June 2013

Global Market Commentary

Positioning for an Eventual Return to Temperance

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CAMBRIDGE ASSOCIATES LLC

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CAMBRIDGE ASSOCIATES LLC

Positioning for an Eventual Return to Temperance

A mid-year update on our views, focusing on the macroeconomic factors that impact short-term market moves and the valuations that influence long-run results.

On May 21, Cambridge Associates hosted an internet-based presentation to provide our investment outlook and address questions from clients. All clients are invited to join these periodic events. This report adapts and updates the remarks and exhibits presented during the May 21 event.

The first five months of 2013 have been intoxicating for investors, with central bank liquidity infusions sending the message that excess debt, anemic growth, and other sobering factors are worries for another day. But investors do not know when last call is, and some Federal Reserve governors appear inclined to wind down their stimulus this year, so investor portfolios need to be prepared for a more temperate environment.

Equity returns year-to-date have been generally strong, with the notable exception of emerging markets stocks, which have struggled partly due to disappointing Chinese growth. Bond returns have been modest as the demand for "safe" assets has slipped, and in recent weeks growing speculation about Fed "tapering" has further dented returns. Commodity-related assets have not performed well, as expectations for Chinese growth and global inflation have both been reset downward (Figure 1).

Political machinations and debt concerns have not whipsawed the markets as much this spring as in recent years, and realized volatility is well below its average level of the past ten years. The annualized volatility of world equities, measured on a daily basis, is just 9.6% year-to-date (about 40% less than the average level of the past decade). Of the asset classes shown in Figure 1, only gold and Japanese equities have been more volatile than average so far this year.

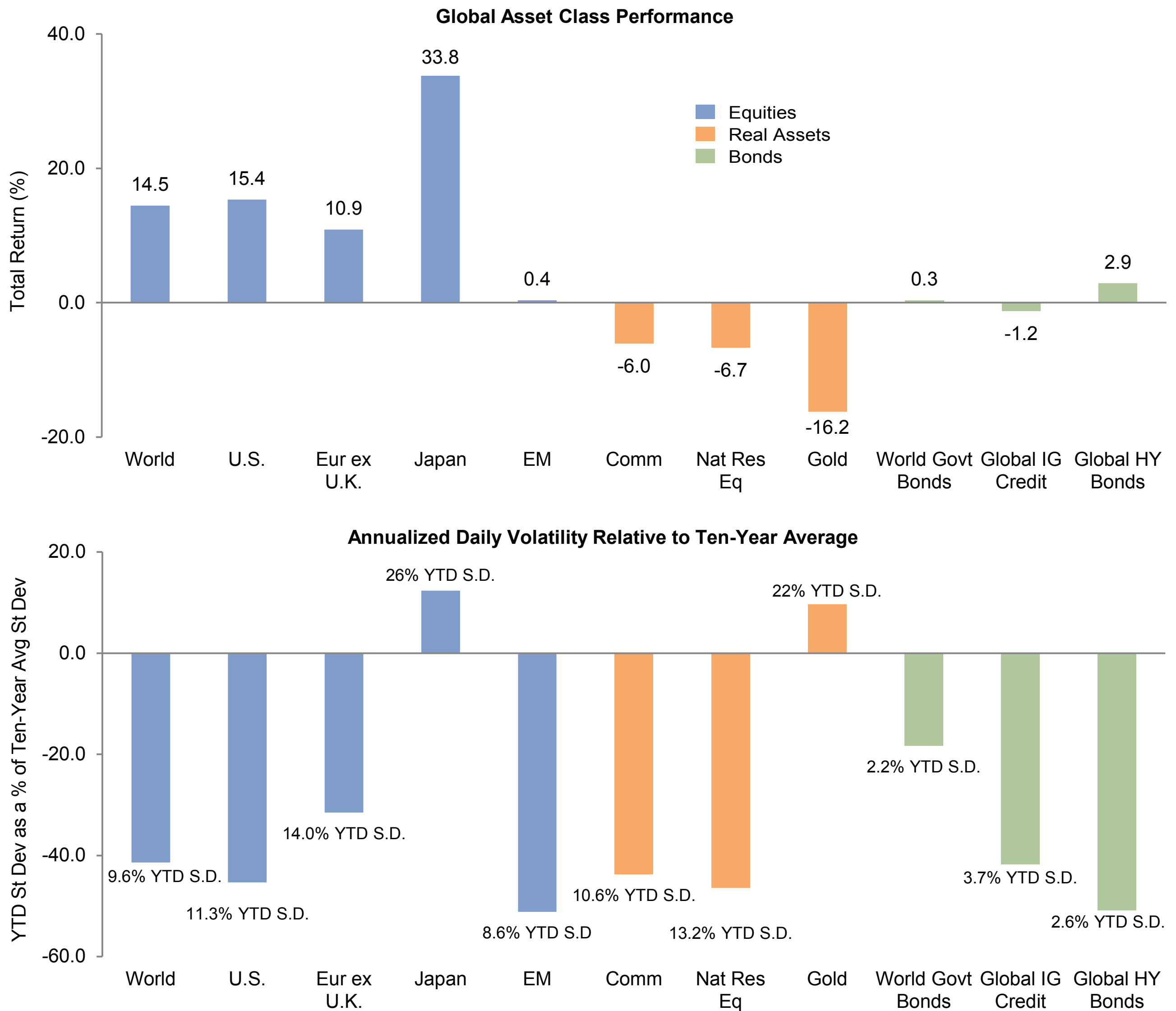
This commentary reviews recent performance and valuations for equities, commodities, and bonds. With so much noise in the macroeconomic environment, we encourage investors to focus on the signal provided by valuations. Valuations are a meaningful predictor of returns for long-term investors, as we show in the figures throughout this commentary. One important challenge today is the "danger in safety," with many defensive assets bid up to a degree that imperils their stability. We conclude this commentary with our advice. At some point, central banks will slow the liquidity spigot, and investors should ensure their portfolios are suited to weather a less-stimulative environment.

A Review of Valuations and Returns

Equity valuations are somewhat disparate, with the United States overvalued, although not dramatically so, and emerging markets undervalued. After rising by about 50% since last fall, we now consider Japanese equities fairly valued, and European shares are fairly valued as well (Figure 2). Commodities remain overvalued in our opinion; however, valuations have improved a bit. Bond valuations remain quite stretched.

While initial valuations are an important driver of *long-term* returns in the short term, expectations for economic growth, as well as speculation about whether central bank liquidity measures will grow or shrink, influence share prices.

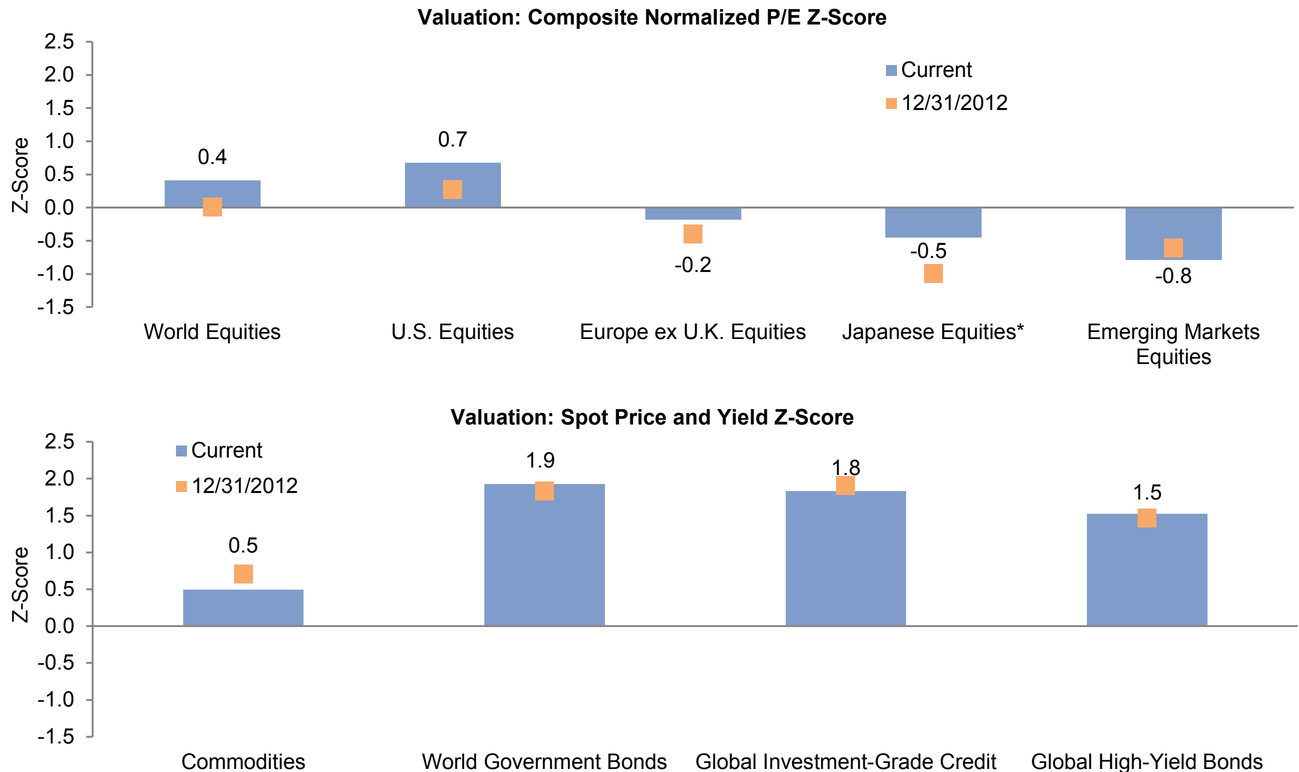
Figure 1. Year-to-Date Performance and Volatility
As of May 31, 2013 • Local Currency



Sources: Barclays, Citigroup Global Markets, Dow Jones Indexes, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: All returns are shown in local currency, except commodities, gold, global investment-grade credit, global high-yield bonds, and natural resources equities, which are shown in US$ terms. Asset classes represented by the following indices: MSCI World ("World"), S&P 500 ("U.S."), MSCI Europe ex U.K. ("Eur ex U.K."), MSCI Japan ("Japan"), MSCI Emerging Markets ("EM"), Dow Jones-UBS Commodity ("Comm"), 70% Datastream World Oil & Gas, 20% Datastream World Metals & Mining, and 10% Datastream Gold Mining ("Nat Res Eq"), Gold spot price ("Gold"), Citigroup World Government Bond ("World Govt Bonds"), Barclays Global Aggregate Corporate ("Global IG Credit"), and Barclays Global High-Yield Bond ("Global HY Bonds"). Total returns for MSCI developed markets indices net of dividend taxes. Total returns for MSCI emerging markets indices are gross of dividend taxes.

Figure 2. Equity, Commodities, and Fixed Income Valuations
As of May 31, 2013

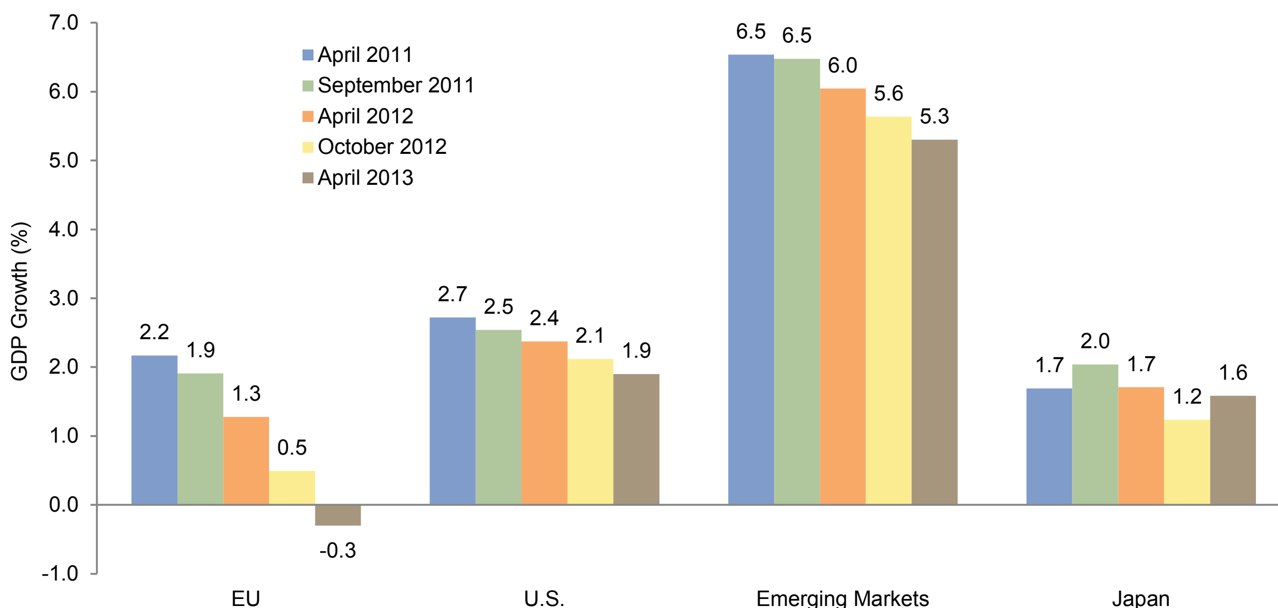


Sources: Barclays, Citigroup Global Markets, Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Z-scores represent the number of standard deviations away from the historical mean. Valuation data in local currency terms. U.S. deflated by CPI-U. All other equities deflated by CPI-G7.
* Z-score for Japanese equities is based on price-to-book ratio (post-2001 distribution).

