# Global equities: Balancing home bias and diversification

Vanguard research

February 2014

- Equities not domiciled in the United States accounted for 51% of the global equity market as of December 31, 2013,[1] reflecting a significant opportunity for portfolio diversification.
- Despite the size of non-U.S. markets, U.S. mutual fund investors held, on average, only 27% of their total equity allocation in non-U.S.-domiciled funds as of year-end 2013, according to Morningstar.
- This paper concludes that although no one answer fits all investors, empirical and practical considerations suggest a reasonable starting allocation to non-U.S. stocks of 20%, with an upper limit based on global market capitalization, subject to the investor's perspective on the short- and long-term trade-offs.

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Note: This paper is an update of a paper by the same author published in 2012 and titled *Considerations for investing in non-U.S. equities.*

1 Sources: Thomson Reuters Datastream and MSCI, as of December 31, 2013.

As of December 31, 2013, U.S. equities accounted for 49% of the global equity market. Non-U.S. equities, including those of developed countries such as Germany, Japan, and the United Kingdom, plus those of emerging countries such as Brazil, India, and China, accounted for the remaining 51%. As shown in **Figure 1**, the 2013 U.S. market capitalization was below the recent high of 55% of the global equity market, reached in March 2003, but remained significantly above the all-time low of 29%, reached at the peak of the Japanese stock market run in the late 1980s. A portfolio investing solely within the U.S. stock market thus automatically excludes over one-half of the global opportunity set.

## The case for investing in non-U.S. stocks

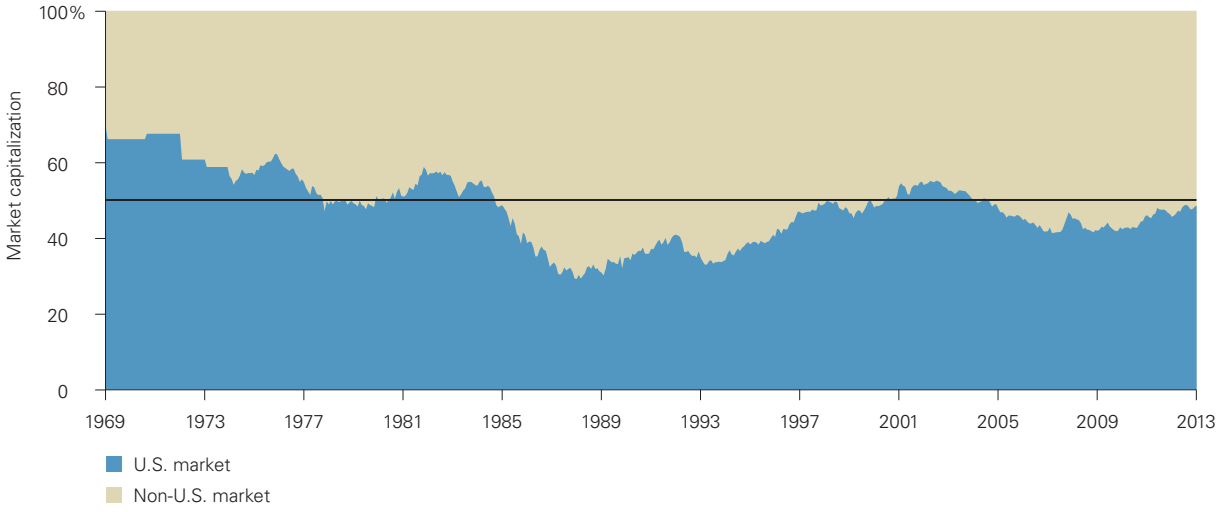
Beyond the opportunity to invest across a broader market, non-U.S. equities have diversified the returns of U.S. equities, on average, across time. The rationale for diversification is clear—U.S. stocks are exposed to U.S. economic and market forces, while stocks domiciled outside of the United States offer exposure to a wider array of economic and market forces. These differing economies and markets produce returns that can vary from those of U.S. stocks. **Figure 2a**, on page 4, shows that, all else being equal, a U.S. investor should realize a diversification benefit from investing globally because the equity markets of other developed economies are less-than-perfectly correlated with the U.S. equity market.

At a high level, the benefit of global diversification can be shown by comparing the volatility of a global index with that of indexes focused on either the U.S. market or non-U.S. markets in isolation. In **Figure 2b**, on page 4, the benefit of diversification is clear: Although each individual country has experienced greater volatility than that of the United States, the broad MSCI World Index ex USA, which focuses on developed markets, has experienced volatility more similar to that of the United States. And when taken one step further, the broadest global index—representing the combined MSCI USA Index, the developed markets index, and the MSCI Emerging Markets Index—has realized the lowest average volatility.

Notes on risk: All investments are subject to risk, including possible loss of principal. Diversification does not ensure a profit or protect against a loss in a declining market. Investments in securities issued by non-U.S. companies are subject to risks including country/regional risk and currency risk. These risks are especially high in emerging markets.

*Past performance is not a guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

**Figure 1.** Historical mix of global equity market capitalization




Notes: U.S. market represented by MSCI USA Index; non-U.S. market represented by MSCI World Index ex USA from 1969 through 1987 and MSCI All Country World Index ex USA thereafter. Data as of December 31, 2013.

Sources: Thomson Reuters Datastream and MSCI.

