

SEARCHING FOR VALUE: EQUITY MARKET VALUATIONS HOME AND AWAY



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U.S. equity markets have bounced back, and market valuation metrics now appear stretched even as prospective returns on investment are being compressed. Are U.S. equities overvalued? Should investors balance their portfolios by looking elsewhere for higher returns?

What's going on?

U.S. equity market performance has been strong in recent years, with the Standard & Poor's (S&P) 500 reaching a new high on Jan. 15, 2014 of 1,848, some 18 percent higher than the pre-Lehman meltdown peak of 1,565 in October 2007 and 173 percent higher than the March 2009 low of 677. Furthermore, fuelled by the ready availability of low-cost debt, there are signs that investor risk appetite and corporate activity have strengthened over the past 12 months. Examples include the Verizon/Vodafone acquisition (the largest merger and acquisition (M&A) transaction since 2007) and the strengthening of the initial public offering (IPO) market in the United States (Twitter, Hilton) and in the UK (Royal Mail, Merlin Entertainments, Foxtons), as well as strong demand for high-yield debt issuance.

This spectacular recovery in the equity market since 2009, and the concomitant upsurge in M&As and IPOs, has been associated by many with quantitative easing (QE) by the Federal Reserve

and other central banks. QE has driven interest rates and borrowing costs to record lows, allowing corporations and consumers breathing space in which to refinance, extend maturities to improve returns and begin lowering debt burdens. While the stated objective of QE is to spur and support economic growth in the real economy, its side effects in the financial world arguably have been just as (if not more) significant. QE has helped drive treasury bonds higher, resulting in yields on treasuries and alternative fixed income instruments (such as money market and deposit accounts) that by historical standards are very low. Yields on investment grade debt worldwide dropped to record lows during 2013, with the Bloomberg Global Investment Grade Corporate Bond Index now yielding just 2.6 percent.

All this financial market exuberance stands in marked contrast to a real economy that remains more constrained, with U.S. unemployment stuck at 7 percent¹ and consumer confidence remaining tepid.

For investors, entry points at higher valuations are associated with lower expected returns. This leads to these questions: Are U.S. equity markets now overvalued? And if they are, should global investors look to international markets for lower initial valuations and hence higher potential returns?

To answer these questions, we need to look at how equity markets can be valued and the reliability of the methods used to value the markets.

The limits of P/E multiples

The price to earnings (P/E) multiple is the most ubiquitous measure of valuation in publicly traded equities. Thus, a natural starting point to determine whether the U.S. market is overvalued is to compare today's P/E with historical P/E ratios (see Figure 1). On Jan. 22, 2014, the S&P 500 P/E multiple stood at 17.2x, slightly above its long-term average of 16.4x.

The S&P 500 has run ahead, but P/E's are broadly in line with the historical average.