Near-term economic growth expectations continue to trend downward, even as housing and some other bright spots have appeared in the United States recently. The International Monetary Fund's GDP growth expectations for calendar-year 2013 have declined steadily over time. Over the past year, expectations for Europe, the United States, and emerging markets as a group have declined by up to 1.5 percentage points. The IMF's growth expectations for Japan rose modestly from last fall, as a new government outlined massive stimulus measures (Figure 3).

However, while GDP growth expectations were generally declining, so were investors' concerns about the Eurozone unraveling or about the impact of the U.S. fiscal cliff. In part, this was because central banks have continued to open the liquidity spigots even wider. In fact, within the past year:

Figure 3. Shrinking Expectations for 2013 GDP Growth (IMF)



Source: International Monetary Fund.

- The Fed announced that it would buy $85 billion per month of mortgage and Treasury securities, and that it would keep policy rates low until the unemployment rate moves below 6.5%, as long as inflation expectations remain contained;
- The European Central Bank's Mario Draghi said that the ECB would do "whatever it takes" to preserve the euro; and
- Japan's new central bank chief unleashed a massive asset purchase program that has helped to push the value of the yen down sharply.

The U.S. and Japanese QE programs together are vacuuming up close to $2 trillion of assets on an annualized basis.

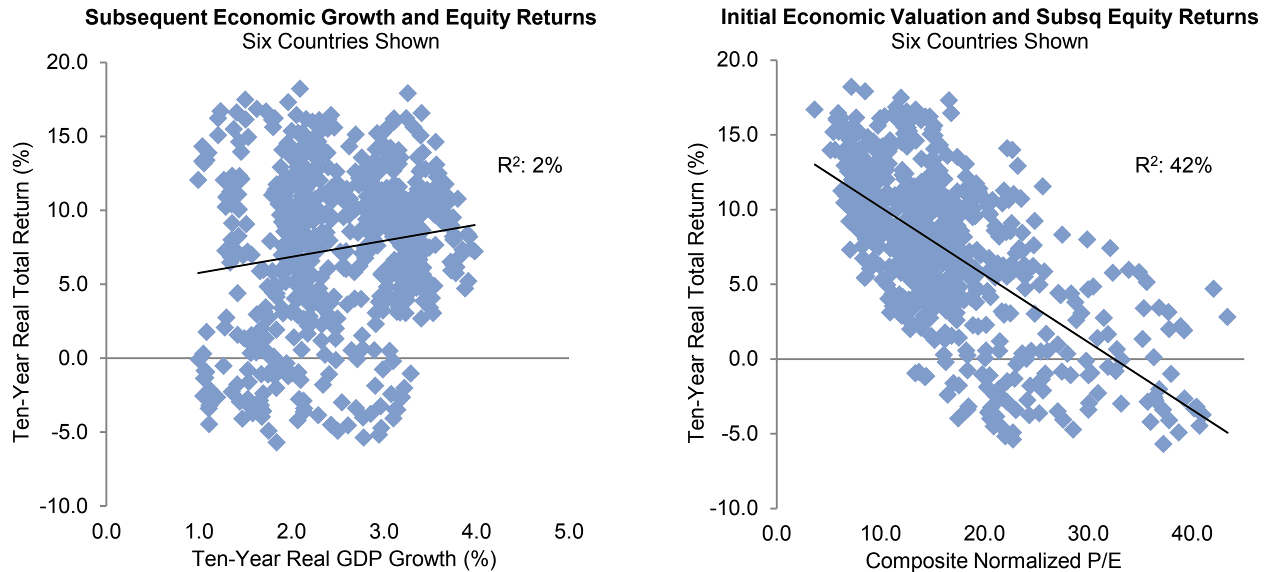
Announcements of central bank programs such as QE clearly have shaped market action recently, as have changing growth expectations.

But for long-term investors, how meaningful are macroeconomic factors? Historically, a country's level of GDP growth has not had much of a relationship to its equity return for a particular period. The left chart in Figure 4 compares the GDP growth for six major countries[1] over many overlapping ten-year time periods with the equity returns for those countries and time periods. Even a clairvoyant investor with perfect foresight into the level of future growth in various countries could not have translated that knowledge into a beneficial investment strategy by favoring the countries that would experience robust growth and underweighting those that would grow slowly.

[1] The chart includes the United States, United Kingdom, France, Australia, Canada, and Switzerland. These countries were included because we had ready access to data on returns, GDP, and normalized valuations over more than four decades; the relationship of their returns to either concurrent GDP growth or initial valuations was not a consideration.

Figure 4. Relationship of Equity Returns with Economic Growth and Valuation

Second Quarter 1970 – Fourth Quarter 2012



Sources: MSCI Inc. and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: Data are quarterly. The following countries are included in the analysis: Australia, France, the United Kingdom, the United States, Canada, and Switzerland. Equity returns refer to the subsequent ten-year real equity total return average annual compound return (%). Growth refers to the corresponding ten-year real GDP growth. Valuation refers to the initial composite normalized price-earnings (P/E) ratio. The composite normalized P/E ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data are in local currency terms, deflated by the CPI-G7.

The historical relationship was very weak and close to random, with an R^2 of just 2% (equating to a correlation of about 15%).

While *clairvoyance* on future GDP growth would not have been particularly useful to an equity investor, *clarity* on entry valuations is another matter altogether. Beginning valuations influence long-run returns. The right chart in Figure 4 compares initial valuations and subsequent returns for the same six countries and the same overlapping ten-year time periods. Generally, cheaper starting points were associated with higher subsequent returns, and more expensive starting points tended to result in poor returns.

The association is meaningful but not airtight, with a correlation of -65% and an R^2 of 42%. Subsequent figures in this report follow this format in comparing initial valuations with subsequent returns, but for a shorter and therefore more demanding time horizon of five years.

Equities

United States: Recovery Still Sluggish, Yet Share Prices Rich. In the United States, the economic environment continues to be sluggish and subdued, but generally improving. Equity markets, meanwhile, are full steam ahead.

Housing has gone from a drag on the economy to neutral to a likely positive today. Low

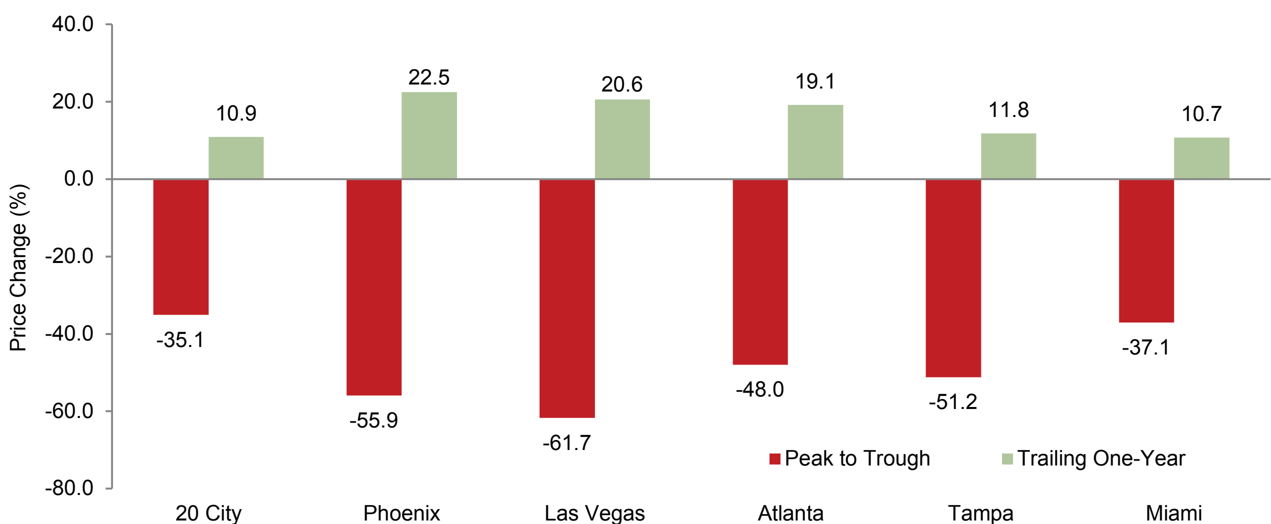
home-price-to-rent ratios have drawn investors, historically low mortgage rates have encouraged renters to become homeowners, and supply is tight in some markets. Home prices in hard-hit areas including Phoenix and Las Vegas have risen sharply over the past year (Figure 5), and a greater percentage of homeowners are now above water on their mortgages. Thanks to mortgage refinancing and the debt write-downs during the crisis, the household debt service burden is lower than it has ever been during the three decades it has been tracked. Housing starts remain moribund relative to history but are picking up.

Yet housing is only one part of the economy, and while job growth is picking up, the employment situation remains disappointing. The unemployment rate is falling at a decent clip, but it remains at a level consistent with past *peaks*, and much of the improvement in the unemployment rate has simply come from people dropping out of the job market.

While the real economy in the United States is glum but improving, valuations today reflect a degree of optimism. U.S. stocks are trading at about 20 times normalized earnings, which is above the average level of 16 times, so they are moderately overvalued (Figure 6).

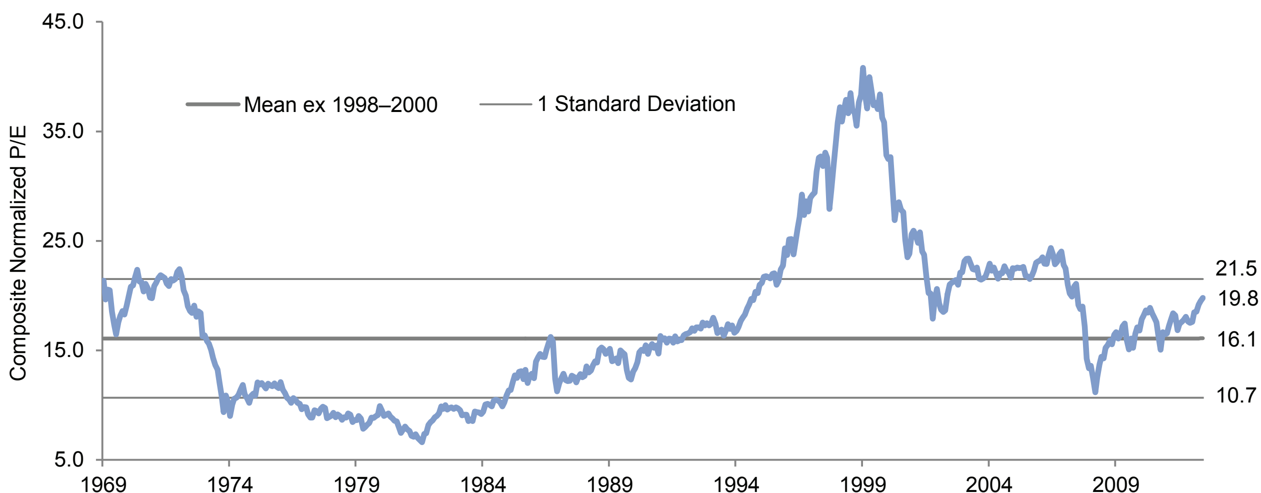
The relationship between the initial valuations and subsequent real returns is reasonably strong over a five-year period, with a -47% correlation between the two factors (Figure 7). However, subsequent real returns when valuations started near today's level have varied widely, from negative double digits annualized to more than 20% annualized. We estimate that if U.S. equity valuations were to revert to historical norms over the next decade, U.S. equities would return about 2% above the level of inflation, which is

Figure 5. S&P Case-Shiller Home Price Indices
As of March 31, 2013



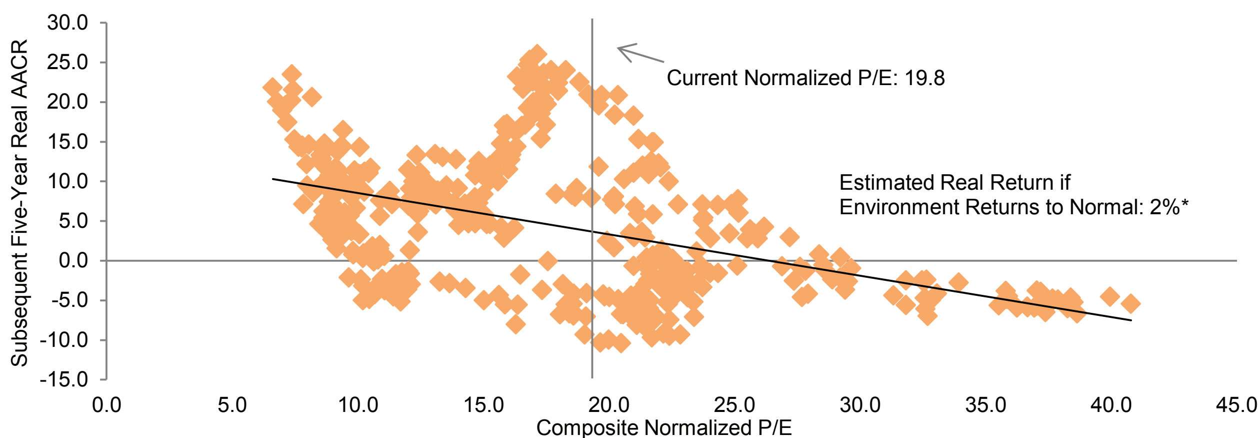
Source: Thomson Reuters Datastream.
Notes: There is a two-month lag for the data; current data covers home sales through January 2013. Peaks occurred in 2006 and 2007, while troughs occurred in 2011 and 2012.