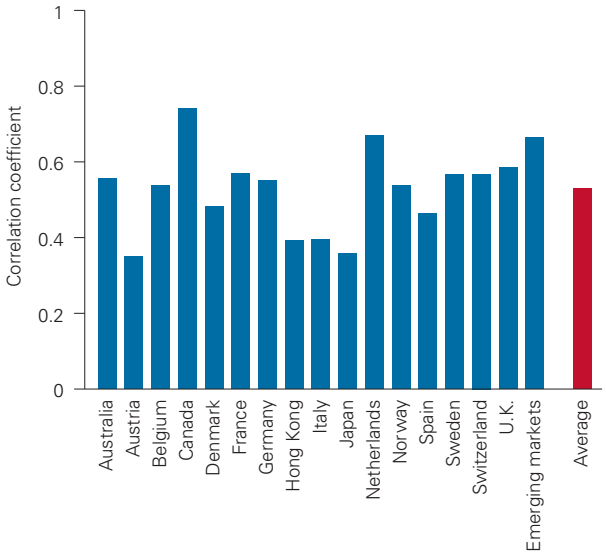
## Can multinational corporations provide enough exposure?

One common question regarding exposure to non-U.S. stocks is whether enough coverage of foreign markets is embedded in the prices of U.S.-domiciled multinational companies such as McDonald's, Amazon.com, or ExxonMobil. The thinking goes that because many large firms generate a significant portion of their revenue from foreign operations, the diversification benefits of global investing are already reflected in the prices and performance of large U.S. firms.

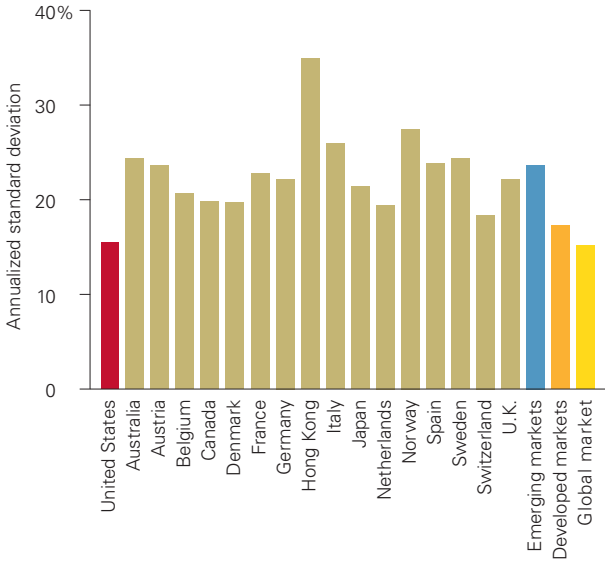
While this aspect of globalization cannot be ignored (and certainly can have an impact on investors' portfolios), we believe it still makes sense for investors to hold non-U.S.-domiciled investments, for several reasons. First, simply focusing on U.S.-domiciled companies means an investor has no stake in leading, global companies that are domiciled in other countries such as Samsung, Toyota, or Nestlé. Second, many firms seek to hedge away currency fluctuations of their foreign operations. Although this can help to smooth revenue streams, foreign exchange can be a diversifier for U.S. investors. Lastly, a portfolio made up solely of U.S. firms, which are more concentrated in biotechnology, computer equipment, information technology and IT services, and software, would be underweighted in "old world" industries such as electrical equipment, durable household goods, and automobiles. In other words, an all-U.S. portfolio would lose not just investment opportunities but also the diversification benefits of a portfolio that's more evenly distributed across industries.

**Figure 2.** Correlations and volatility of equity returns of countries and regions

a. Correlations of returns in foreign equity markets with U.S. equity markets




b. Volatility of returns for country and regional indexes




Notes: Country returns represented by MSCI country indexes; emerging markets represented by MSCI Emerging Markets Index; developed markets represented by MSCI World Index ex USA; global market, including both developed and emerging markets, represented by MSCI All Country World Index. Emerging market data begin in 1988; all data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

## Given global exposure, how much?

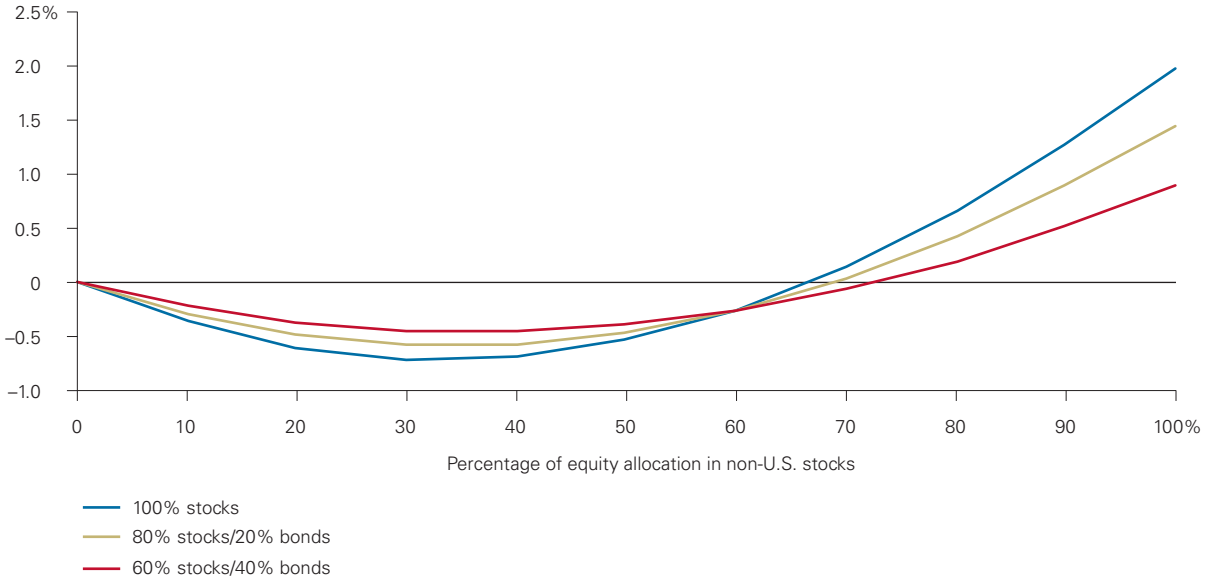
The decision to invest globally is only the first step. The next step is to determine an appropriate allocation. The standard financial-theory approach, whether for allocating globally or within a specific country or market, is to invest proportionally according to market capitalization. This method assumes that markets are reasonably efficient and that stock prices reflect all the available information, investment positions, and expectations of the investing community. As shown in Figure 1, U.S. equities currently make up approximately 49% of the global market. According to this theory, then, U.S. investors would currently have 51% of their equity portfolio in non-U.S. equities, and this weight would fluctuate with market performance. However, few investors follow this approach to the letter; instead, they more often choose a set allocation and then periodically rebalance to that level.

