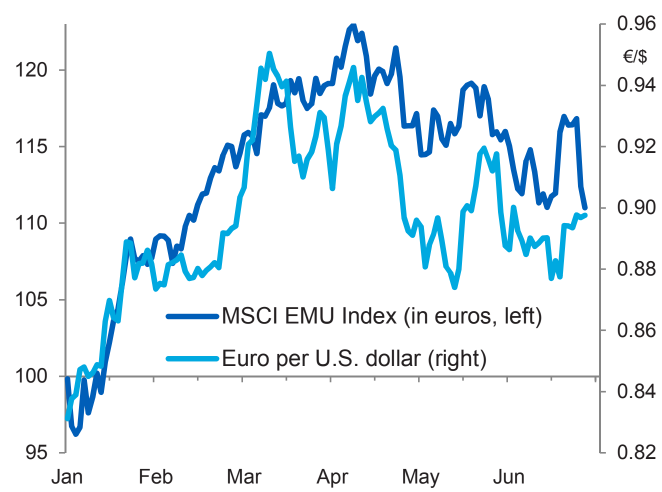
Currency depreciation can only get you so far, however. Just 50% of Eurozone country exports are shipped outside of the currency union, so the benefits of the weaker euro are mitigated. The real potential for the market is for companies to attain margins similar to those from 2006–2008, when they reached nearly 9% versus their current level of under 7% (see Figure 9). Both U.S. and European company margins recovered sharply from 2009, but then Europe suffered another downturn. The trend has fortunately been positive for the last two years, and the rate of margin increase for the region's companies has outpaced that of both the U.S. and emerging markets. Higher inflation, credit growth and economic reforms implemented in Spain, and belatedly in France and Italy, should enable companies to continue on this path.

Fixed income

The weak euro protected investors somewhat from the first quarter's -4.3% decline in the Barclays Euro Aggregate index, as German bund yields leapt twice over the course of the quarter, with the 10-year bond ultimately rising over 70 bps from April's low. A key cause of the turnaround in yields was inflation expectations, which recovered from the deflation scare that had gripped the region as oil prices fell. The change in inflation expectations was nonetheless nowhere near as large or as sudden as it was for bund yields, which highlights the technical problems created by the ECB's QE program. With so few newly issued bonds available, liquidity has fallen, which means markets reflect changes in investor sentiment or economic data more violently than they have in the past.

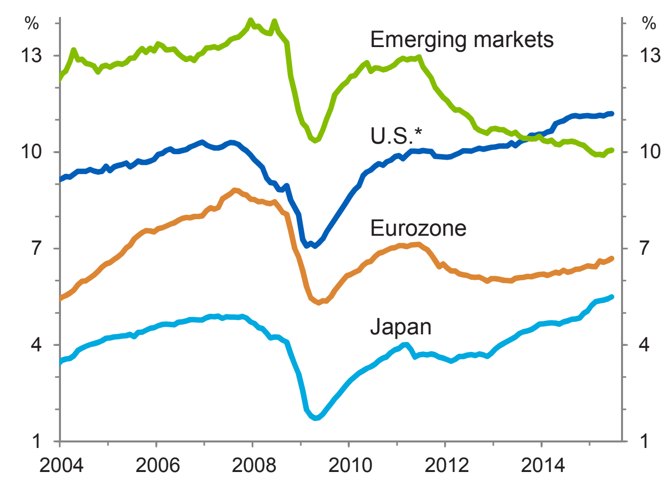
Though we expect equity markets and the euro to reprise their performance of the first quarter, we are less certain that bond yields will retrench as before. Now that inflation and growth expectations have reset, bonds appear fairly valued compared to when a significant part of the European fixed-income universe was offering negative yields. Rising U.S. and U.K. yields will exert upward pressure on those in the Eurozone, but with the ECB continuing to purchase almost all new government bond issuance, the pass-through will be mitigated. Hence Eurozone bonds should outperform their U.S. counterparts in local currency terms, but the euro's deprecation is likely to overwhelm any gains.

Figure 8: Eurozone equities and euro exchange rate, 2015



Data as of June 30, 2015. Sources: Factset, TIAA-CREF Asset Management.

Figure 9: Net margin forecasts



Data as of June 30, 2015. *Ex-energy from 2008. Sources: Factset, TIAA-CREF Asset Management.