Figure 6. MSCI U.S. Composite Normalized P/E
December 31, 1969 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data are in local currency terms, deflated by CPI-U.

Figure 7. Starting Valuations vs Subsequent Five-Year Real AACR: MSCI U.S.
December 31, 1969 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data in local currency terms, deflated by CPI-U.
* This estimated return uses our valuations-based projection for our Return to Normal scenario that assumes mild inflation, moderate real earnings growth, a relatively low corporate default environment, and a return to normalized ten-year Treasury yield.

lower than the historical average.[2] Of course, while our 2% real return estimate is a base case, we acknowledge there is a large margin of error around that estimate. Given the moderate overvaluation of U.S. equities, we would underweight them versus emerging markets equities.

Europe: Panic Has Subsided; Potential for Flare-Up Remains. The economic situation in Europe has shown some signs of stabilization, but not many signs of improvement. Meanwhile, *markets* are much more sanguine than this time last year.

Market stresses have come down dramatically since last summer, as the ECB has made it quite clear that it would devote considerable resources and energy toward keeping the euro together. After Spanish and Italian bond yields soared in late 2011, the Long-Term Refinancing Operation (LTRO) encouraged banks to buy massive amounts of their domestic government's bonds, which papered over the debt problems for several months … until it didn't. From March to August 2012, two-year Spanish government bond yields soared from 2% to nearly 7% (Figure 8). Then, last summer, after ECB President Mario Draghi vowed to do "whatever it takes" to preserve the monetary union and the ECB announced it was prepared to buy bonds via the Outright Monetary Transactions (OMT) program, two-year yields once again collapsed back to roughly 2%, and ten-year yields are about 4%. Since late July 2012, European equities have returned 30%. The Cypriot bank bail-in earlier this year barely registers on the chart.

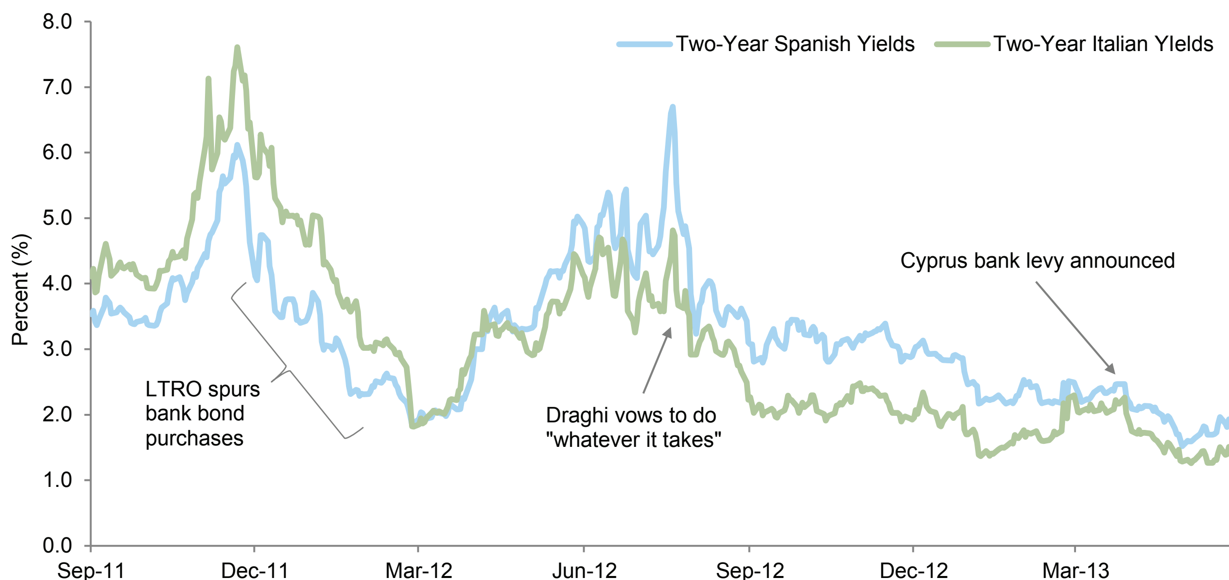
[2] This estimated return uses our valuations-based projection for our Return to Normal scenario that assumes mild inflation, moderate real earnings growth, a relatively low corporate default environment, and a return to normalized ten-year Treasury yield.

However, despite the apparent all-clear from the peripheral bond markets, economic woes clearly persist. Unemployment remains very high in Southern Europe, factories are not exactly humming despite euro weakness and falling unit-labor costs, and consumer and business sentiment is improving but weak. Debt levels remain well over 100% of GDP for some countries.

Given high debt levels and the prospect of ongoing deleveraging, weak economic growth (or even continued contraction) is likely to persist for a prolonged period in Europe. However, as we have seen, this has precious little relationship to equity returns—equity valuations are more meaningful. We currently characterize equities within continental Europe as fairly valued. At 14.4, the Continent's normalized price-earnings (P/E) ratio is at a modest discount to its long-term average level of 15.5, in part because low valuations of companies in the financial sector continue to exert a downward pull on the overall index (Figure 9). We remain neutral on Europe, implying a market-weight posture toward the region.

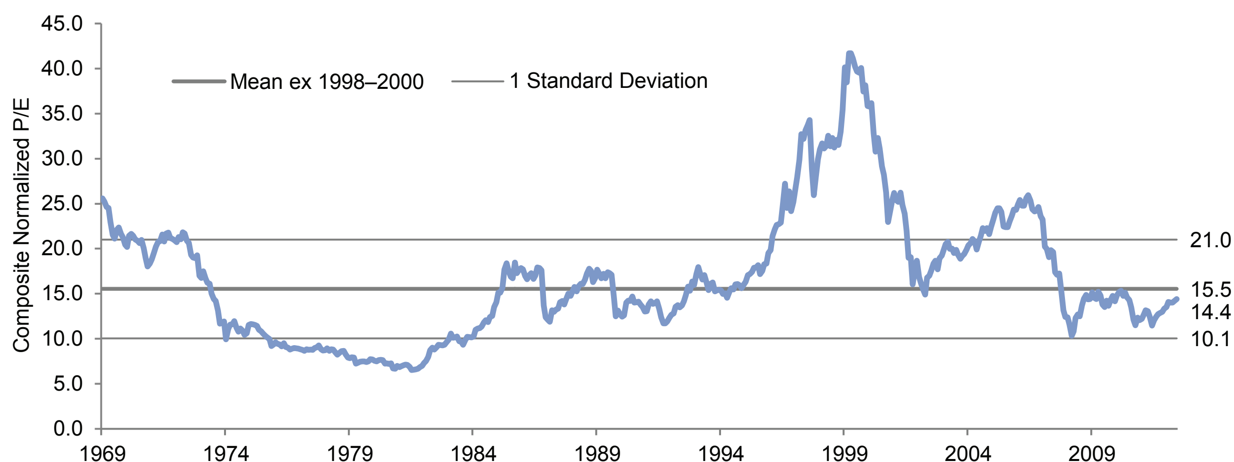
Just as in the United States, European equities have generally delivered better returns when starting valuations were cheap, and poor returns when starting valuations were rich; however, this is not airtight, and valuations do not necessarily revert over a given five-year period (Figure 10). With that said, in our Return to Normal scenario, European equities would see estimated annualized real returns of about 6%, which is a bit higher than the historical average level. Of course, as with the United States, this return is simply a base case, and investors must recognize that the realized return over the coming years could vary substantially.

Figure 8. Two-Year Spanish and Italian Government Bond Yields
September 5, 2011 – May 31, 2013



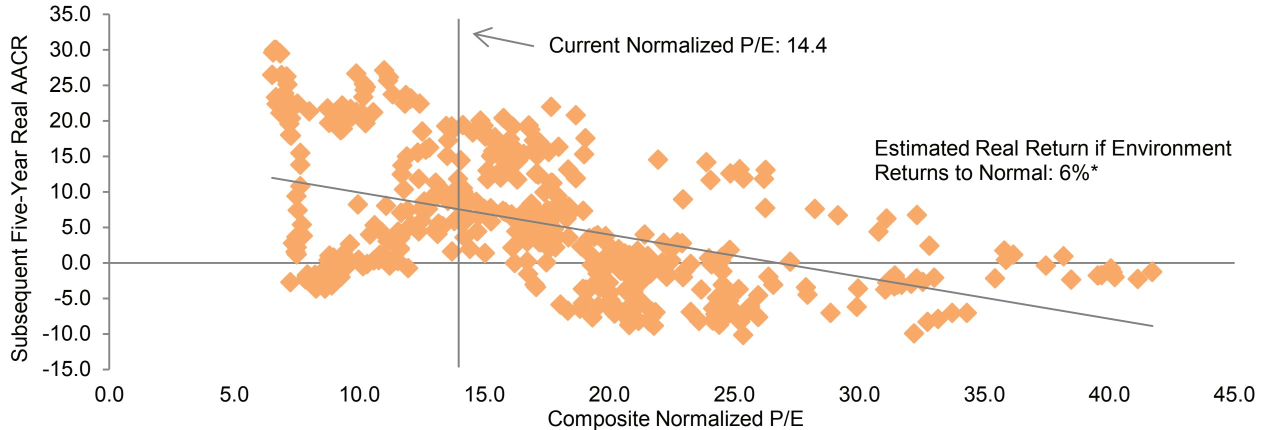
Source: Thomson Reuters Datastream.

Figure 9. MSCI Europe ex U.K. Composite Normalized P/E
December 31, 1969 – May 31, 2013



Sources: Bloomberg L.P., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data are in local currency terms, deflated by the CPI-G7.

Figure 10. Starting Valuations vs Subsequent Five-Year Real AACR: MSCI Europe ex U.K.
December 31, 1969 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied
Note: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data are in local currency terms, deflated by the CPI-G7.
* This estimated return uses our valuations-based projection for our Return to Normal scenario that assumes mild inflation, moderate real earnings growth, a relatively low corporate default environment, and a return to normalized ten-year Treasury yield.

Japan: Rocketing Share Prices Already Reflect a Revolution That Has Yet to Occur. Europe's 30% rally since last summer has nothing on Japan. Since last June, the Nikkei has risen more than 60% and the yen has fallen 20% (Figure 11).

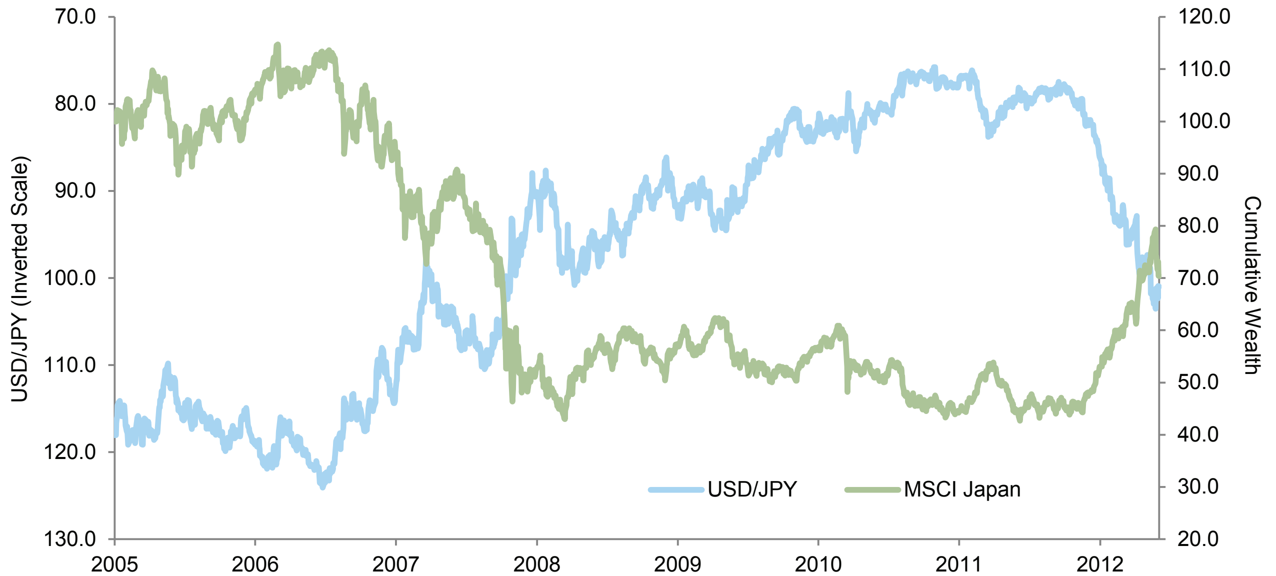
Prime Minister Shinzō Abe and Bank of Japan (BOJ) Governor Hirohiko Kuroda, attempting to kick-start the long-moribund Japanese economy and eradicate deflation, are pursuing a very aggressive $1.4 trillion quantitative easing scheme. Implementing a plan to weaken the currency and boost inflation clearly has risks in a country as indebted as Japan.[3] For equity investors, even if higher inflation somehow spurred higher growth rates, without a more shareholder-friendly culture, it is not clear that common shareholders would reap all of the implied rewards.