For many investors such an approach represents a reasonable trade-off between the opportunity for diversification and the realities of the global equity markets. For example, despite increasing efficiencies, global markets are not yet fully and seamlessly integrated. The fact remains that costs such as expense ratios, bid-ask spreads, frictional costs, and even market-impact costs continue to be higher for markets outside of the United States.

In addition, local investors across the world (including in the United States) are influenced by embedded home biases, probably a result both of regulatory constraints, such as explicit limits on public pension funds' allocations, and behavioral tendencies. For example, according to Philips, Kinniry, and Donaldson (2012), U.S. investors maintained an allocation to U.S. stocks that was approximately 1.7x the market cap of

**Figure 3.** Adding non-U.S. stocks has historically reduced the total volatility of a portfolio

Average annualized change in portfolio volatility when adding non-U.S. stocks to a U.S. portfolio




Notes: U.S. equities represented by MSCI USA Index; non-U.S. equities represented by MSCI World Index ex USA from 1970 through 1987 and MSCI All Country World Index ex USA thereafter. Bond data represented by Salomon High Grade Index from 1970 through 1972, Lehman Long-Term AA Corporate Index from 1973 through 1975, and Barclays U.S. Aggregate Bond Index thereafter. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

U.S. stocks, while the next-closest investors in terms of bias to home market cap were those in the United Kingdom, who maintained a relative home bias of about 6.25x the market cap of U.K. stocks. Whatever the underlying driver, the local home biases of investors in each country aggregate to form a global market that is not fully representative of the theoretical free-floating investor experience, which would be the objective of a fully market-proportional portfolio. As a result, a case could be made for a dedicated allocation to non-U.S. stocks that differs from the global market-weighted portfolio simply based on awareness of local and global biases (whether justified or not).

## Historical minimum-variance analysis

When deviating from a market-proportional approach, a natural question is: What represents a reasonable allocation? One simple methodology is to conduct an analysis evaluating the diversification impact of various combinations of U.S. and non-U.S. stocks over time. **Figure 3** shows the results of a minimum-variance analysis between non-U.S. stocks and U.S. stocks (and bonds) since 1970. We elected to focus on volatility under the assumption that over the long term, returns across developed countries should be more similar than different. The downward-curving lines indicate that adding non-U.S. stocks to a U.S. portfolio would have led to incrementally greater levels of diversification in the form of reduced portfolio volatility over the period studied.

What's striking about Figure 3 is that U.S. investors would have obtained substantial (relative) diversification benefits from allocations to non-U.S. stocks far short of the current market-proportional portfolio (now about 51% and historically approximately 50%, on average). In fact, when referring back to Figure 2, the net impact of a fully globally market-proportional portfolio across history has been approximately 35 basis points in lower annual volatility relative to a 100% U.S. equity portfolio (represented in Figure 3 by the x-axis)—the same impact as a 10% static allocation to non-U.S. stocks. Looking at the blue line in Figure 3, which represents a portfolio composed entirely of equities, the maximum historical diversification benefit would have been achieved by allocating approximately 30% of an equity portfolio to non-U.S. equities (although the difference between 30% non-U.S. and 40% non-U.S. is within 0.02%), with a net reduction in volatility of 71 basis points. Allocating 20% of an equity portfolio to non-U.S. stocks would have captured 60 of those 71 basis points, or about 85% of the maximum possible benefit. For investors interested in deviating from the global market cap, it's helpful to understand that historically it has been possible to obtain similar diversification benefits while mitigating the impact of higher costs and some of the behavioral hurdles of larger global allocations.

Although such optimization can serve as a reference point, a significant weakness of this analysis is that it is backward-looking and particularly dependent on the time period examined. For example, at different observation dates, the "optimal" allocation to non-U.S stocks has been as low as 20% or as high as 70%. As recently as year-end 2005, the bottom of the "U" pattern in Figure 3 fell between 40% and 50%; through both year-end 2008 and year-end 2013, however, the curve clearly bottomed out between 30% and 40%. And even more recently over shorter time periods, we have seen non-U.S. stocks fail to reduce the volatility of a portfolio at any allocation. Further, when evaluating portfolios diversified across multiple asset classes, the results may also change. For example, the minimum-volatility portfolio in Figure 3, given a 40% allocation to bonds, has differed from an equity-only allocation. This is the reason we do not focus solely on such optimization techniques to form portfolios, but instead combine an evaluation of the investment trade-offs with factors such as cost and behavioral realities.