Japan

Equities

Japan has outperformed the U.S. equity market for the last four quarters in local-currency terms (i.e., hedging against the depreciation of the Japanese yen), and for the last two in U.S. dollar terms. What are the prospects that the market can continue to outpace the U.S.? The arguments against Japanese equities are that the government is failing in its objective to move the country out of deflation—the latest reading for headline inflation was 0.0%, well below the central bank's target of 2%. The third arrow of Abenomics—economic reform—is advancing only fitfully and has yet to address the crucial area of labor market reform.

There are several factors, however, that support a more optimistic view. Inflation expectations may not have reached the Bank of Japan's target, but they are at least positive, not negative as they were in the past, and in any event inflation expectations are low across the developed world. Prime Minister Abe's reform efforts may not be advancing as fast as many would like, but there is still momentum, and certain initiatives, particularly those on corporate governance, could have a significant impact over time. Forecasted corporate margins are already at historical highs (normally a bearish signal), but that level is just 5.5%, more than 200 bps below Europe, suggesting there is still plenty of scope for them to rise higher. Portfolio reallocations out of bonds and into equities by the Government Pension Investment Fund (GPIF) and other public pension funds will provide sustained demand for equities. The provision of "fast track" authority for President Obama increases the odds of an approval of the wealth-generating Trans-Pacific Partnership (TPP). Lastly, valuations are comparatively attractive; the current forward multiple for Japanese stocks is only slightly below average, but this is much better than it is in the U.S. or Europe, where the premium is much larger.

It is less clear whether the yen will continue to depreciate, though if it does, it will provide a further boost to the market. At ¥123/$, the exchange rate has already fallen below the low of 2007 and is just 9% from the previous low of ¥135/$ from 2002. The global trade- and inflation-adjusted index is at the weakest level it has ever reached since data began in 1970. The yen is currently undervalued and at some point will appreciate, especially if inflation ever rises meaningfully. But with the Bank of Japan continuing to print money and the Fed in tightening mode, it is certainly possible that the yen will weaken further even from these levels.

Fixed income

With the reset in global developed-market interest rates since the end of April, Japanese government bonds (JGBs) have underperformed both the U.S. and Eurozone markets in dollar terms. This was due largely to the depreciation of the yen, as yields on the Barclays JGB index widened by only 9 bps compared to 31 bps in the U.S. and 53 bps in the Eurozone. We expect JGB yields to remain less volatile than those of European bonds, so the primary factor determining U.S. dollar returns will continue to be the exchange rate. The risk of another 5%–10% depreciation in the yen makes an investment in Japanese bonds unattractive from a risk/reward perspective.

Emerging markets

Economy

China continues to be the dominant factor affecting emerging markets (EM). While Chinese growth is currently subdued, the government is taking a long-term view. Officials recognize that an expanding middle class will demand different products and services, a healthier environment and increased connectivity to the rest of the world. Consequently, they have embarked on a massive retooling of the economy to change it from one that primarily makes goods for export to one that is much more integrated into the global economy, with goods flowing in both directions.

The transition process is well underway but still has a long way to go. The government's first order of business has been to slow urbanization in China and restructure the legal and regulatory system. Other reform efforts include introducing a bankruptcy code, food safety measures and environmental regulations. Another important priority has been to deepen the monetary system. China has introduced debt instruments at the municipal level, allowed certain investment vehicles to go bankrupt, and tightened regulations governing trusts. It has also steered the credit system in the direction of using more traditional channels, such as banks, rather than borrowing through investment vehicles or trade schemes. As part of this effort, China has also cracked down significantly on corruption.

We recognize that these measures will slow near-term growth, but we have been positively surprised at how these measures have started to increase transparency and predictability in the system. For example, in order to stimulate growth, the People's Bank of China has behaved more like a Western central bank this year, reducing interest rates and engaging in open market actions similar to those of the Fed and the ECB. We fully expect China's economy to continue to slow on average over the next few years, but this should not be viewed as negative or potentially harmful to the global economy. China should manage to grow close to 6.7% this year and 6.5% next year—still healthy rates considering the size of its economy.

Equities
The most positive signal for emerging markets to appear over the past few months has been the turnaround in corporate profitability expectations (see Figure 10). Since 2011, return on equity (ROE) forecasts for developed-market corporations have been largely steady, but those for EM corporates have declined across all regions and sectors. The relatively stable performance of EM equity indexes versus developed indexes since early 2014 has been primarily due to a recovery in valuations after the forward multiple on the MSCI EM Index fell below 10x versus a long-run average of 12.3x. Now that the discount has disappeared, better earnings growth is needed to offset what is likely to be an ongoing drag from the appreciation of the dollar versus EM currencies. Though the dollar was flat against EM currencies in the second quarter, we expect it to resume its bullish trend.