Investors certainly seem to have embraced the plan, however, pushing up share prices sharply. Japanese share prices appear to be driven by somewhat speculative momentum, increasing the vulnerability of Japanese shares (Figure 12). Indeed, in late May, Japanese equities suffered two days of 4%+ sell-offs.

After their recent hard rally, we once again consider Japanese equities to be fairly valued in absolute terms based on price-to-book (P/B) metrics (Figure 13). Additionally, in relative terms, they are trading at their historical average levels versus the rest of the developed world. We remain neutral on Japan and would be cautious of claims of a new dawn, particularly in the absence of changes to a corporate culture that tends to place shareholders toward the bottom of the pecking order.

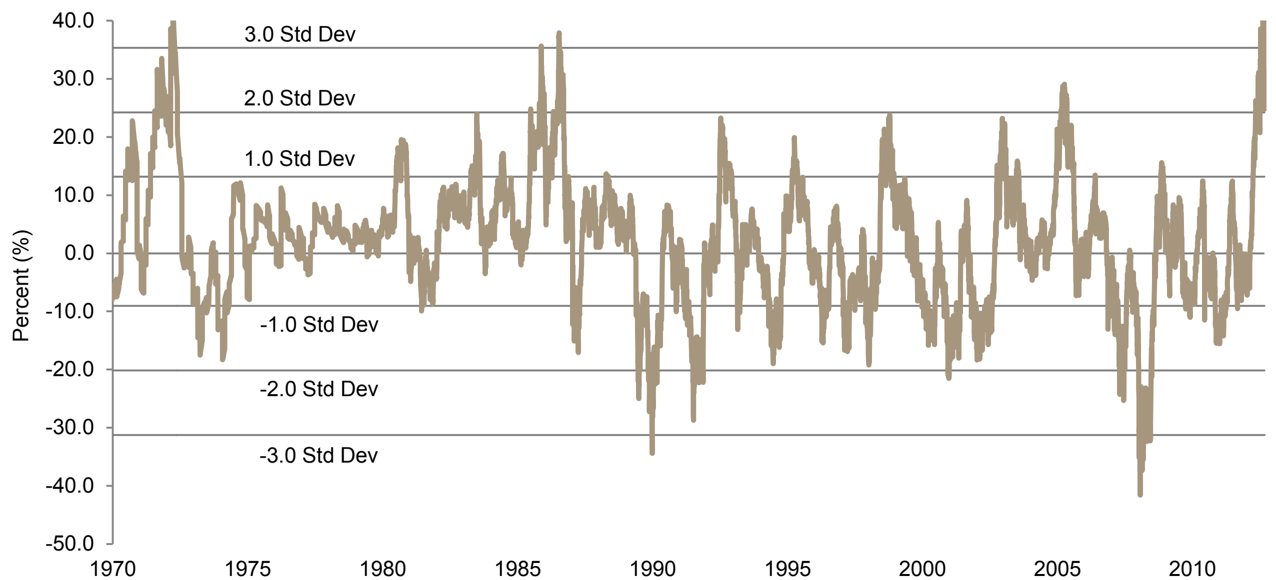
[3] The risks are lower when the country's debt is primarily held domestically, as is the case in Japan.

Figure 11. MSCI Japan vs USD/JPY
December 31, 2005 – May 31, 2013



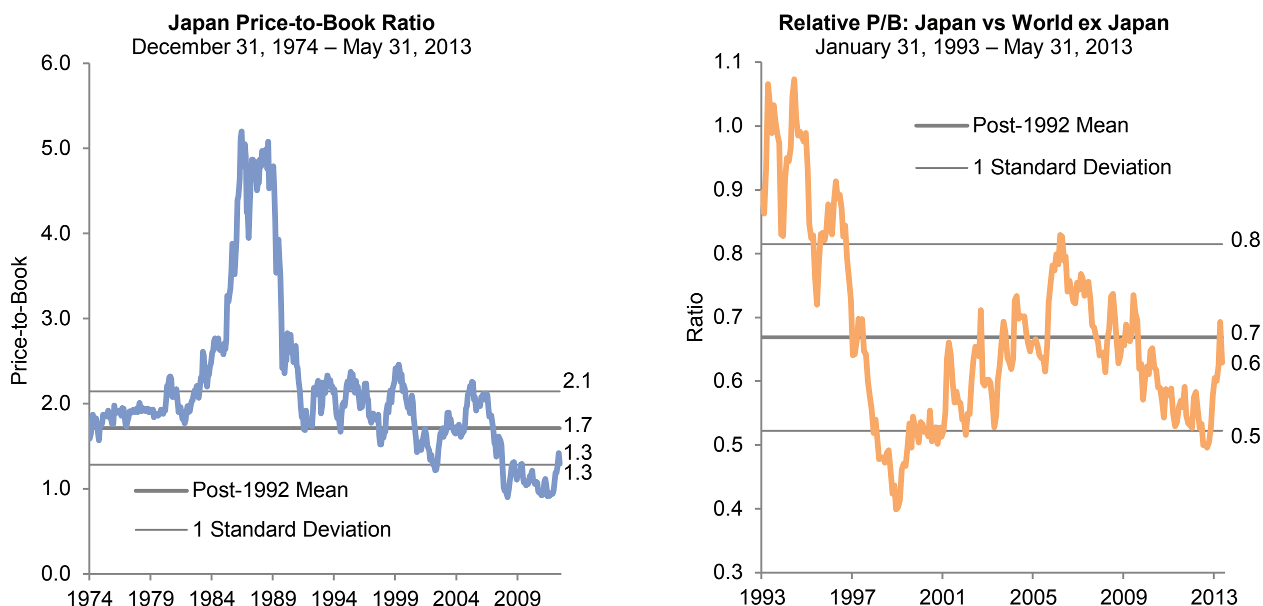
Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Figure 12. MSCI Japan: Percentage from 200-Day Moving Average
October 6, 1970 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Figure 13. Japanese Equity Valuations



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

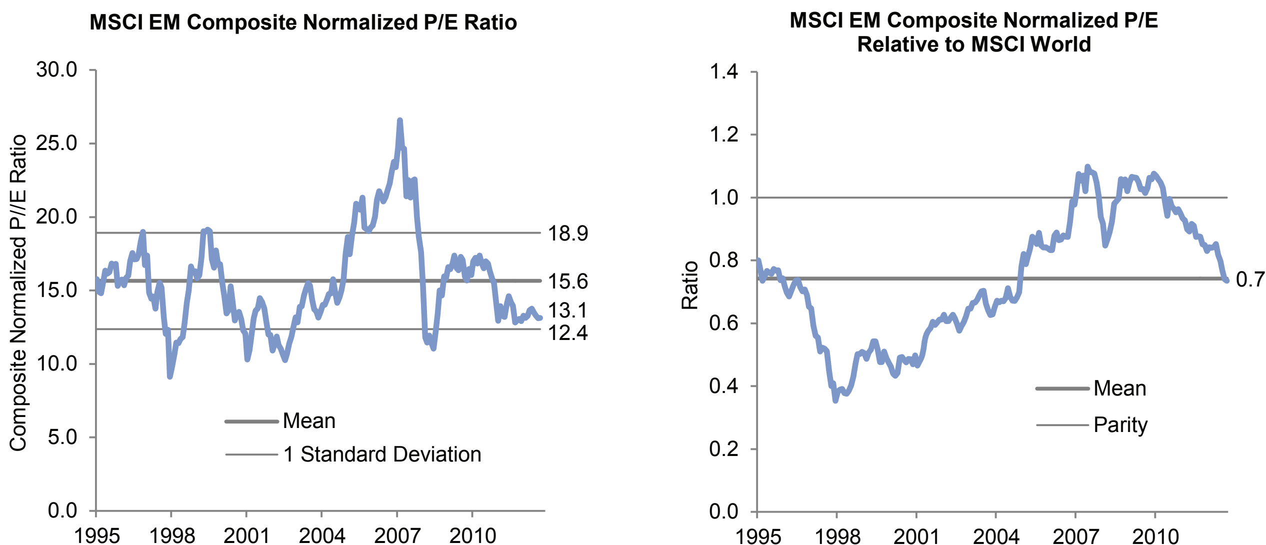
Emerging Markets: Chinese Demand Worries Depress Equity Valuations.
The year-to-date performance gap between emerging markets equities and the MSCI World Index has been extreme, and many investors are understandably nervous about the outlook for emerging markets. While we have concerns about near-term performance, we believe share prices reflect some of the headwinds, and we continue to recommend that investors overweight emerging markets equities versus U.S. equities, given the valuation divide between the two markets.

We view emerging markets equities as undervalued, trading 13 times normalized earnings, or 0.8 standard deviation below the historical average multiple of 16 times (Figure 14). While emerging markets equities are clearly undervalued, valuations remain some 28% above the trough levels seen a decade ago.

Emerging markets equities trade at a 28% discount to the MSCI World Index, after trading at a premium for the past few years. Today's discount is larger than in 2008 and in line with the post-1995 average, although it is worth noting that this historical average discount is impacted by the giant tech-bubble premiums of developed markets equities in the late 1990s, so at today's 28% discount, emerging markets are a good value relative to developed markets.

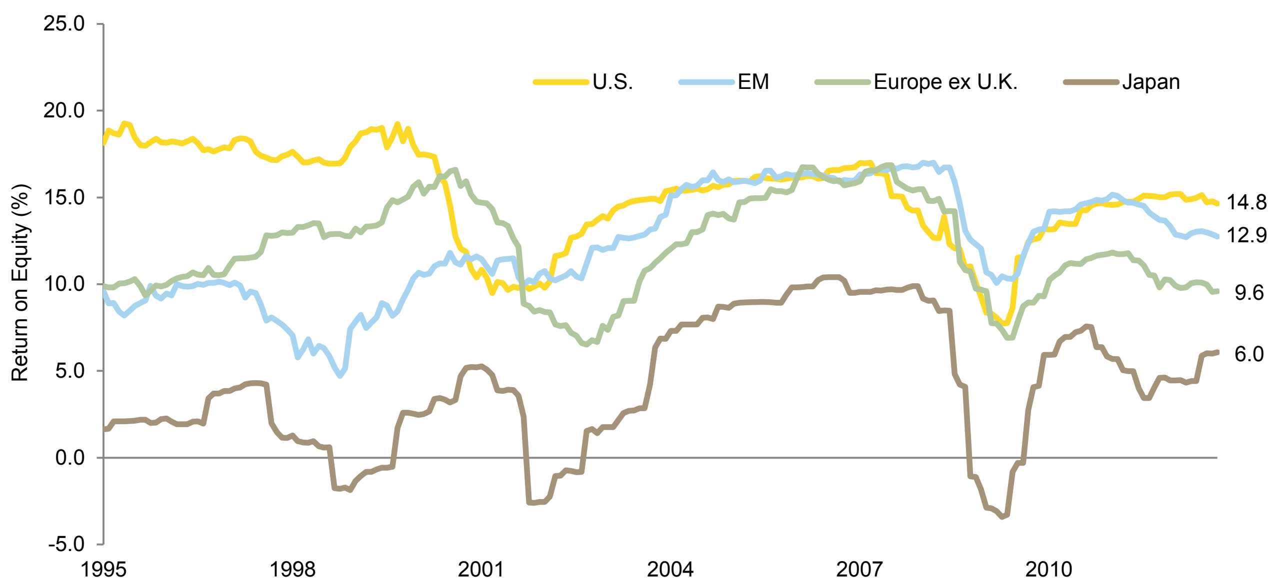
The large valuation discount for emerging markets equities today is intriguing given that emerging markets equities as a group continue to generate higher profitability than many developed markets, measured by return on equity (ROE). Emerging markets ROE is well above European and Japanese ROE, and only modestly below U.S. ROE (Figure 15).