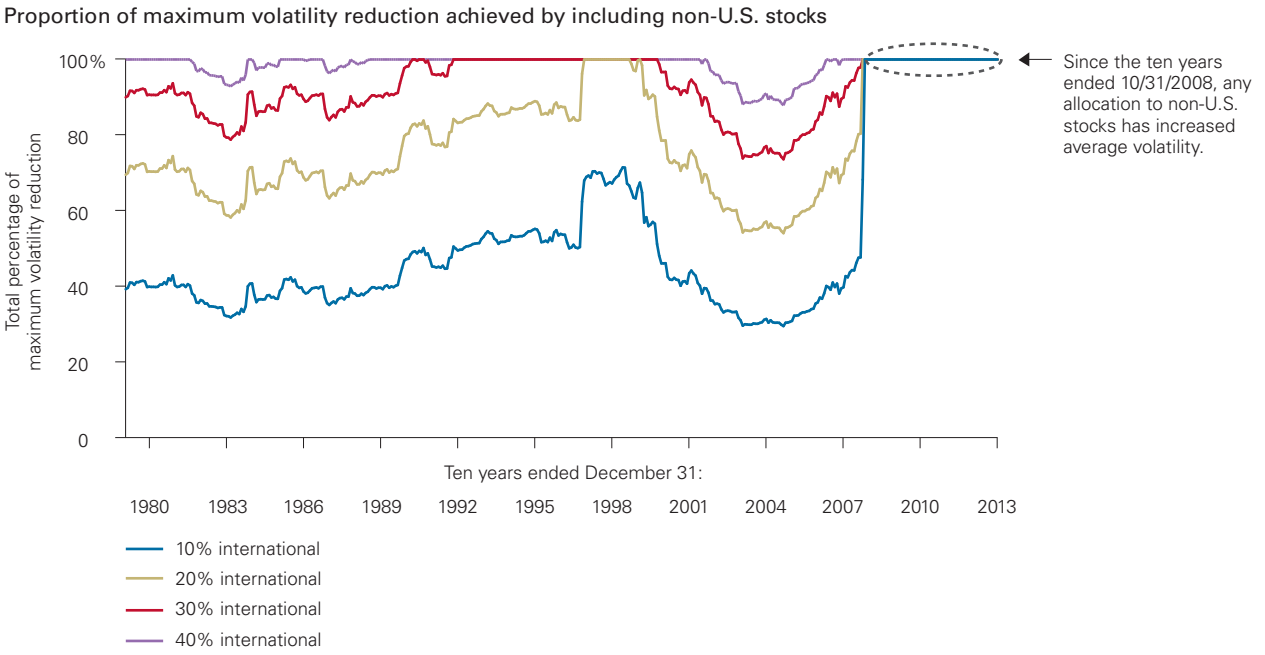
## Qualitative considerations

Real-world considerations may further support a lower allocation to non-U.S. equities than that recommended by market proportions. Broadly, such considerations involve barriers to investment, such as limitations on the repatriation of investment income and higher transaction and friction costs (for instance, commissions, opportunity costs, and market-impact costs).

Although barriers to cross-border investment have been falling over time, transaction and investment costs generally remain proportionally higher in foreign markets than in the United States. This is primarily a result of liquidity differences and relatively lower market participation. For example, bid-ask spreads tend to be wider, and management fees and friction costs tend to be higher, for foreign markets.

Finally, our empirical analysis relies on monthly return data for developed markets that extend back to only 1970 and data for emerging markets that extend to 1985. A longer time series of returns, if it existed, might provide more robust empirical results because it would span more financial, economic, and political cycles. However, investors might also consider more recent experiences to be more representative of the future as global markets become more integrated and information flows more seamlessly. We discuss the implications of such a view in the next several sections.

**Figure 4.** On average, dedicating 30% of equities to non-U.S. stocks has provided most of the maximum possible diversification benefit




Notes: U.S. equities represented by MSCI USA Index; non-U.S. equities represented by MSCI World Index ex USA from 1970 through 1987 and MSCI All Country World Index ex USA thereafter. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

## Ever-changing impact of global diversification

Although Figure 3 shows the impact of diversification over the entire 1970–2013 period, few investors actually realize such an extended time horizon without making changes to their portfolios. Therefore, it makes sense to evaluate the diversification impact of combining U.S. and non-U.S. equities over shorter time windows. **Figure 4** shows the proportion of the maximum possible diversification benefit achieved at various allocations to non-U.S. stocks over rolling ten-year windows. For example, over the ten years ended December 1979, a 10% allocation to non-U.S. equities would have provided 39% of the maximum possible diversification benefit. A 30% allocation to international equities would have provided 90% of the maximum diversification benefit.

However, it's important to note how the impact of diversification can change over time as the returns, volatilities, and correlations between U.S. and non-U.S. stocks change. For example, Figure 4 shows that during several periods, one or more of the lines bump up against the top of the chart—at the 100% limit. Over these periods, investors would have been better off holding a lower allocation to non-U.S. stocks (assuming lower average volatility was their primary motivation for holding non-U.S. equities). For instance, for the ten years ended December 31, 1997, a 20% allocation would have provided the maximum diversification benefit, meaning those investors who held allocations greater than 20% would have found themselves on the backside of the U pattern in Figure 3—with a still lower average volatility than a portfolio of 100% U.S. equities, but with greater volatility than that of a portfolio with a 20% allocation to non-U.S. equities. On the other hand, a 40% allocation would have provided around 90% of the maximum volatility reduction for the ten-year periods ended in the early 2000s, but a 60% allocation would have been required to reap the maximum volatility reduction.

Although there has been significant disparity in the incremental benefit delivered by allocations to non-U.S. stocks over time, Figure 4 shows that, on average, a 20% allocation of a domestic portfolio to non-U.S. equities has provided 70% of the maximum diversification benefit. An investor who allocated 30% to non-U.S. equities has averaged 90% of the maximum diversification benefit across all periods. These results indicate that investors can benefit substantially from exposure to non-U.S. equities while remaining sensitive to the potentially higher costs and risks of a portfolio whose allocations are based on global market capitalization across many different time periods.