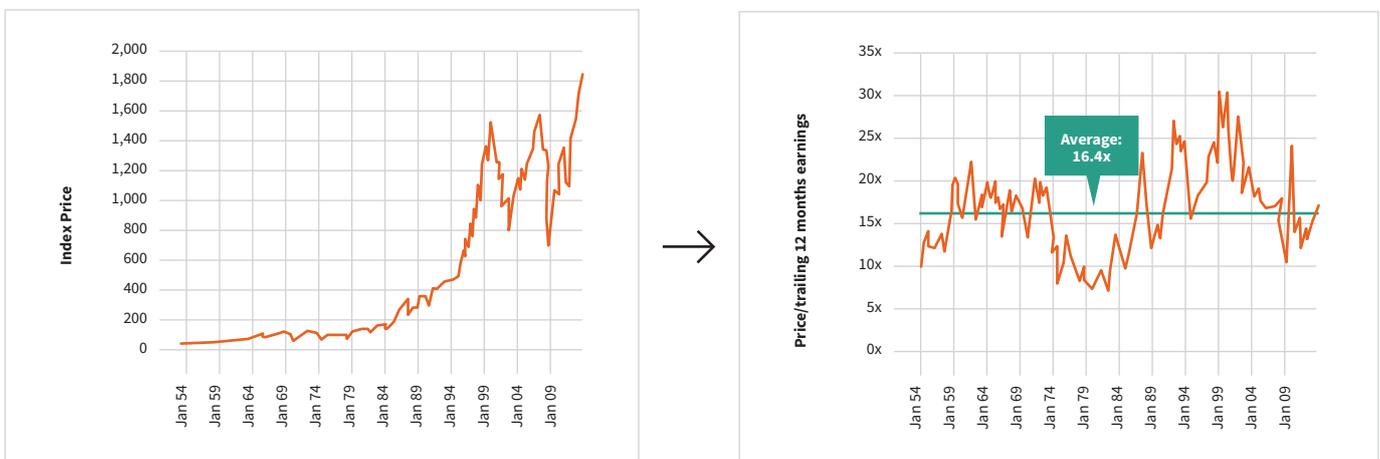


Figure 1 – S&P 500: 1954 to January 2014¹

However, investors should be wary of relying solely on simple P/E multiples to assess valuation. Single period P/E multiples can be distorted by a number of factors, including corporate accounting policies, the impact of inflation and, most important, the cyclical nature of the economy.

There is some evidence that, over time, corporate earnings may be somewhat overstated vs. cash flow-based measures. However, there is no evidence that this divergence between cash and accounting profits has increased in recent years. Indeed, the reverse seems more likely given the convergence of U.S. Generally Accepted Accounting Principles and International Financial Reporting Standards in recent years.

At the same time, inflation expectations currently appear well-anchored, although the long-term effects of QE are yet to be seen. Low, stable levels of inflation and interest rates historically have been associated with investor willingness to pay higher P/Es.

But the biggest potential pitfall of relying on simple P/E is due to the variability of corporate earnings across economic cycles. By focusing on valuations based on P/E multiples, the investor implicitly assumes the earnings figure is both normal and sustainable. In practice, however, corporate earnings are volatile. In an upswing, increases in revenues boost earnings given (relatively) fixed operational costs (such as overhead) and financial charges (such as bond coupons and the interest on bank

borrowings). In a downturn, the same effect works in reverse. Small percentage declines in revenues quickly can wipe out a large proportion of earnings.

The cyclical nature of earnings is illustrated in Figure 2, which depicts U.S. corporate profits as a share of gross domestic product (GDP). This chart suggests that while corporate profit margins typically revert to the mean over time, profit margins currently are higher than historical norms. This implies that the “E” in the P/E multiple may be elevated temporarily, and, therefore, P/E multiples may appear lower than they would be if reviewed over time. Globalization (leading to lower corporate costs through labor arbitrage), government stimuli and low savings rates (the last two indicating higher



Figure 2 – U.S. corporate profits as a share of GDP²

demand and spending) all have been cited as potential causes of today’s elevated corporate earnings.

The earnings cyclical nature illustrated in Figure 2 suggests that we need a measure that takes into account the peaks and troughs of earnings over one or more full business cycles. Any single year’s earnings are too volatile to offer a solid indication of the underlying earning power of any individual company or index. Therefore, averaging, or otherwise smoothing earnings over a longer period, would provide a more appropriate measure of earnings for assessing value.

CAPE: A metric for turbulent times?

One valuation method that takes the above factors into account and is widely used to gauge whether stock markets (in the aggregate) may be cheap or expensive is the cyclically adjusted price earnings (CAPE) ratio developed and popularized by Yale professor Robert Shiller.

CAPE takes an index level (the S&P 500) and divides this by the average real reported earnings over the prior 10 years. Real, in this sense, means adjusting historical earnings for the impact of inflation. Averaging over 10 years smooths out peaks and troughs,

providing investors and analysts a more stable measure of earnings for valuation purposes. Comparing the current CAPE with the long-term average CAPE then should present investors with a more reliable assessment of whether or not the current market is overpriced.

A low CAPE should be associated with stronger subsequent price performance and higher investor returns over time as the market returns to fair value. Conversely, a high CAPE, indicating over-valuation, eventually should be associated with weaker price performance and lower investor returns.

The current CAPE ratio for the S&P 500 is around 25.0x, approximately 52 percent higher than the long-term average of

