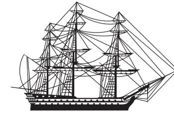


Considerations for global equities: A Swiss investor's perspective

Vanguard Research

December 2014

Peter Westaway, PhD, Matthew Tufano, Todd Schlanger, CFA, Christopher Philips, CFA

- Swiss investors, in aggregate, hold significant overweight allocations to equities not only in their domestic market, but also to equities from broader continental Europe.
- This concentration means that Swiss investors are willing to hold allocations that are effectively not on the forward-looking efficient frontier.
- While Swiss investors have been somewhat more willing to invest beyond their own borders compared to investors in other countries around the world, this study concludes that they would benefit from greater global diversification.

The home bias of Swiss investors

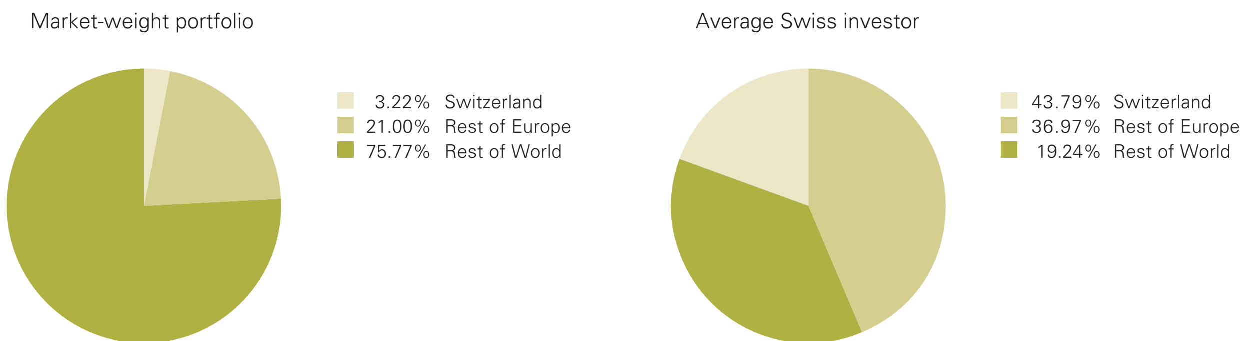
According to major market indices (MSCI/FTSE) Swiss equities account for approximately 3.3% of the global equity market. As a result, equities outside of Switzerland, including those of developed and emerging markets, currently account for the remaining 96.7% of global market capitalisation. However, according to the most recent survey from the International Monetary Fund (IMF), Swiss residents allocated approximately 44% of their portfolios to Swiss equities. This paper evaluates the short- and long-term impacts on a portfolio of investing across a wider range of markets, including the opportunity to invest in a larger number of securities, the risks associated with overweighting domestic markets, expected risks and returns, correlations, and investor preferences, concluding that increasing global diversification can be beneficial to Swiss investors.

The stark difference in size between the market weight of Switzerland and the effective weights of Swiss investors highlights the degree to which investors are reducing their global equity exposure. Figure 1 presents the weight of Switzerland and its size relative to the global equity market, as well as the average Swiss investor's equity portfolio weights as at 31 December 2012.[1]

The size of a country's equity market relative to the world is a key factor in identifying the consequences of holding only domestic equities. Swiss investors overweighting Switzerland will be affected more than American investors overweighting American equities (about half of the global market). Larger markets represent smaller trade-offs in giving up global equity exposure. A portfolio investing solely in the Swiss equity market excludes the majority of the global equity opportunity set.

Investors often intentionally overweight their home country. This "home bias" decision is usually driven by several factors, all of which make their home markets more favourable in their eyes. According to Philips et al. (2012), investors prefer more familiar investments, and therefore are likely to allocate a considerable portion of their portfolios to domestic equities. In short, these investors feel as if they are stepping outside of their "comfort zone" by adding international exposure – they may not think that the additional risk could generate greater expected returns. While the causes of home bias are outside the scope of this analysis, the consequences are not. The effects of favouring domestic equities presented below do not depend on the reason for the overweight.

Figure 1: Swiss investors significantly overweight domestic equities



Source: Vanguard calculations, using data from FactSet and the IMF. The chart on the right represents the implied portfolio weights of an average Swiss investor at the end of 2012 (the latest portfolio holdings data available from the IMF). Each chart uses the MSCI All Country World Index as its benchmark.