Finally, it's important to note that in recent periods diversifying into non-U.S. stocks has not reduced volatility in an equity portfolio. We illustrate this on the right portion of Figure 4, where even the 10% allocation line merges with the top of the chart. In fact, since the ten years ended October 31, 2008, investors would have realized lower volatility by being invested solely in U.S. stocks. Of course, because Figure 4 only accounts for volatility impact, return differentials are not evaluated, which is another potential motivation for diversification and something we address in a later section.

## Challenges facing investors today

There are two primary drivers of this recent divergence from long-term history. The first driver has been higher average correlations across global equity markets. **Figure 5a** shows that the correlation between U.S. and non-U.S. stocks has increased over time, and notably so since the mid-1990s. In fact, although longer-term correlations were stable through the 1980s and early 1990s, recent years have shown a significant rise. One factor for the increased correlation has been the steady decline in the importance of the Pacific region since 1989. Historically, European markets have been more closely correlated to U.S. markets than Pacific markets have been to U.S. markets. In other words, Pacific markets, and especially Japan, have historically been a significant source of diversification for global portfolios. But, since the 1980s, Europe's market capitalization has doubled, at the expense of the Pacific region. As a result, the strong diversifying effect of the Pacific region has diminished.

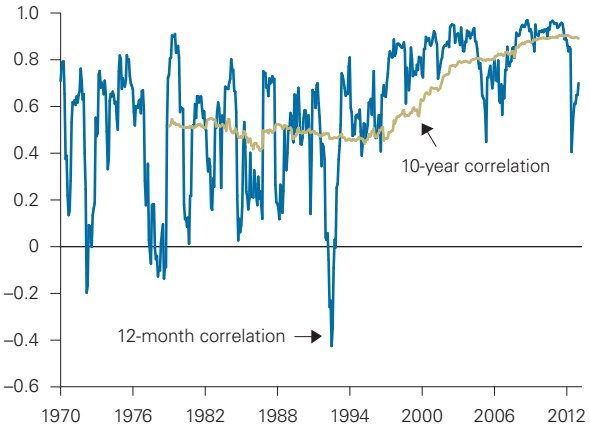
In addition, individual markets across the world have become more synchronized. As shown in **Figure 5b**, correlations across individual countries have also increased significantly, from approximately 0.35 in the 1980s to 0.77 as of 2013. Whether these trends will continue is open for debate; however, it is not unreasonable to anticipate that the future correlation between non-U.S. and U.S. equities will more closely resemble that of the recent past, rather than the 1970s and 1980s, particularly given that correlation trends are slow to shift.[2]

The second driver for the reversal in diversification benefits was a significant spike in relative volatility for non-U.S. stocks since 2007. **Figure 6** shows the trailing 12-month standard deviation of returns for both U.S. and non-U.S. stocks. It is notable that the spike in volatility from September 2007 through 2011 actually increased the long-term average volatility of non-U.S. markets by nearly a full percentage point, from 16.47% to 17.27%. The higher volatility, combined with rising correlations, served to mute the impact of a globally diversified portfolio. It is interesting that there have been prior periods in which non-U.S. stocks have experienced significantly higher volatility than U.S. stocks—for example, 1990–91 and 1972–74. However, the key difference in those periods was that correlations across global markets were lower than they have been recently. Of course, despite periodic spikes in relative volatility, more often than not, U.S. and non-U.S. stocks have experienced similar volatility. As such, we would not expect the high relative volatility observed in recent periods to persist indefinitely. All else being equal, lower relative volatility for non-U.S. stocks would increase the diversification benefits of global equity allocations.

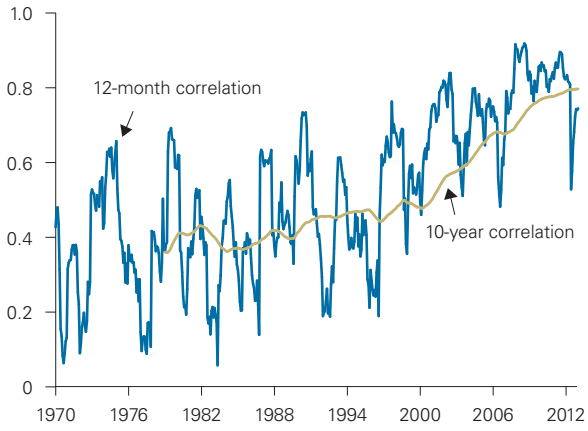
2 That said, international equity correlations should remain less than perfect. Consider, for instance, that several studies (e.g., Stock and Watson, 2003) have found minimal evidence of increased international synchronization of business cycles, despite increases in international trade flows, developed-market integration, and the introduction of the euro.