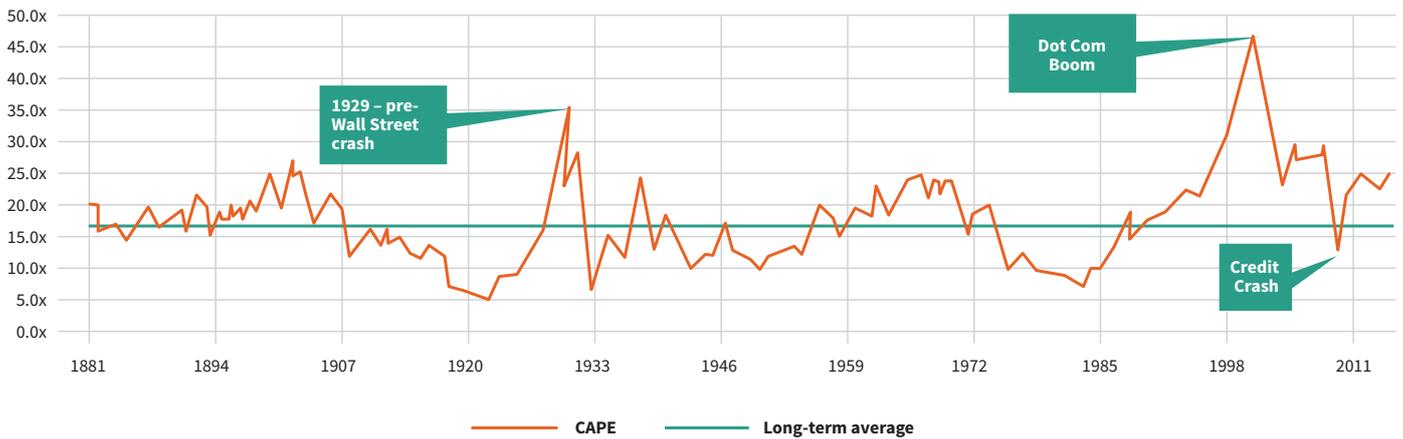


Figure 3 – S&P 500 CAPE 1881 to 2013³

16.5x. This strongly suggests that (at least in historical terms) the U.S. stock market currently is trading above fair value (albeit much less so than at the 2000 peak of the dot.com boom).

Historically, extreme levels of CAPE have been associated with subsequent poor market returns. Figure 3 shows that the current CAPE has been higher only on three occasions in the past 100+ years: before the 1929 crash (peak CAPE 32.6x in September 1929), before the 2000 dot.com crash (peak CAPE 44.2x in December 1999) and before the 2008 credit crash (peak CAPE 27.5x in May 2007).

CAPE, however, is only a single valuation metric among many. One may reasonably ask for empirical evidence of how reliable different measures of valuation have been. The Vanguard Group (Vanguard) researched U.S. equity returns since 1926 to assess the predictive power of a range of alternative valuation metrics. Figure 4 illustrates the correlation (quantified as R²) of each metric with subsequent 10-year returns.

Vanguard found that many commonly used valuation metrics (such as dividend yield) had limited use in forecasting future returns. Of the various metrics tested, Shiller's CAPE produced

the strongest results, accounting for 43 percent of the variation in real returns. This closely was followed by simple price: trailing 12 months earnings. In other words, lower starting PEs (both simple PEs and CAPE) significantly correlate with higher future returns (price appreciation plus dividends).

(Interestingly, commonly cited reasons for high or low valuations such as GDP or corporate earnings growth had almost no predictive power. Indeed, rainfall had similar predictive accuracy, a factor chosen to provide comparison with an obviously useless metric).