Figure 14. Emerging Markets Equities Valuations
September 30, 1995 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Valuation data are in local currency terms, deflated by the CPI-G7.

Figure 15. Return on Equity
September 30, 1995 – May 31, 2013



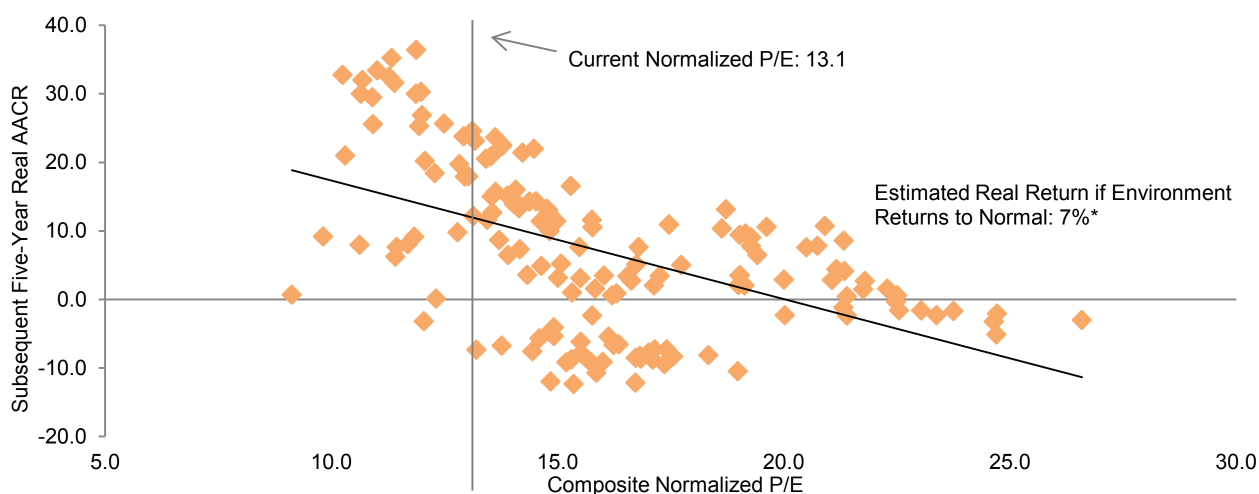
Sources: MSCI Inc. and and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Today's relatively low valuations imply strong future returns, with our valuation-based Return to Normal projection penciling in 7% annualized real returns over the next five years (with a wide margin of error on either side of the projection) (Figure 16). While this is a very attractive return prospect, it is not clear whether emerging markets equity valuations will revert to normal any time soon.

Emerging markets as a group are undervalued, but we find wide dispersion across sector and country valuations. Undervaluation is concentrated in sectors that are generally cyclical in nature, such as materials, energy, and financial stocks (Figure 17). Consumer-related sectors range from fairly valued to outright expensive, with consumer staples stocks trading at 2.4 standard deviations above their historical average valuation multiples (consider that rather prosaic firms including Indian soap makers and Mexican bread bakers trade at more than 30 times forecast earnings). While sector valuation dispersions are present in developed markets as well, with defensive sectors trading at wide premiums to cyclical stocks, the dispersion within emerging markets is more pronounced.

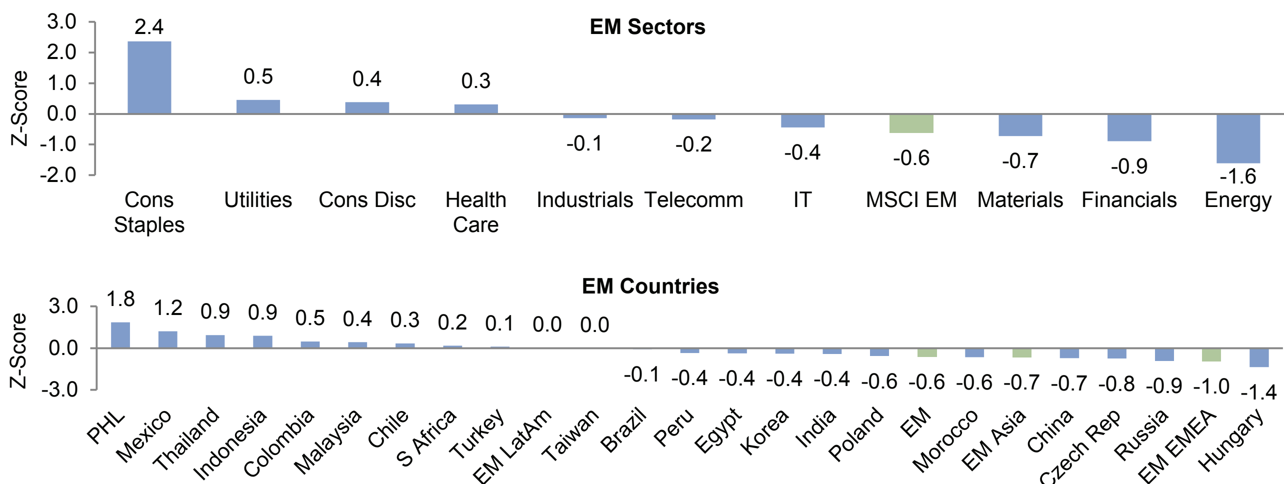
Among countries, undervaluation is most apparent in China and Eastern European markets. Russia is viewed as particularly cheap by some analysts. Eastern European markets are suffering from their own debt crisis and spillover from the euro crisis. At the same time, smaller, so-called domestic demand–driven markets are trading at above-average valuations (particularly ASEAN markets including the Philippines and Thailand). It is also worth noting that emerging markets small caps are trading at a historically wide premium to large caps, given less concentration in financials and commodity-related stocks. After trading

Figure 16. Starting Valuations vs Subsequent Five-Year Real AACR: MSCI EM
September 30, 1995 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Valuation data are in local currency terms, deflated by the CPI-G7.
* This estimated return uses our valuations-based projection for our Return to Normal scenario that assumes mild inflation, moderate real earnings growth, a relatively low corporate default environment, and a return to normalized ten-year Treasury yield.

Figure 17. MSCI Emerging Markets: Price-to-Book Deviation from Historical Average
September 30, 1995 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: For IT valuation, the bubble period (1998–2000) has been removed from the average and standard deviation calculations. Sector z-scores are calculated based on the historical mean price-to-book (P/B) ratio while the country z-scores are based on the historical post-2001 median P/B.

largely in unison for many years, sector- and country-specific factors are now overshadowing broad-market beta within emerging markets. Additionally, the parts of the emerging markets world that are cheap face considerable head-winds and elevated risk.

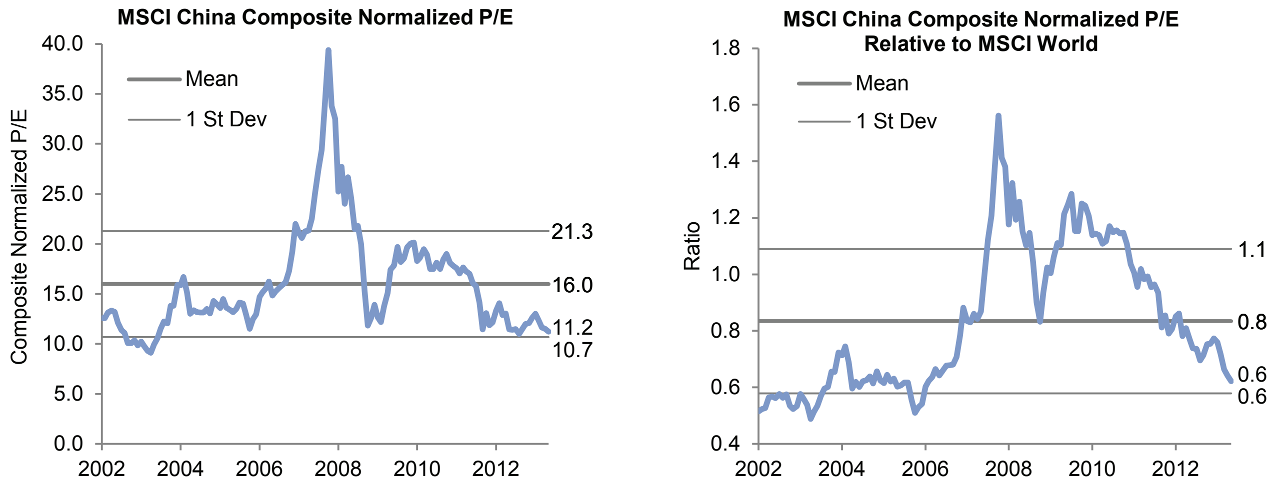
China: Falling Off the Treadmill. Given that China is the single largest market in the emerging markets index at roughly 20%, it deserves special attention, as its weak equity performance has held back the index as a whole (as has its slowing economic growth). Hong Kong–listed Chinese equities[4] appear nearly 1 standard deviation cheap, with shares priced at 11 times normalized P/Es, versus the historical average of 16 times (Figure 18). Relative to developed equities, Chinese equity multiples are at a roughly 40% discount—almost back to the discount seen in the early 2000s.

As with the broader emerging markets universe, the undervaluation is most acute within cyclical sectors, with some trading at 30%+ discounts to historical average levels, while consumer-related stocks trade at above-average valuations (Figure 19).[5] Given the deep discounts within cyclical sectors, it would seem that the near-term growth headwinds have been priced in. However, Chinese equities traded at low absolute and relative valuations for several years in the early 2000s before eventually re-rating in 2006–07. While Chinese equities appear to be priced for decent long-term returns, any rebound could be a long time coming.

[4] The MSCI China Index tracks the H-share market, generally open to non-Chinese investors. The mainland A-share market also appears fairly cheap; however, foreign investors still have somewhat constrained ability to invest in A-shares, despite some liberalization over the past year.

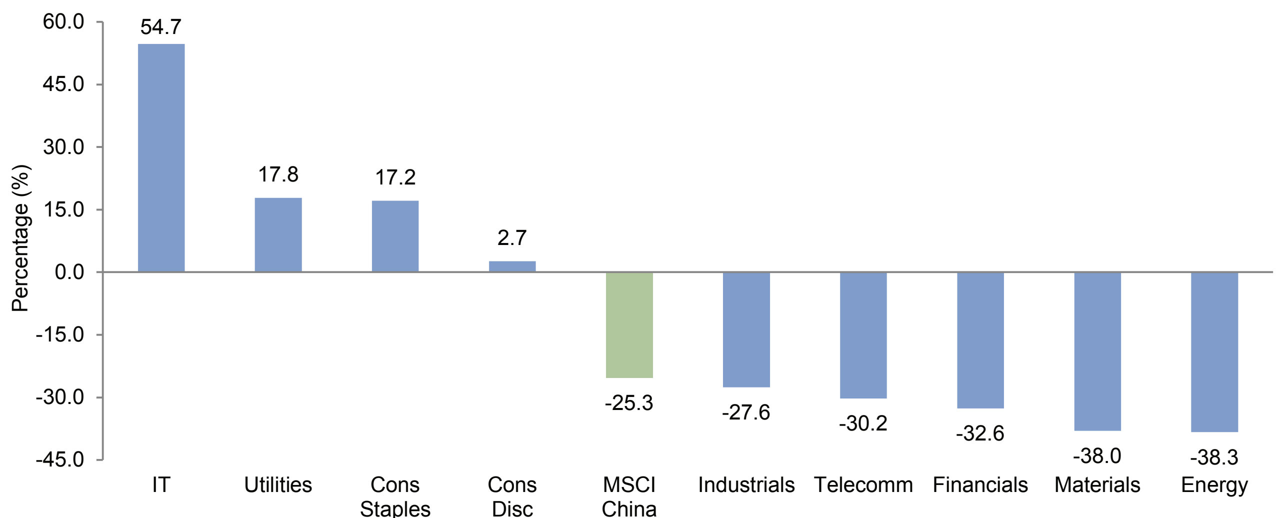
[5] The IT sector in China is also largely consumer-oriented.

Figure 18. Chinese Equity Valuations
January 31, 2002 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied
Notes: The composite normalized price-earnings ratio is calculated by dividing the inflation-adjusted index price by the simple average of three normalized earnings metrics: ten-year average real earnings (i.e., Shiller earnings), trend-line earnings, and return on equity–adjusted earnings. Valuation data are in local currency terms, deflated by the CPI-G7.