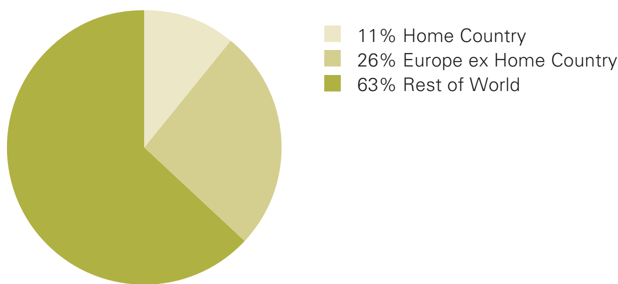
1 We evaluated the country weights as at year-end 2012 because at the time of writing this paper, 2012 represents the most recent annual data release from the IMF Coordinated Portfolio Study.

What does an investor get when buying Swiss equities?

A common misconception when investors buy Swiss equities is that they are buying shares in firms that represent the Swiss economy. This is not entirely the case, as many of the companies are large multinational organisations or exporters. Figure 2 examines the sources of revenue for major Swiss companies and finds that a large portion of each firm's revenue is being generated outside of its domicile.

Figure 2 reveals that a large percentage of Swiss companies' revenue comes from abroad. Swiss equities are well-integrated into the larger global market, much like those of other large, developed countries.

Figure 2: Swiss companies generate much of their revenue internationally



Notes: Swiss equities represented by the MSCI Switzerland Index. Revenue distribution was derived from the breakdown of revenue by country for the representative index. In a limited number of cases, revenue from Switzerland or Europe ex Switzerland may have been combined with one or more countries, or even regions. All data in Swiss francs, from the latest fiscal year to 31 December 2013.

Source: Vanguard calculations, using data from FactSet

Diversification of investment opportunities

Given that Swiss companies are affected by forces outside of the continent, some investors may still wonder why they would hold non-Swiss equities at all. The most fundamental reason pertains to diversification: by expanding investments globally, investors not only improve their opportunity set, they also greatly increase the number of securities they hold and reduce the concentration of their portfolios. This expansion limits the idiosyncratic risk associated with any particular company, country, or continent. Therefore, the market weight of Swiss equities should serve as a reasonable starting point for investors constructing equity portfolios.

A fairly small number of stocks drive the returns of a portfolio allocated to domestic equities. Investors who favour Switzerland greatly expose themselves to country-specific risk factors. The same can be said for greater Europe: while continental Europe offers over 320 equities for investors, country-specific (and at this level, continent-specific) risk factors are still present, as Europe excluding the UK only represents 13.43% of the stocks available in the entire equity market. Any investor favouring either Switzerland or continental Europe is taking an implicit view that companies in these regions will perform significantly differently to their peers around the world. This overweight also implies that investors have an active belief that these companies will provide better performance, and that their opinion is superior to the collective wisdom of participants in the global capital markets. Investors believe the broad market's assessment of Switzerland or continental Europe is incorrect, and that the idiosyncratic risks they take will be offset by greater expected returns.

Similar to the discussion above, Swiss equities are also more concentrated in certain sectors and industries of the global market. Figure 4 displays the weightings of Swiss equities in ten sectors. The global equity market is included to highlight the differences.

Figure 3: Investing only domestically can concentrate portfolios in a small number of stocks

	Switzerland	Europe	Global
Index	MSCI	MSCI	MSCI
Representing	Switzerland	Europe ex UK	ACWI
Country	Index	Index	Index
Number of Stocks	38	323	2,406
% in Top 10 Holdings	80.9	24.00	8.31

Source: Morningstar. Data as at 10 June 2014.

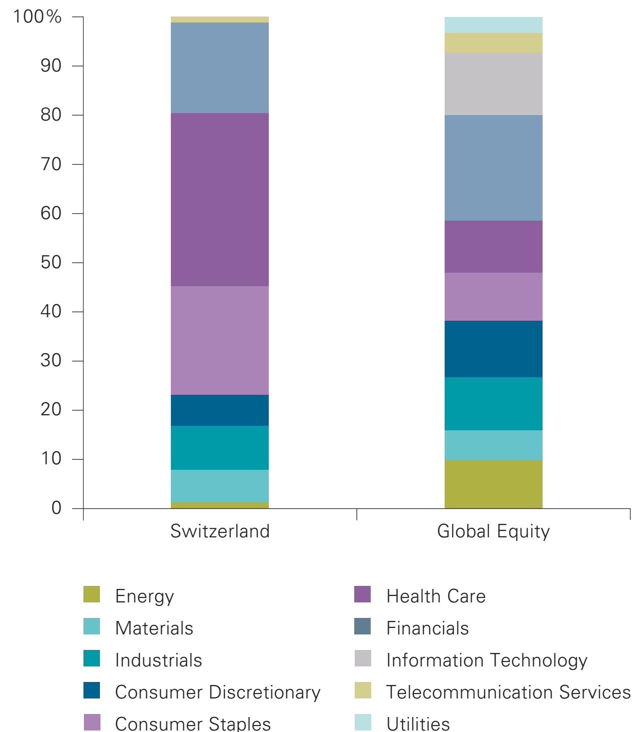
Examining Figure 4, Switzerland is overweight sectors such as healthcare and consumer staples, while being underweight energy. In some cases, certain sectors are not represented at all – there is no exposure to information technology. These sector mismatches create unintended over- and underweights for Swiss investors that offer no expected return premiums relative to other sectors – they are not being compensated for the extra sector risk. As with security concentration, this sector concentration could represent part of a strong active view that one region will outperform, but such a view also requires the tenuous assumption that another region will underperform and that these assumptions will be persistent throughout time. At the extreme, the sectors' performance could drive most of the portfolio's outcomes in a given period.