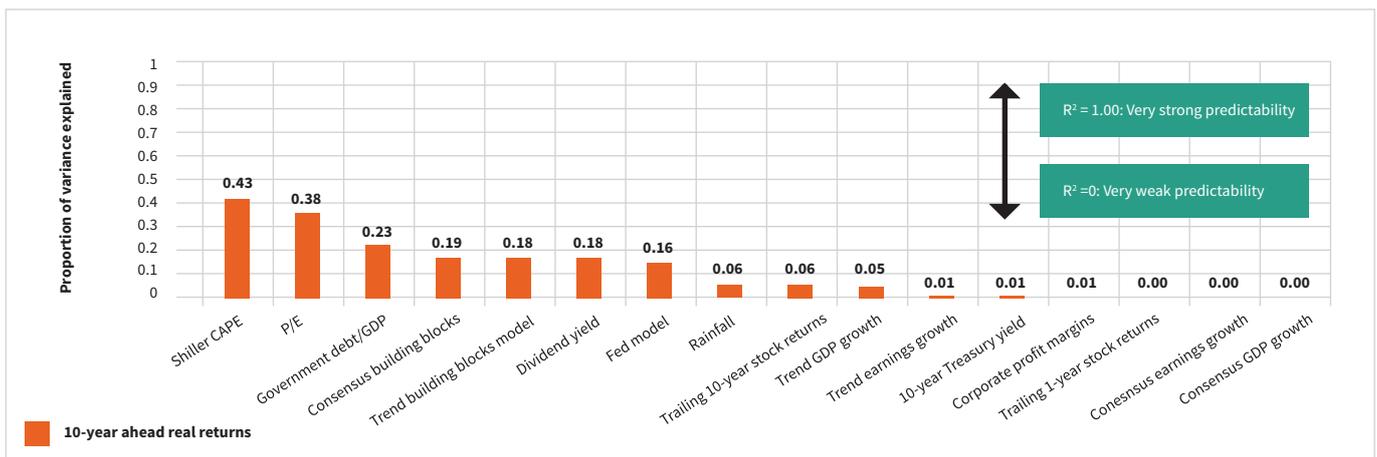


Figure 4 – Proportion of future stock returns explained by various metrics⁴

It should be borne in mind that, in the short term, expensive markets always can move higher and cheap markets always can drop lower. Vanguard found that short-term stock returns essentially are unpredictable, with most

correlations having an R² close to zero. In other words, even if CAPE tells us the market is overvalued, this would not necessarily correlate with lower future returns in the short term. However, the evidence does suggest that certain

measures can provide signs of over- or undervaluation in equity markets that eventually have consequences and can be a warning signal for investors.

Warning signals: Not just CAPE

There are other long-term valuation approaches that can be used to cross check CAPE, and, today, many, indeed,

do validate its warning. These methods include comparing total market capitalization of the stock market to GDP, total market capitalization to corporate revenues and the q ratio (ratio of market price to replacement cost).

Using the market value of all publicly traded securities as a percentage of GNP is a favorite of Warren Buffett's to assess aggregate equity market valuations. In 2001, he said:

“[T]he market value of all publicly traded securities as a percentage of the country’s business — that is, as a percentage of GNP — has certain limitations in telling you what you need to know. Still, it is probably the best single measure of where valuations stand at any given moment. And as you can see, nearly two years ago, the ratio rose to an unprecedented level. That should have been a very strong warning signal.”

Figure 5 shows that the current ratio of total market capitalization to GNP of just above 1.0x is higher than the average over the past 40 years. While the number is lower than the ratio achieved in the last two peaks (1999 and 2007), Buffett's advice suggests this now should be a warning signal to investors.

We also can consider the ratio of U.S. equity prices to U.S. corporate sales. While sales may not always translate into profits and cash flows (the true drivers of value), price to revenue multiples can be a useful high-level indicator of market valuation given that revenues are much less cyclical than earnings (and hence less prone to distorting a calculation in any given year).

Figure 6 shows the movement in price to sales ratio for the S&P 500. While the ratio typically has been above 1.0x since June 1995, today's ratio of 1.6x now is back to pre-Lehman levels and is approximately 79 percent higher than the long-term average of 0.9x.

Tobin's q ratio provides another approach used to assess aggregate market or index valuation. This ratio compares the combined market value of all the companies listed on a stock market with the replacement cost of