Figure 19. MSCI China Price-to-Book Percentage Above/Below Median
January 31, 2002 – May 31, 2013



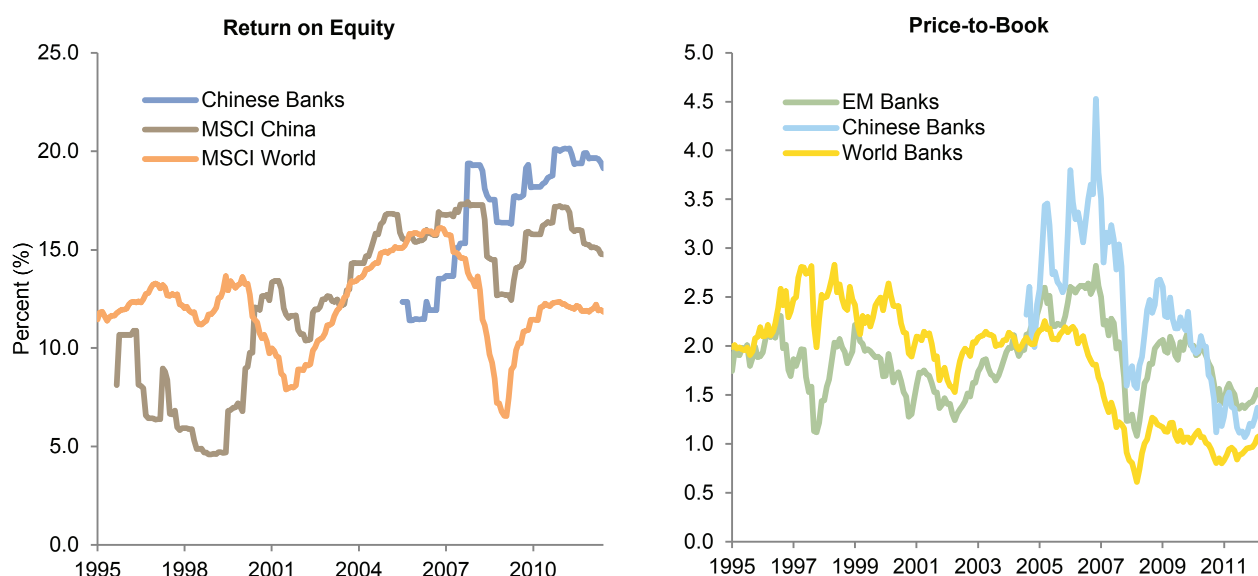
Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied
Notes: All sectors are valued based on post-2001 median and standard deviation except for consumer staples, which is valued based on its post-2003 median and standard deviation. The health care sector has been omitted due to incomplete historical data.

Among the factors weighing down Chinese equity valuations are concerns about near-term profits, especially for banks—financials is the market's single-largest equity sector. As the Chinese economy has slowed, Chinese ROE has begun to weaken, although it remains high relative to developed markets. Chinese bank ROE, meanwhile, remains very strong for now (Figure 20). Thus, current low valuations seem to imply that Chinese bank profitability will weaken substantially going forward. Currently, emerging markets banks trade at low P/B valuations, but above their 2008 trough levels, yet Chinese banks have moved to a discount to emerging markets banks and are below their 2008 levels. In fact, Chinese banks trade at valuations similar to the trough levels reached by emerging markets banks during the Asia crisis in 1998. However, at 1.2 times book value, Chinese banks still command a premium to developed markets banks. Clearly, Chinese banks have priced in considerable headwinds to margins from increasing financial liberalization and risk from rising non-performing loans. However, they are not yet at the depressed levels associated with the types of balance sheet crises that have affected U.S. and European banks recently and Japanese banks before that. In other words, if China can avoid a financial crisis, the country's bank stocks are cheap—if not, they are potentially a value trap.

So, can China avoid a hard landing or credit crunch? So far, the slowdown in China has been gradual, with real GDP growth coming in at 7.7% year-over-year for first quarter 2013 (Figure 21). While this is still a very high rate of growth relative to most other economies, it is low in the context of China's 10% average growth rates of the past decade. Recent economic data have come in on the weak side, implying the economy is not picking up speed.

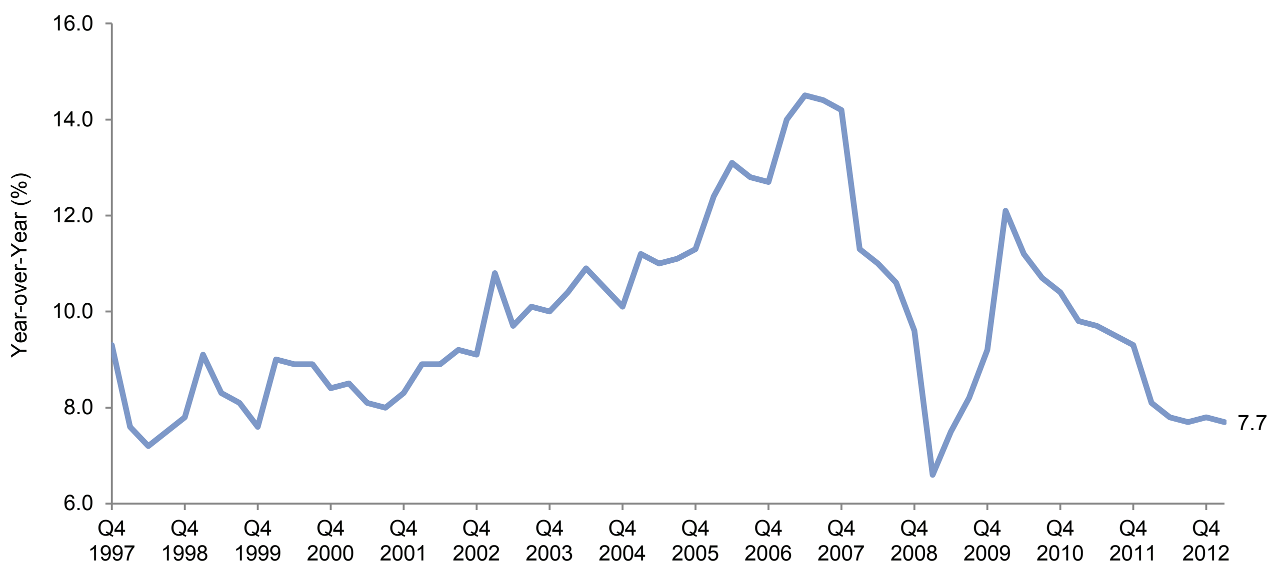
Figure 20. Profitability and Valuations for Chinese Banks

December 31, 1995 – May 31, 2013



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Figure 21. Chinese Real GDP Growth
Fourth Quarter 1997 – First Quarter 2013



Source: Thomson Reuters Datastream.

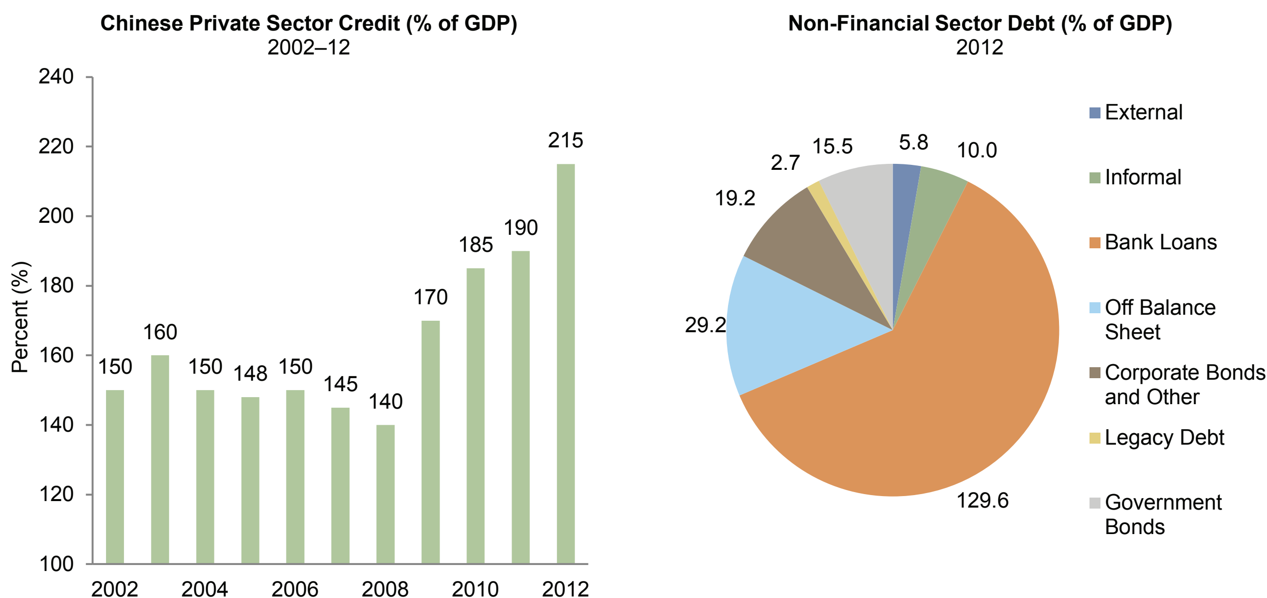
While property prices are once again rising, this has not yet translated into much additional construction.

Of increasing concern is that the deceleration has occurred amid rapidly rising debt levels. Non-financial debt has risen to 215% of GDP at the end of 2012, up from 150% before the global financial crisis (Figure 22). The credit-fueled stimulus over 2009–10 saw Chinese growth rebound sharply amid infrastructure and real estate construction. However, last year's 25 percentage point rise in debt has yet to trigger any acceleration.[6] Some observers argue that growth is even lower than official statistics indicate.

Much of the debt in China takes the form of bank loans (Figure 22), which go to the corporate sector, but also to local governments in the form of loans to special purpose vehicles to finance infrastructure and real estate development projects. While the authorities put a brake on direct bank lending to local governments in 2010, over the past two years a rash of off–balance sheet lending and other forms of borrowing, including trust loans and opaque "wealth management products," have emerged to skirt lending curbs. Such shadow-banking debt amounts to an estimated 50% of GDP. However, central government debt is a low 15% of GDP.

[6] The amount of GDP increase associated with a given increase in Chinese credit has shrunk dramatically over the past decade, implying that less and less of the newly issued debt is being used for productive investment. From 2003 through 2007, each incremental RMB 2 million increase in debt would boost annual GDP by approximately RMB 1 million. During the following three years, the incremental credit increase required to generate a 1 million RMB bump in GDP increased by about half, to roughly RMB 3 million. And in 2011–12, it increased again to nearly RMB 4 million. Thus, the marginal benefit of new credit has declined by half over the past ten years.

Figure 22. Chinese Credit and Debt



Sources: CEIC, People's Bank of China, Pivot Capital Management, UBS, and Wind Information.

The extent of the potential bad debts in the system is hotly debated. Current non-performing loans are low at 1% of bank assets, but this is a lagging indicator given the rapid expansion of bank balance sheets. Some estimates peg the potential bad-debt figures as low as 10% of GDP; however, during China's last debt crisis in the late 1990s, non-performing loans swelled to more than one-third of bank assets (which today would approach 50% of GDP). While the 1990s experience may or may not be indicative today, it does help explain why Chinese bank share prices are cheap.

The recent run-up in Chinese credit growth appears to be unsustainable, which the authorities have acknowledged by seeking to rein in various forms of shadow banking. Yet as authorities hold back credit growth, economic growth will likely continue to slow. Policymakers seem comfortable with this, provided the slowing is gradual.

A crisis triggered by rising defaults cannot be ruled out and would necessitate a government bailout and restructuring, similar to what China has done in the past, and the United States has done since 2008. While China has the fiscal scope and domestic savings to accomplish this, such an effort could drag on future economic growth and earnings for several years as banks roll over bad loans and new lending contracts.

The Chinese economy might stabilize later this year, as the impact of recent credit growth begins to feed through the system with a lag. Policymakers are also expected to unveil a host of supply-side reforms later this year to support domestic consumption and begin to rebalance the economy. A crisis is not yet a foregone conclusion.

In any case, China's credit and investment growth needs to slow further, and because consumption cannot yet fully offset a slowdown in investment, overall growth will slow as well. Thus, China's slowdown is both cyclical and secular in nature, and the world must adapt to a slower China.

To some extent, this transition is already priced in to emerging markets equities. Stocks most tied to Chinese demand have suffered. Cyclicals are cheap, while Chinese consumer-oriented names are not. Absent acceleration in the global and Chinese economy, emerging markets equities may remain under pressure in the near term. Still, emerging markets valuations offer compelling upside potential over the long term, especially if negative views on the asset class are overdone.

Overall, today we continue to advocate an overweight posture in emerging markets equities as a value play (underweighting the United States), but given near-term headwinds we would be cautious in sizing this position.

Other Asset Classes

Commodities: "Supercycle" on the Way Out? As Figure 1 showed, commodity-related investments are sitting out the risk-asset rally so far in 2013. With slowing growth in China and other emerging markets, investors are second guessing the theme that saw massive commodity price increases over the past decade. Several years of high prices encouraged a large build-out of potential supply that can come on line in many commodities in the near term. And long-only investors may be getting fed up with an asset class that has under-delivered.