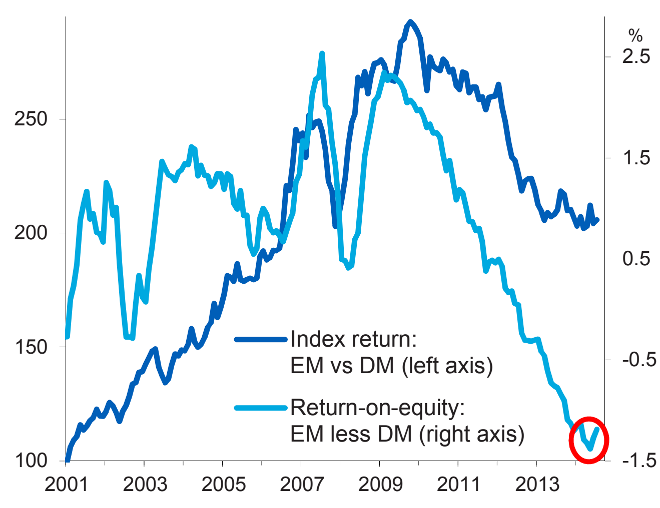
The profitability outlook is not uniformly positive, however. The recovery in ROE forecasts is concentrated in Latin America and countries in Europe, the Middle East and Africa (EMEA), which make up less than one-third of the MSCI EM index. Within Asia, the trend has stabilized in two of the largest markets, China and Korea, but forecasts have not yet turned higher. The macroeconomic landscape is also challenging. China's economy is not going to return to 7+% growth rates, meaning trade flows will not rebound soon. Domestic demand in countries with large external financing needs, such as South Africa, Turkey and Brazil, is at risk from a hike in interest rates if central banks are forced to defend their currencies against the dollar.

Currently low valuations and margins suggest an investment in emerging-market equities today will pay off over the medium term, but we recommend focusing on countries with resilient currencies (see Figure 11), low valuations (Taiwan, Korea) or a brightening earnings outlook (Taiwan).

Fixed income
The Teutonic replay this year of the 2013 "taper tantrum" has shown the resiliency of U.S. dollar-denominated emerging-market debt and suggests it remains an attractive option for investors looking to bolster portfolios against rising interest rates in the U.S. Despite the 43 bps increase in 10-year Treasury yields, from April's low through the end of the quarter, spreads for USD sovereign and corporate emerging-market debt tightened by 18–34 bps, leading to outperformance by the respective J.P. Morgan indexes.

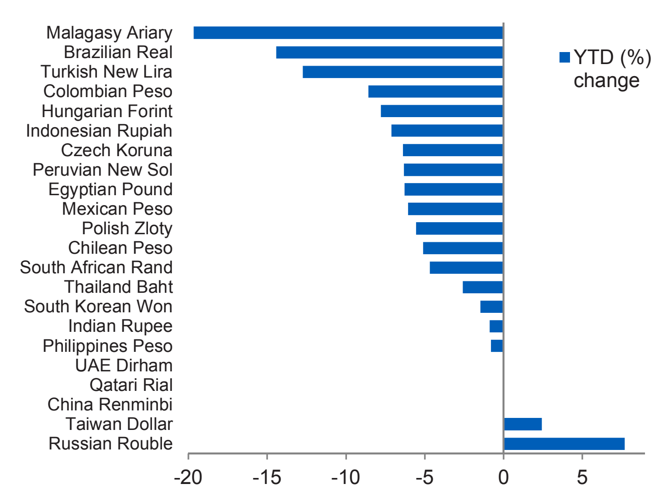
While emerging-market debt offers higher yields than what is available domestically, investors need to be selective. Local currency debt is unlikely to be able to provide enough income to offset further gains in the dollar versus the currencies of the main issuing countries. Debt issued in U.S. dollars, from both corporations and governments, mitigates that risk. The larger concern is what a resurgence of outflows from emerging markets by foreign debt investors could mean for spreads. Spurred by quantitative easing, investors poured over $72 billion into emerging-market debt funds from 2009 to 2013, nearly 10 times what had been invested in the previous 15 years. Some of these inflows have already reversed, with $15 billion redeemed over the

Figure 10: Relative emerging market profitability and return



Data as of June 30, 2015. Note: ROE based on next-twelve-month consensus estimates. Relative return is in U.S. dollars. Sources: Factset, TIAA-CREF Asset Management.