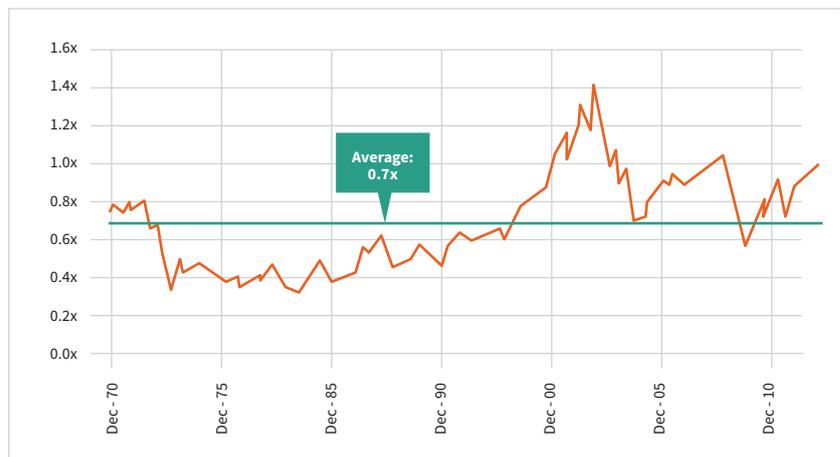


Figure 5 – U.S. stock market vs. GNP⁵

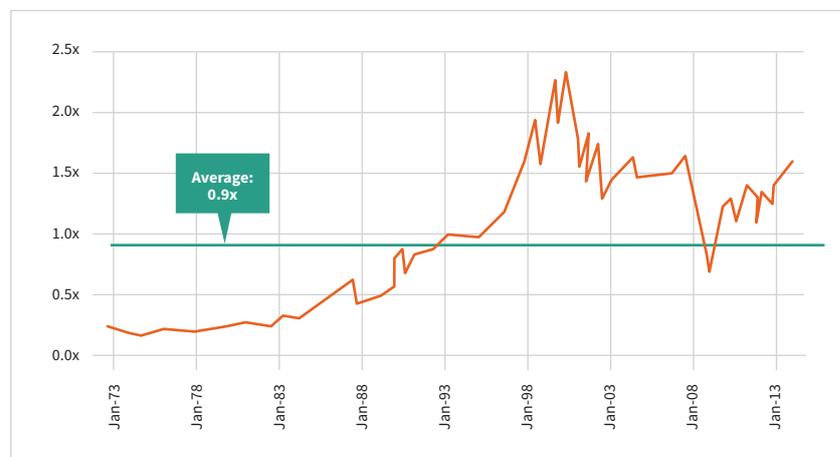


Figure 6 – S&P price vs. sales⁶

their combined assets. A low q ratio (less than 1.0) means that the market value is less than the estimated cost to replace all the underlying assets of the constituent corporations and that the stock or index, therefore, may be undervalued. A high q ratio (greater than 1.0) implies the opposite. Historically, q for the S&P 500 is below 1.0 and has averaged approximately 0.7.

Similar to CAPE, the q ratio should tend to revert to the mean over time. When market prices are above asset replacement costs, it is cheaper for investors or corporations to buy assets directly than it would be for them to invest in equities (or undertake acquisitions of public companies) and vice versa. This process of arbitrage over time causes mean reversion.

Figure 7 shows the movement in the q ratio since 1951. This graph shows an almost identical trend to CAPE both in the short and long term. The current q ratio for the S&P 500 of 0.98 is 42 percent higher than its long-term average of 0.7, again suggesting, like CAPE, that the U.S. stock market now is trading above fair value.



Figure 7 – Tobin’s q ratio for the United States and how its variance to long-term mean compares with CAPE⁷

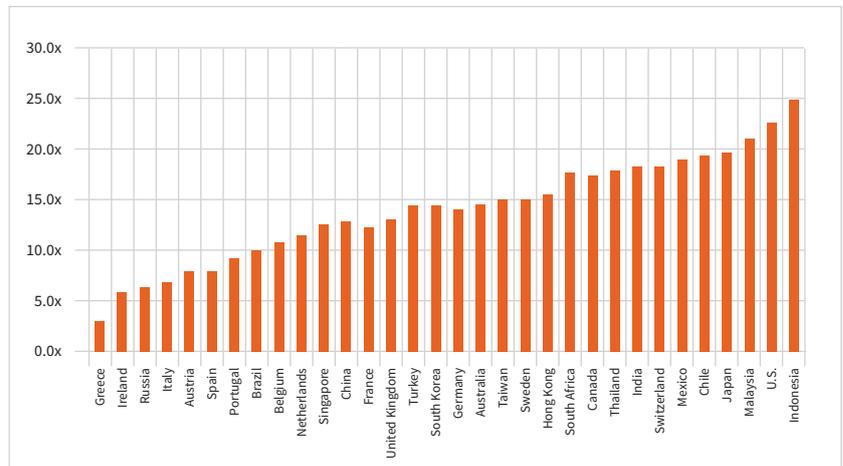


Figure 8 – Country CAPEs

Searching for value around the world

We live, work and invest in an interconnected financial world. How does the United States compare with international markets? Are they similarly overvalued? Figure 8 shows recent absolute CAPEs (averaging all industry sectors) for a range of the world’s biggest economies. The United States scored as the second most expensive market in the world.

However, absolute CAPEs can be misleading as some countries will tend to have higher average valuations than others depending on the mix of sectors and corporate entities. For example, an index with a higher weighting in low-growth, price-regulated utilities would tend to have lower CAPEs than an index more