Commodity prices and prices of related natural resources equities more than tripled from 2002 through early 2011, but have subsequently trailed off (Figure 23) as China's investment pace slowed sharply, dragging down its consumption of industrial metals and energy commodities. Investment contributed almost 8 percentage points of China's GDP growth in 2009, then 6 percentage points in 2010, 5 in 2011, 4 last year, and just over 2 for the first quarter of this year. The "supercycle" has been driven by Chinese demand, and it is certainly an open question whether it remains intact.

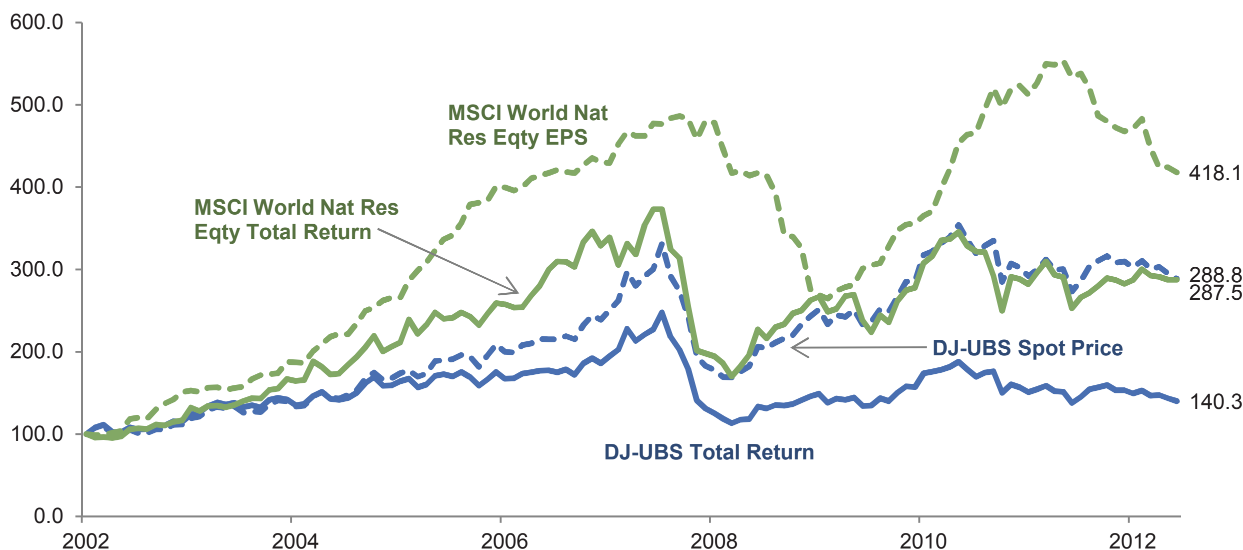
Yet poor performance of commodities is not just a China issue and not just a recent issue. Longer-tenured investors in commodity futures have likely been somewhat disappointed. Even as spot prices tripled over the past decade, the impact of contango roll yields, together with a cash-collateral yield near zero for five years now, has combined to generate massive underperformance of about 150% cumulatively for commodity futures investments versus the underlying spot prices from the end of 2002 to the present (Figure 23). However, we have long recommended that investors use active management in this asset class, given the opportunity for managers to mitigate the negative roll yield.

The performance of natural resources equities has been better than commodities over the period, but has provided some disappointments, too. Returns have lagged the growth in EPS as P/E multiples have come down.

We believe natural resources equities are a decent value today. Within the natural resources sector, which includes oil & gas companies, diversified minerals and mining firms, and gold mining stocks, the gold mining stocks are arguably the cheapest relative to their history and are surely the most beaten-up, off about 60% from their 2011 peak levels and down about 44% year-to-date.

Commodity spot prices remain elevated relative to their inflation-adjusted average levels over

Figure 23. Commodity Total Return and Spot Price Performance and Nat Res Total Return and EPS
December 31, 2002 – March 31, 2013



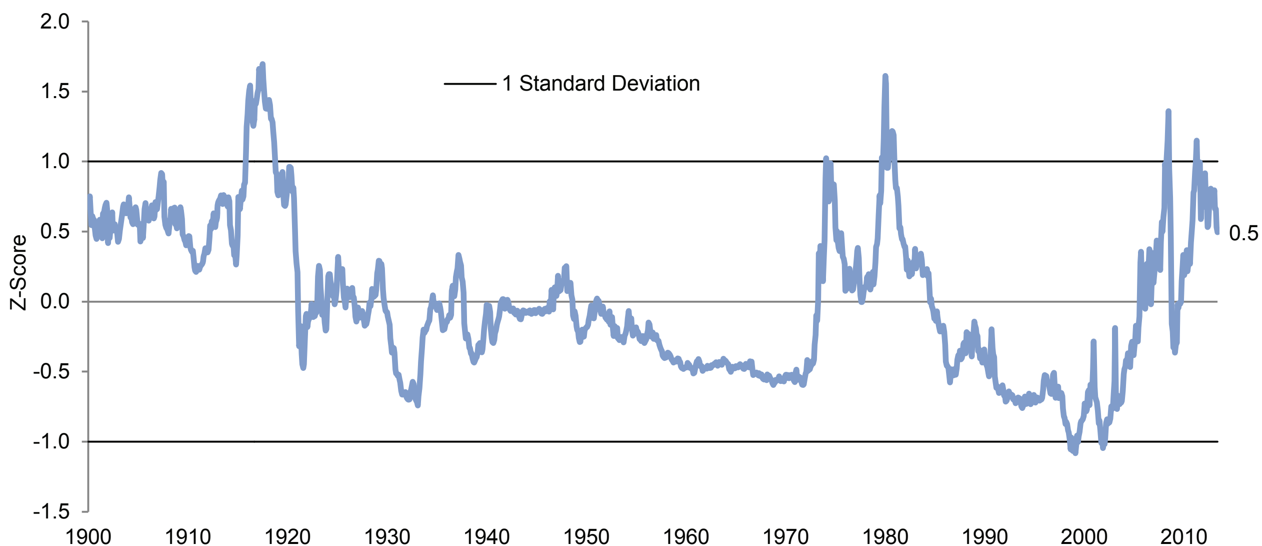
Sources: Dow Jones Indexes, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

the past 113 years (Figure 24). Starting valuations have historically been tied to subsequent changes in spot prices (Figure 25), and the combination of the spot change, roll yield, and cash collateral yield have all been important drivers of long-term returns. Today, none of the three factors is very appealing. While we advise underweighting commodities and overweighting the related equities, it is worth keeping in mind that commodities would probably do better in a very strong inflation spike.

Sovereign Bonds: What You See Is What You (Eventually) Get. Given the amount of bond buying by central banks (Figure 26) and the slow levels of economic growth and inflation, it is no wonder bond yields remain very low. However, the scope of this is jaw-dropping: $19 *trillion* of bonds globally (nearly half the world's bond market) are trading at yields below 1%. Not many investors are likely to generate a positive real return owning bonds at that initial yield level.

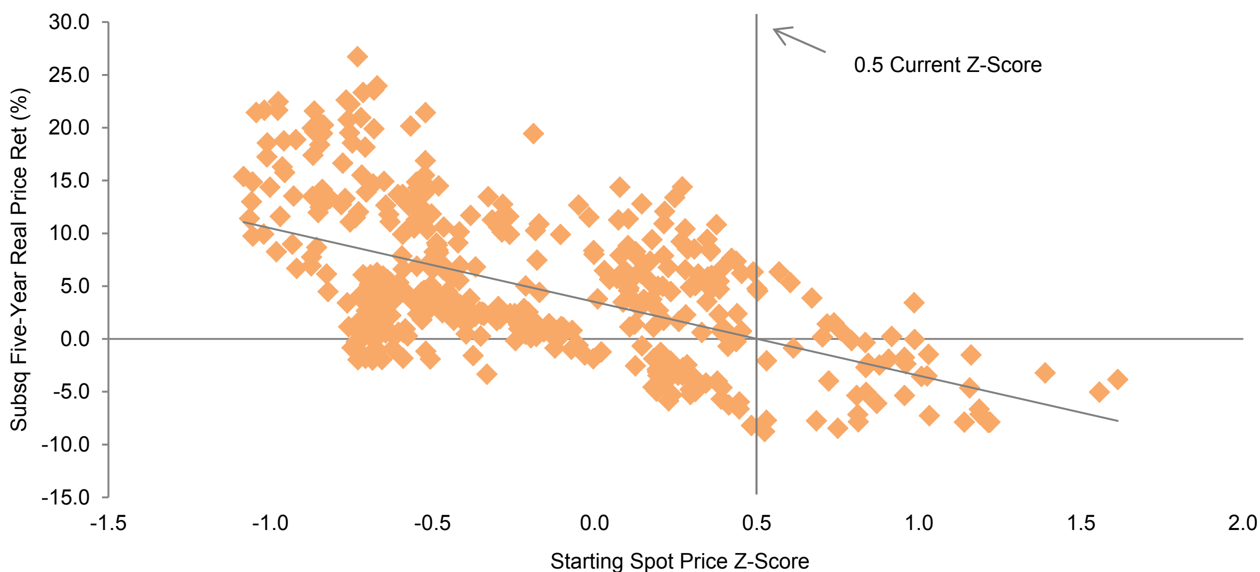
While the valuation/return scatterplots for equities are instructive, the chart for bonds in Figure 27 shows an even tighter relationship. We believe that investors should continue to underweight bonds, incorporating cash instead to support spending in any deflationary rout. While yields have risen sharply in May, they could reverse course, and we recognize that holding zero-yield cash for extended periods can be challenging. To that end, we encourage investors to keep the spending reserve role in mind to help avoid the counterproductive temptation to reach for yield.

Figure 24. Commodity Spot Prices vs Inflation-Adjusted Historical Average
January 31, 1900 – April 30, 2013



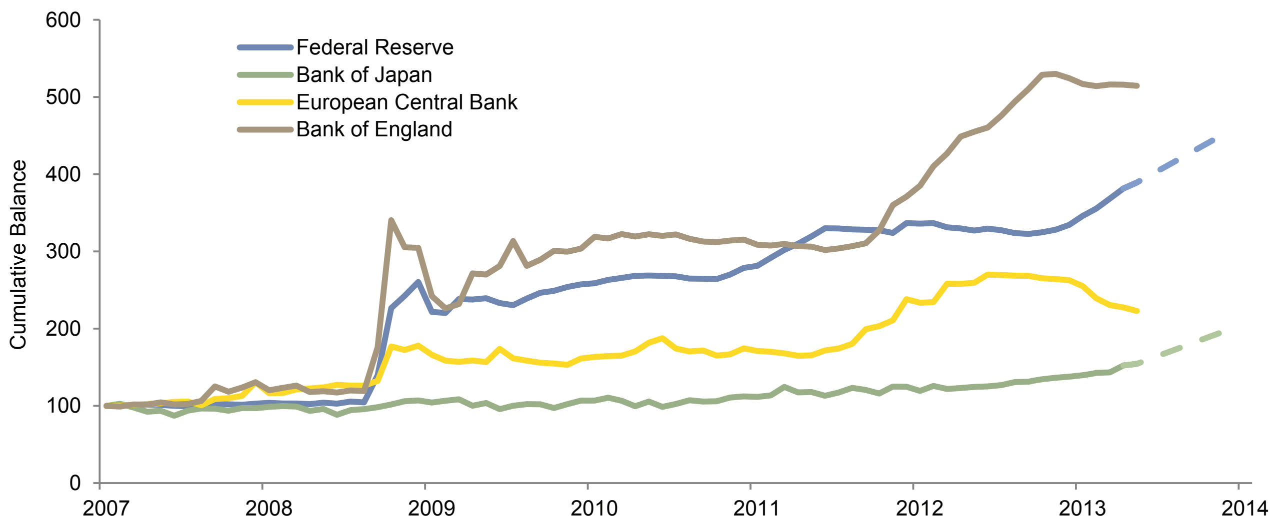
Sources: Cambridge Associates LLC, Global Financial Data, Inc., and Thomson Reuters Datastream.
Note: Z-score represents the number of standard deviations above or below the historical average valuation.