**Figure 5.** Rising correlations mean less impact from global diversification

a. Correlation between returns of U.S. and non-U.S. stocks




b. Correlation across all countries

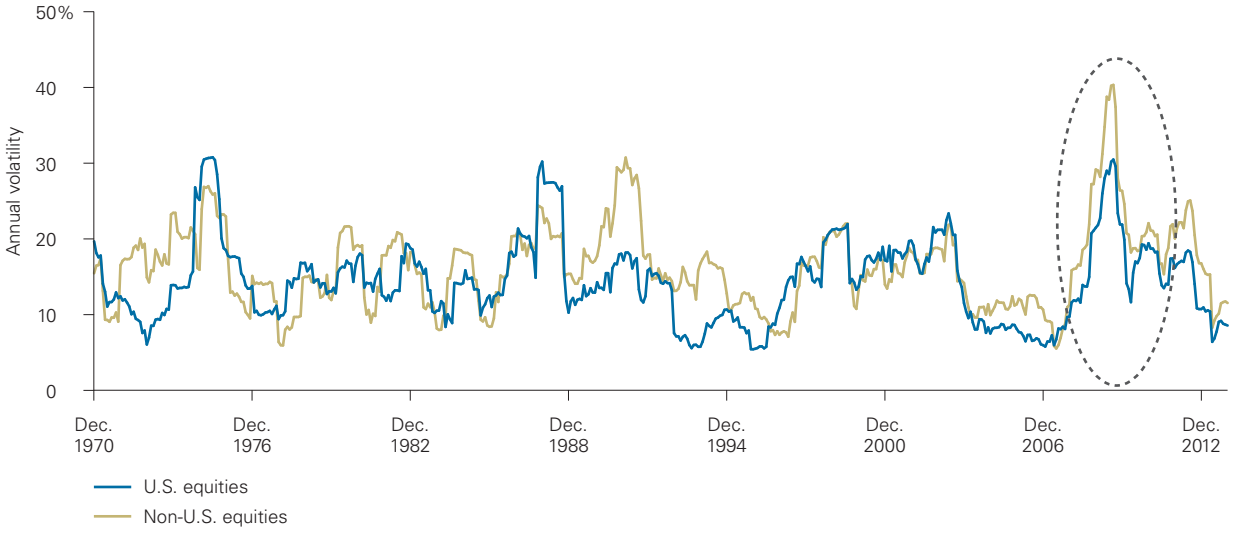



Notes: Country returns represented by MSCI country indexes; emerging markets represented by MSCI Emerging Markets Index. Emerging market data begin in 1988. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

**Figure 6.** High relative volatility means less impact from global diversification

Rolling 12-month standard deviation of returns

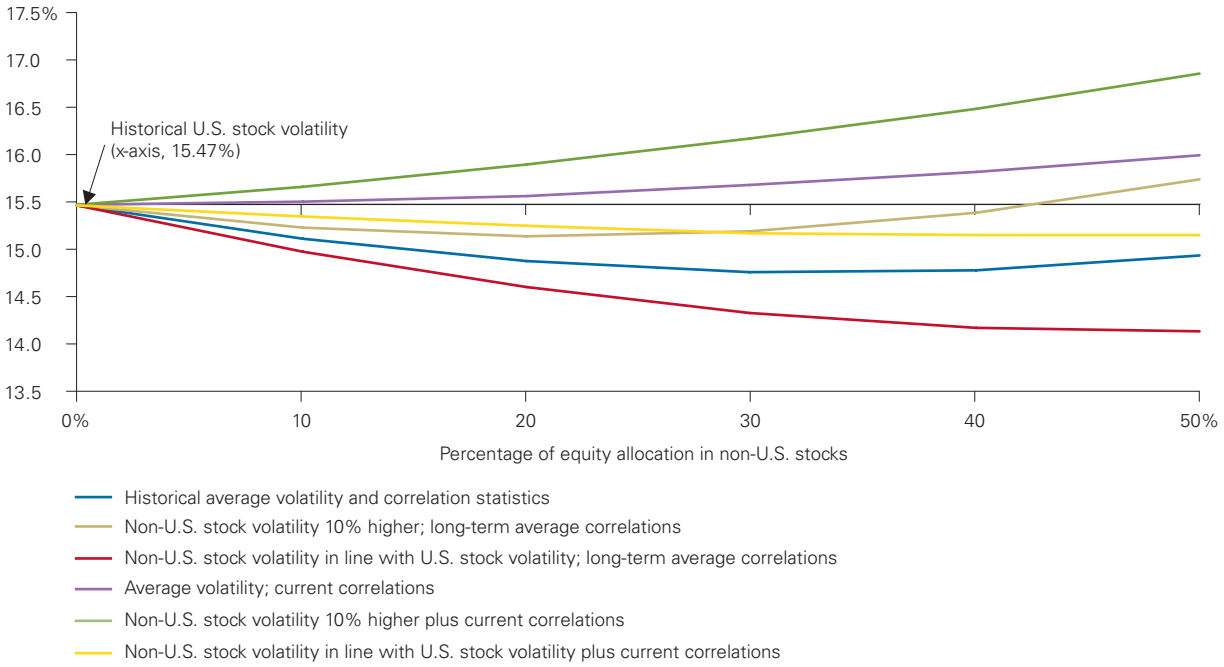



Notes: U.S. equities represented by MSCI USA Index; non-U.S. equities represented by MSCI World Index ex USA from 1970 through 1987 and MSCI All Country World Index ex USA thereafter. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

**Figure 7.** A normal environment would be expected to lead to positive diversification benefits

Hypothetical change in portfolio volatility, given alternate scenarios

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Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