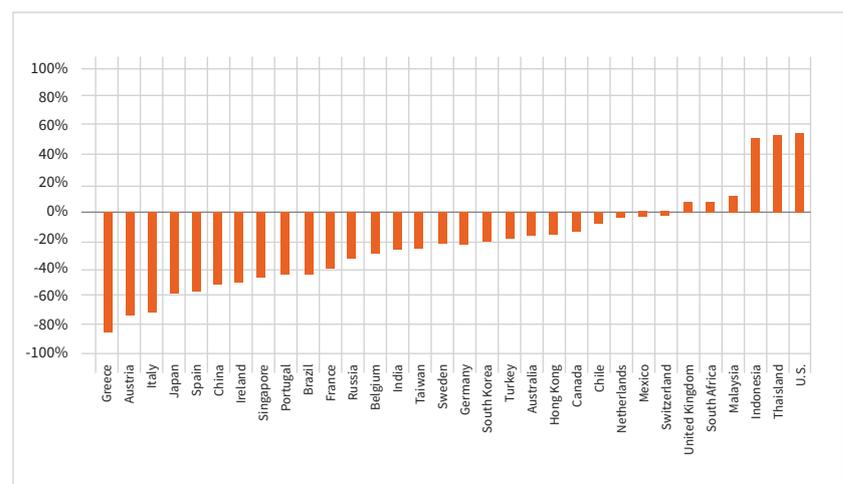


Figure 9 – Country CAPEs : percentage difference from historic median

weighted toward, say, high-growth technology companies.

Obviously, the macroeconomic outlook and quality of corporate earnings may be completely different from country to country. Given continuing banking sector stress and sovereign debt levels in the Eurozone, for example, there are good reasons why southern European equity markets should be cheap. Similarly, the United States arguably may warrant a premium compared with many other markets given its stronger demographic, innovation and resource profile.

However, this does not explain why the United States currently trades at a significant premium to its own historic median CAPE. In Figure 9, the current CAPE of each country is compared with its historical median. Again, the picture is of a U.S. market that is fully valued, contrasting with markets in Europe (e.g., Greece, Austria, Italy) and some of the emerging markets (e.g., China, Brazil) that appear extremely undervalued.

What does the data tell us about the relative valuations of emerging markets vs. developed markets? Figure 10 shows the P/E comparison between the S&P 500 and emerging markets, based on the MSCI Emerging Markets Index.

Traditionally, the S&P 500 has traded at a higher P/E ratio than the MSCI Emerging Markets Index. The current S&P 500 P/E ratio of c.17.2 is approximately six P/E points higher than the MSCI P/E Index of 11.0x. Thus,

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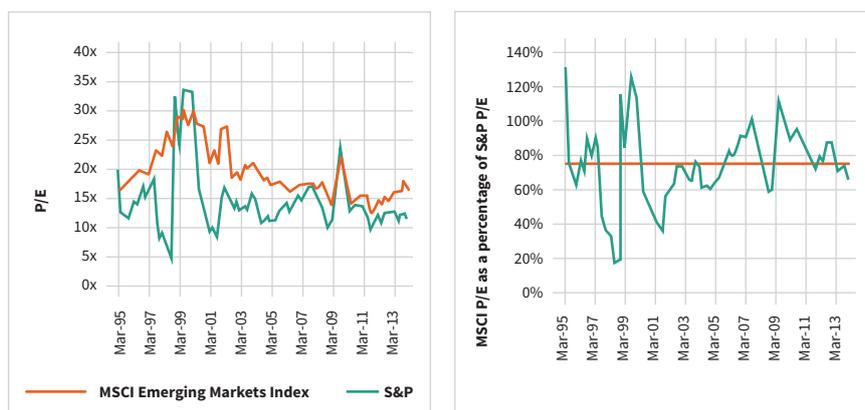


Figure 10 – S&P and MSCI Emerging Markets Index P/E comparison⁸

we can see that the S&P 500 appears more fully valued than emerging markets not only on an absolute basis but also relative to its historic relationship with emerging markets. By expressing the emerging markets' P/E ratio as a percentage of the S&P 500 P/E, we see that the current ratio of 66 percent is below the 75 percent average since March 1995, again suggesting that compared with the S&P 500, emerging markets are relatively attractively priced.

Whilst emerging market currencies and equities have exhibited recent volatility and continue to face macro-economic adjustment challenges, it appears that emerging market valuations may already reflect these risks.

An argument for diversification

Simple P/E multiples show the S&P 500 currently trades in line with its historical average. However, earnings

are cyclical, and other historically accurate and reliable valuation measures indicate that the S&P 500 is overpriced. As previously noted, the current CAPE ratio for the S&P 500 is approximately 52 percent higher than its historical average. This finding is consistent with the q ratio for the S&P 500, currently some 42 percent higher than its historical average.

CAPE data also suggest that certain stock markets in emerging markets and in Europe appear undervalued in comparison with the United States both in absolute terms and relative to past relationships. Right now, these markets may offer better value than the United States so investors could look at this as an opportunity to consider diversifying their portfolios internationally. Broad diversification is a key to managing risk and, as the old saying goes, is the only free lunch on Wall Street. ■

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