Figure 25. Relationship Between Spot Price Z-Score and Subsequent Price Return
1970–2013



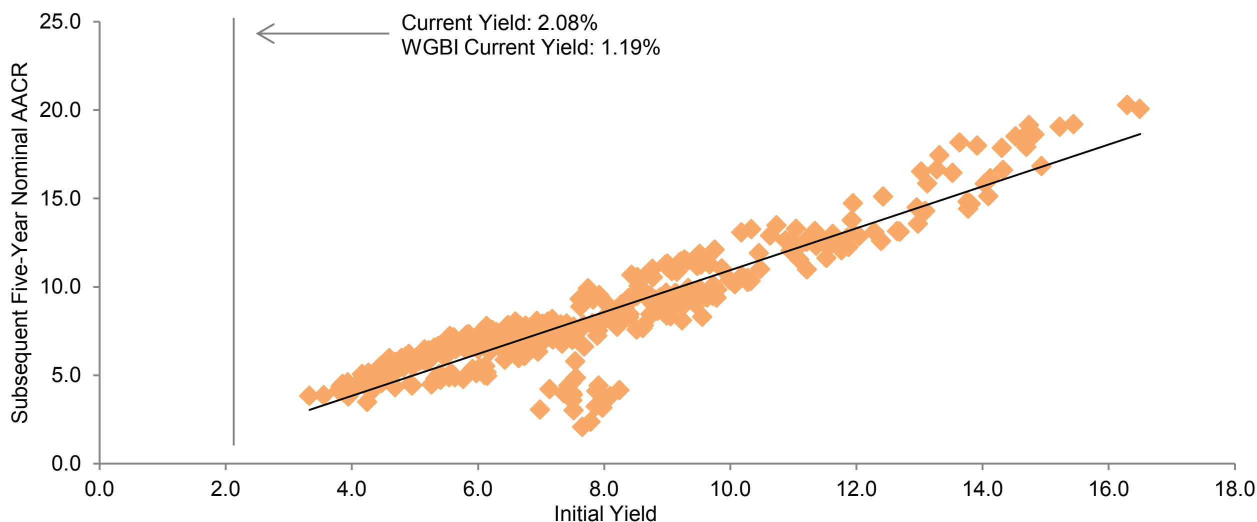
Sources: Cambridge Associates LLC, Global Financial Data, Inc., and Thomson Reuters Datastream.

Figure 26. Central Bank Balance Sheet Expansion
January 1, 2007 – January 1, 2004 • January 1, 2007 = 100 • Local Currency



Sources: Bloomberg L.P. and Thomson Reuters Datastream.
Notes: Federal Reserve balance sheet projections based on continuation of current asset purchase rate of $85 billion per month. Bank of Japan balance sheet projections based on continuation of current asset purchase rate of ¥7.5 trillion per month.

Figure 27. Barclays U.S. Aggregate Bond Index Starting Yield vs Subsequent Five-Year Nominal AACR
January 31, 1976 – May 31, 2013



Sources: Barclays and Thomson Reuters Datastream.
Notes: All data are monthly. The last full five-year period was June 1, 2008, to May 31, 2013. The May 2013 yield-to-maturity of 2.1% on the Barclays Aggregate Bond Index implies low nominal returns at best.

Danger in Safety?

Overvaluation today appears to be concentrated in, but not limited to, bonds. The most comfortable, defensive assets have been bid up to a degree that imperils their stability.

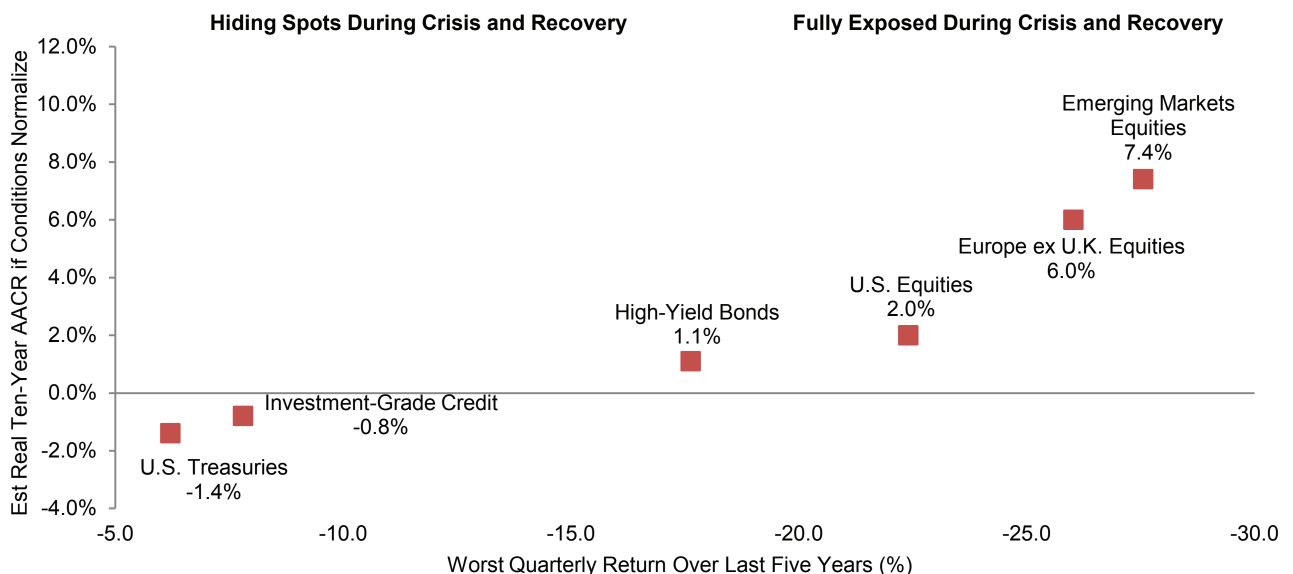
Figure 28 compares assets that have served as hiding places among the crisis periods during the past five years with assets that have been fully exposed to the maelstrom. The horizontal axis shows each asset class' worst quarterly return during the period. The vertical axis shows our expectation for each asset class' inflation-adjusted results in a Return to Normal scenario, where valuations and economic conditions gradually normalize over the course of ten years. As a reminder, there is a large margin of error around these Return to Normal estimates.

Given current valuation levels, we believe that long-run returns from this starting point are likely to be punishingly low for the asset classes that have helped investors play defense in recent years. Additionally, should investors begin to demand more typical valuation levels for defensive assets, prices could fall sharply.

Summary Advice

One year ago, in our June 2012 Market Commentary *Uncertainty Reigns*, we discussed investor concerns about Europe's debt problems, slowing growth and rising credit issues in China, and the United States' fiscal woes. Clearly, those underlying problems have not been completely fixed, yet global equities have returned approximately 30% over that time, in part because central banks have pumped even more liquidity into the system and made it clear that they will make a strong effort to preserve the euro.

Figure 28. Impact of Potential Mean Reversion on Defensive and Aggressive Assets



Sources: Barclays, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Estimated real return based on our valuations-based scenario projections for the Return to Normal scenario.

If select central banks were to show signs of pulling back on stimulus, that would change the tone. Just a whiff of that possibility has helped move prices of REIT shares and gold sharply lower, and has boosted the dollar. A Fed that is reining in bond purchases could play havoc with a variety of asset classes, including bonds, commodities, gold, and equities. On the other hand, plenty of reasonable people believe that the Fed is very unlikely to step off the gas this year. After all, 7.5% unemployment is quite elevated relative to history, and inflation remains low.

Investors should remember that the market action seen today is associated with a punch-bowl that central banks are refilling with roughly $7 billion of liquid refreshment every trading day. At some point, they will begin to pour more slowly. If portfolios are not suited to weather a less-stimulative environment, now is the time to change that.

For *long-term* investors, GDP or unemployment levels are not particularly helpful as focal points. The comparative advantage for a long-term investor comes from being able to take long-term positions, generally based on valuations, which may take considerable time to work out. And valuations today are reasonable for assets seen as risky or exposed, such as European equities, emerging markets equities, and natural resources equities. Valuations range from overvalued to very overvalued for assets seen as defensive, such as almost all varieties of bonds.

High-yielding, low-quality credits have been seen as defensive alternatives to equities, and that has driven up their valuations as well. However, it is also pushing valuations higher for a decidedly non-defensive asset class: buyouts. Large-company buyout specialists can secure very low cost financing today, allowing firms to underwrite deals at valuation multiples that would not have been acceptable in a more typical financing environment. Thus, a rise in interest rates or required spreads could pressure valuations. A highly selective approach to private managers is perennially important, but particularly for large-cap U.S. buyout partnerships today.

Of course, the defensiveness of an asset tends to be at least partly dependent on its price. Bonds yielding 2% and maturing in ten years may be defensive on a given day, but are exposed to the possibility of higher required interest rates, regardless of whether central banks turn off the taps.

We believe most investors need to have some assets that can support spending in an unanticipated inflation shock, and those that can support spending in a malign deflation, until equity valuations recover somewhat. *If* valuations were uniformly fair today, we would recommend high-quality bonds for a deflationary spending reserve, plus commodities and inflation-linked bonds to support spending during inflationary spikes. However, given today's unappealing valuations, we would underweight all three.

Of course, some investors have very modest endowment spending needs relative to the size of their portfolios, so the inflation and deflation spending "buckets" for those investors can be rather small. Yet these investors often still include some bonds due to the portfolio diversification they tend to provide. For those investors, it is reasonable to lighten up on some of that diversifying bond allocation and incorporate absolute return–oriented hedge funds or mutual funds that have consistently *low* sensitivity to equity movements and relatively low volatility. These funds might include unconstrained bond funds or global macro funds. Manager selection is very important for these funds.

Tactical Portfolio Tilts

We recommend that investors position several aspects of their portfolio for better defensiveness if the environment becomes more adverse and in ways that *should* outperform over the long term (Figure 29).

Within the equity portion, we continue to prefer high-quality U.S. equities over U.S. small caps because we believe high quality would hold its ground more than small caps in a sharp equity downdraft, yet should still perform modestly better over the long term from this starting point. High-quality shares are those of companies that have proven to be resilient across the business cycle, with consistent profitability and low leverage. Valuations of these companies are getting somewhat rich (similar to the moderate overvaluation of the broad U.S. equity market); however, they remain somewhat cheap relative to small caps.

We continue to prefer emerging markets equities over U.S. equities, given the valuation difference. However, recall that not all emerging markets sectors are cheap, so if playing this tilt with an active manager, ensure that you are not using a manager that continues to hide out in "defensive" but very rich consumer sectors.

Within the deflation-resistant portfolio, cash is well suited to the spending reserve role and does not have the asymmetric risk/return of today's bonds, but would be painful to hold if bonds resumed their run.

Within the inflation spending reserve, we would pull back from commodity futures and favor (1) natural resources equities, (2) some gold as a hedge against currency devaluation, and (3) leveraged loans (which are certainly non-traditional but would likely do well in an inflationary environment that saw an aggressive central bank response).

Assessing all of these portfolio tilts *in total*, they may increase the portfolio's equity exposure and volatility somewhat. One way to counter this would be to incorporate some lower-beta equity-oriented managers into the manager structure for the growth-oriented section of the portfolio. These might include a quantitatively based low-volatility product, carefully selected long/short equity funds, or a multi-asset mutual fund that is focused on equities but is able to hold cash and other assets.

In this low-volatility market, there is little impetus to make changes. But for portfolios that are only suited to the current environment, it is important to position them today so that they could weather a dry period if a central bank decides that its billions of dollars of additional liquidity each day are no longer warranted. ■

Figure 29. Tactical Portfolio Tilts

As of May 31, 2013

	Overweights	Underweights		Pros and cons of the tilt
Diversified Growth	**U.S. High-Quality Equities**	**U.S. Small Caps**	*pros*	Firms with historically stable profits and low leverage should be less vulnerable Small caps are richly valued, and are vulnerable if risk appetite shifts downward
			cons	High quality no longer cheap Small caps have more robust manager universe than high-quality strategies
	Emerging Markets Equities	**U.S. Equities**	*pros*	EM valuations are low relative to their history, while U.S. valuations are elevated
			cons	U.S. equities have the momentum currently Relatively defensive EM sectors are richly valued

	Overweights	Underweights		Pros and cons of the tilt
Deflation Resistant Spend support for prolonged deflation	**Cash**	**Sovereign Bonds**	*pros*	Return potential of bonds today not commensurate with interest rate risk Cash can be spending source for deflation or some *in*flationary periods
			cons	Holding zero-yield cash for extended period would be challenging

	Overweights	Underweights		Pros and cons of the tilt
Inflation Resistant Spending support for inflation shock		**Commodities**	*pros*	High commodity spot prices, no cash yield, and negative roll yield unappealing
			cons	Few good substitutes for commodities in nasty inflation bout
	Natural Resources Equities		*pros*	Solid valuations and return expectations for nat. res. equities; inflation resistant
			cons	Don't expect a big performance pop in a high-inflation period
	Gold		*pros*	Gold should hedge against risk of currency debasement
			cons	Can't value gold, which has no cash flow; very vulnerable in cent bank tightening
	Leveraged Loans		*pros*	Loans should do okay in inflation accompanied by central bank tightening
			cons	Would suffer in truly adverse environments
		Inflation-Linked Bonds	*pros*	Negative real return is a lock for linkers with negative real yields
			cons	Contractual link to inflation can't be found elsewhere; sole survivor in stagflation

Notes: Reflects proposed, beta-oriented tactical tilts for institutional investors with long time horizons. Overweights and underweights are relative to an investor's policy weighting. Investors who do not hold an asset marked 'underweight' should not short the asset. Investors who do not have a policy weight for an asset marked overweight should consider adding an allocation tactically.