Figure 11: Year-to-date change in exchange rate versus U.S. dollar

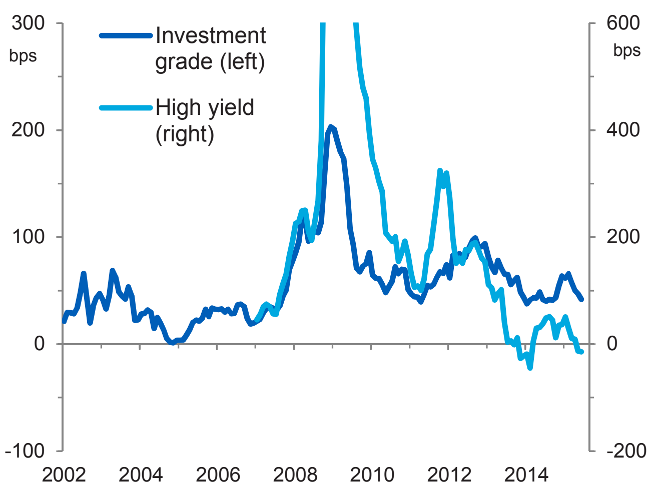


Data as of June 30, 2015. Sources: Factset, TIAA-CREF Asset Management.

last two years. The outflows have not had a noticeable impact on debt spreads, however. The heaviest redemptions were in 2013, when $15 billion was withdrawn in the space of nine months, but over this period spreads actually declined, and the indexes posted gains of 4%–5%.

Corporate debt has produced higher returns than sovereign debt so far this year, thanks to a more generous coupon and tightening spreads. This process may have gone too far, however. The pickup in yield over investment-grade sovereign debt has contracted to just 42 bps, near post-crisis lows (see Figure 12). This is nonetheless higher than it was pre-crisis, and so still offers relative value. High-yield bonds, however, are another matter. Despite the greater risk to corporate debt relative to sovereign and a smaller improvement in credit quality, spreads on corporate high-yield bonds have dropped below those for sovereign high-yield, making this part of the market less attractive.

Figure 12: Difference in spread between corporate and sovereign USD emerging-market debt



Data as of June 30, 2015. Monthly average. Sources: J.P. Morgan, TIAA-CREF Asset Management.

Conclusion

Among global economies, growth trends in the second half of the year should see a reversal of what transpired in the first half. We expect the tepid rate of U.S. GDP growth to improve to a healthier 3% pace, driven primarily by increased consumer spending and a rebound in business investment. Growth will likely accelerate in China as well, approaching 6.7%, as the world's most populous nation continues to transition from an export-based economy to one fueled by domestic consumption. In contrast, Europe should experience a modest slowdown to 1.5% by the end of 2015—still an impressive turnaround from last year.

The question for fixed-income investors is how far and how quickly interest rates will rise. Though the Fed is certainly going to move at a measured pace, the volatility in yields for publicly traded debt is likely to remain high as quantitative easing soaks up supply and liquidity remains low. Higher-yielding parts of the U.S. market offer the best protection against rising rates, while international investments should focus on markets where currencies can withstand a stronger dollar.

U.S. equities offer modest prospects for gains over the medium term. Valuations and margins are high, and wage gains threaten a squeeze on corporate profitability. Cyclical sectors that benefit from robust domestic demand, productivity engines such as the technology sector, or sectors with further M&A potential, such as health care, offer the best prospect of outperformance. Previous yield havens like REITs risk a sharp correction, as bonds finally begin to provide commensurate income without equity-level volatility. Portfolios will benefit most from international equity allocations, though currency risk remains an abiding concern. The potential for earnings growth is high in Europe and in emerging markets, while the Japanese market could yet revalue as Abenomics moves ahead.

[1] Real wages deflate nominal wages by the consumer price index giving one a relative sense of how consumers' purchasing power is faring through time. Economic analysis always uses real wages for this reason. Wages are also distinguished from income because wages measure only direct compensation on an hourly basis whereas income is a broader measure that includes benefits and other sources of income such as transfer payments and interest which are not derived directly through the labor process.

[2] See "Prepare for rising rates: Taking a fresh look at portfolio allocations." www.tiaa-cref.org/public/pdf/PM_Rising_rates_WP_2015-03-13.pdf.

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