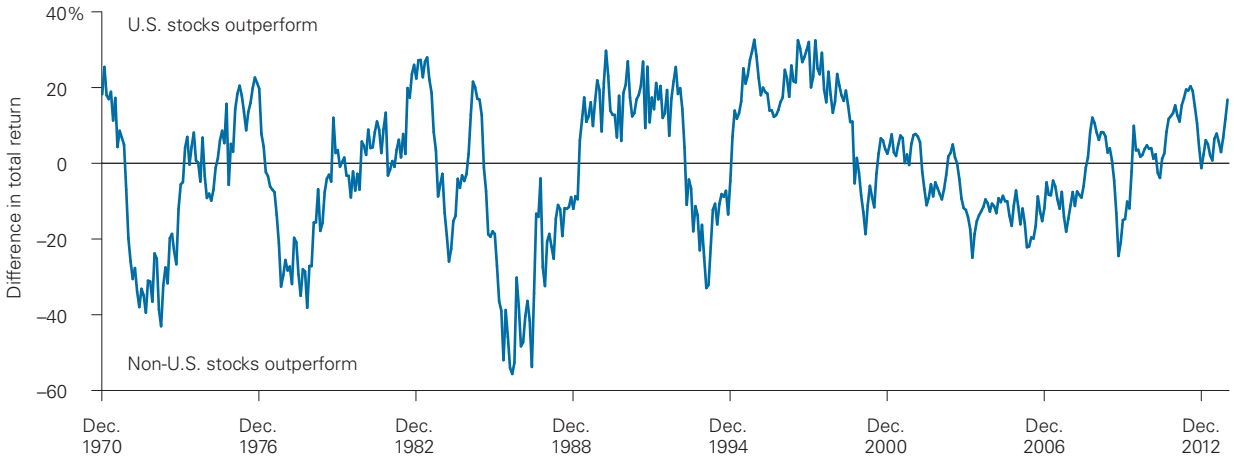
## Correlations and volatility: Scenario analysis

**Figure 7** illustrates how alternative expectations for the characteristics of a portfolio containing non-U.S. equities would alter a strategic asset allocation recommendation. As demonstrated in Figure 3, adding non-U.S. equities has historically helped to reduce the overall volatility of a domestic equity portfolio (represented in Figure 7 by the solid blue line). However, because of the heightened volatility and correlation between U.S. and non-U.S. markets, recent investors' experience has been more similar to that shown in the purple line in Figure 7, where the least-volatile portfolio has been the U.S. portfolio. Of course the worst-case scenario would be one in which volatility and correlations continue to remain elevated, as shown in the figure by the green line.

On the other hand, a best-case scenario would be one in which volatility for non-U.S. markets reverts to the average levels of U.S. equity volatility, and future correlations decrease to the long-term historical levels, perhaps due to a "decoupling" of U.S. and international markets. Of the various theoretical scenarios shown, the most likely scenario is one in which correlations remain elevated but in which volatility for non-U.S. markets more closely resembles that of U.S. markets. This can be rationalized by evaluating the trends in Figures 5 and 6, where correlations have been systematically increasing, but with volatility that tends to be similar more often than not. In such an environment, represented in Figure 7 by the yellow line, the theoretical diversification benefits of non-U.S. stocks are preserved, albeit at more modest levels than were realized historically. Such a scenario analysis

**Figure 8.** Rising correlations have mitigated, but not eliminated, return differentials

Trailing 12-month return differential between U.S. and non-U.S. stocks




Notes: U.S. equities represented by MSCI USA Index; international equities represented by MSCI World Index ex USA from 1970 through 1987 and MSCI All Country World Index ex USA thereafter. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

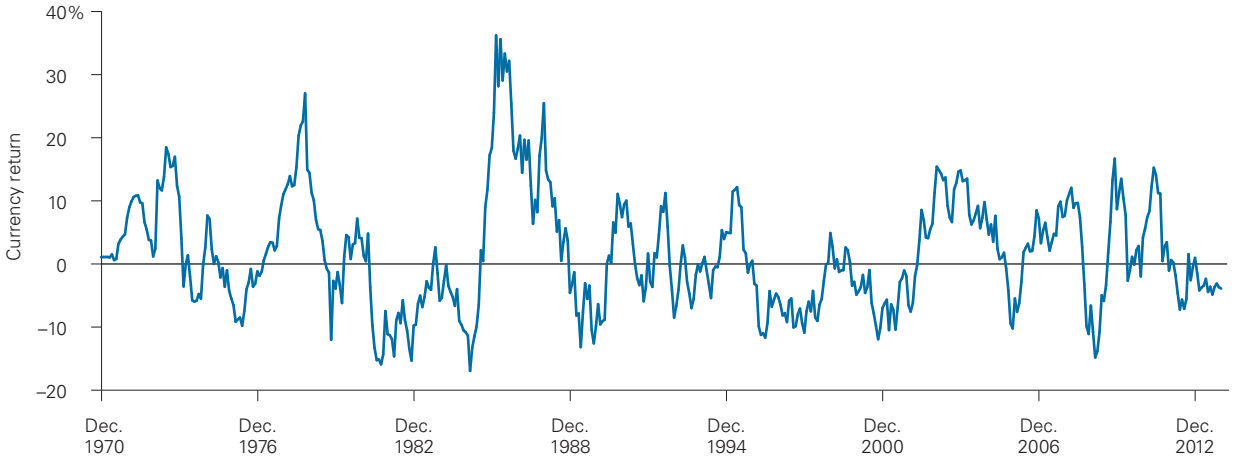
can help investors quantify future expectations and assess the potential impact that a range of allocations to international equities would have on their portfolios. For additional perspective on correlations during recessions, see Davis and Aliaga-Díaz (2009).

## Diversification of return opportunities

Although lower average portfolio volatility would be expected over the long term, a near-term benefit of global diversification is the opportunity to participate in whichever regional market is outperforming. For example, while the United States may lead over some periods, another country or market will invariably lead at other points. **Figure 8** demonstrates the near-term benefits of global diversification. By including both broadly diversified U.S. and non-U.S. equities in a portfolio, the investor's return should fall between those of the U.S. market and the non-U.S. market. For example, in the mid-1980s, exposure to diversified non-U.S. equities would have allowed a U.S. investor to participate in the outperformance of those markets. On the other hand, although exposure to diversified non-U.S. equities would have pushed the returns for a global investor below that of the United States in the mid-1990s, the investor would have again benefited in the 2000s, when international equities outperformed. It is important to recall that during the 2000s, both correlations and volatility rose, negating the primary benefit of diversification (as noted in Figures 4–6). The fact that a globally diversified investor continued to see benefits from diversification in the form of greater returns should not be overlooked. We cannot speculate on the future path of returns, but we can assume that returns for U.S. and non-U.S. equities will continue to differ, leading to a continued benefit from diversification.

**Figure 9.** Exposure to currency can further affect return differentials

Annualized contribution of U.S. dollar to non-U.S. equity returns




Notes: Contribution of the U.S. dollar calculated by subtracting the returns of non-U.S. stocks denominated in local currency from the returns of non-U.S. stocks denominated in U.S. dollars. Non-U.S. equities represented by MSCI World Index ex USA from 1970 through 1987 and MSCI All Country World Index ex USA thereafter. Data through December 31, 2013.

Sources: Vanguard, Thomson Reuters Datastream, and MSCI.

## Impact of currency exposure

Investments in foreign markets are exposed to fluctuations in foreign exchange rates. **Figure 9** illustrates that currency fluctuations have periodically added to or subtracted from the return for U.S. investors of international investments. For example, currency movements subtracted 17% from the 12-month returns of international stocks in 1984 and then added 35% in 1986.[3]

Although currency movements tend to be unpredictable and can be large, they have historically been uncorrelated to movements in stock prices.[4] As a result, over time, currency movements have helped to reduce the correlation between non-U.S. equities and U.S. equities, thus contributing to the diversification benefits of foreign holdings. For example, since 1970, the correlation of foreign stocks denominated in their local currency to U.S. stocks was 0.71, higher than the correlation of foreign stocks denominated in U.S. dollars to U.S. stocks (0.64). However, currency movements also increased the volatility of non-U.S. equities by approximately 2.7 percentage points from 1970 through 2013 (from 14.6% to 17.3%). All else being equal, we would expect currency to continue to be a diversifier for non-U.S. investments from the standpoint that currency movements directly influence the return differentials shown in Figure 8, along with the correlation properties among countries.

3 The theory of purchasing-power parity states that real returns will be the same across countries, as exchange-rate movements and inflation differentials should be identical. Interest rate parity is based on the notion that the interest rate differential between the home and foreign markets will determine the change in the exchange rate. There is considerable empirical support for these theories in the long run, but substantial research documents significant departures from a currency's "fair value" in the short run.

4 Of course, although this statement is generally true, there are cases in which commodity-based economies such as those of Australia and Canada have had a positive correlation with foreign stock prices—see, for example, LaBarge (2010).

## Role of emerging markets

Emerging markets are economies or markets that are just entering the global arena or do not meet criteria to be considered developed economies. For example, the World Bank classifies emerging markets as economies below the upper-middle-income threshold.[5] MSCI, FTSE, and other benchmark providers may consider additional criteria such as the maturity of financial markets, the structure of transaction settlement, and the freedom of capital, among others. Many countries (among the better-known ones are China, India, Brazil, and Russia) may meet one or more of these criteria but not all. Those that successfully develop economically, politically, and financially (such as the United States from the 1800s through the 1900s) would be expected to enjoy strong long-term returns. However, those that do not develop may see their financial markets languish.

Because of highly specialized political, economic, and financial risks, investing in individual emerging-market countries can be extremely risky. However, because individual emerging markets are relatively uncorrelated among each other, the risk of investing across all countries is much less. In addition, the unique development patterns of these emerging markets help them to diversify the returns of developed international markets and U.S. markets—correlations between developed markets and emerging markets have averaged 0.66 since 1985. And emerging markets have delivered higher average returns—with commensurately higher volatility—than those of developed markets. From 1985 through 2013, emerging markets produced an average annual return of 12.7% with an average volatility of 24.0%, versus average annual returns for developed markets over the same period of 9.9% with an average volatility of 17.6%. This overall pattern of relative performance might have been expected, given the overall characteristics of emerging economies or markets. The combination of higher expected returns, higher expected volatility, and moderate correlations between emerging and developed markets suggests that a modest allocation to emerging markets is warranted. For most investors, a market-weighted allocation via a fund or exchange-traded fund that is invested across all non-U.S. markets is the best way to include emerging markets in a diversified portfolio. Such an allocation would ensure constant investment at the market weighting, and would help to insulate investors from emerging markets' potentially severe swings in performance.

## Conclusion

In light of quantitative analysis and qualitative considerations, we have demonstrated that domestic investors should consider allocating part of their portfolios to international securities, and that a 20% allocation may be a reasonable starting point. Although finance theory dictates that an upper asset allocation limit should be based on the global market capitalization for international equities (currently approximately 51%), we have demonstrated that international allocations exceeding 40% have not historically added significant additional diversification benefits, particularly accounting for costs. For many investors, an allocation between 20% and 40% should be considered reasonable, given the historical benefits of diversification. Allocations closer to 40% may be suitable for those investors seeking to be closer to a market-proportional weighting or for those who are hoping to obtain potentially greater diversification benefits and are less concerned with the potential risks and higher costs. On the other hand, allocations closer to 20% may be viewed as offering a greater balance among the benefits of diversification, the risks of currency volatility and higher U.S. to non-U.S. stock correlations, investor preferences, and costs.

5 Countries are ranked by the World Bank each July and divided into four income groups (based on gross national income per capita). The groups are: low income, $1,005 or less; lower middle income, $1,006–$3,975; upper middle income, $3,976–$12,275; and high income, $12,276 or more.

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ISGGEB 022014