Given global exposure, how much?

At a high level and over reasonably long periods, the benefits of global diversification can be shown by comparing the volatility of a global index containing both domestic and foreign securities with an index comprising assets solely from a particular country or Europe itself. Recalling Figure 1, a global investor would align his allocation so that approximately 97% of his equity portfolio is outside of Switzerland, and allow the allocation to vary with market performance. Few investors follow this approach to the letter, however; instead, they more often choose a set allocation to securities outside their domicile and maintain it through time. For many investors, this approach represents a reasonable trade-off between the opportunity for diversification and the realities of investor preferences.

The role of home bias on the Swiss stage will be examined in greater detail later on; it is important to remember, though, that investor-specific asset allocations of market participants aggregate to form the theoretical free-floating adjusted portfolio, the objective of fully market-proportional investing.[2]

Figure 4: The Swiss equity market has sector biases



Notes: Switzerland represented by the MSCI Switzerland Index. Global equities represented by the MSCI All Country World Index. Data as at 30 May 2014.

Source: Vanguard calculations, using data from FactSet.

2 Market proportional refers to weighting the securities in a portfolio according to their size in the market from which they were selected based on market capitalisation.

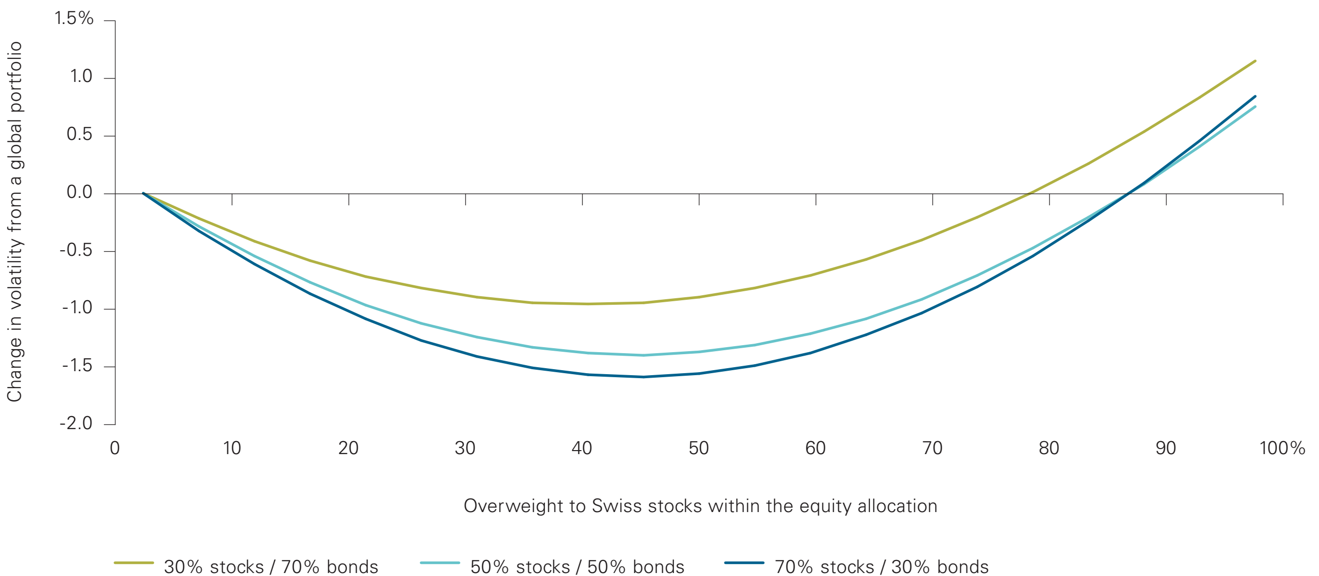
Historical volatility analysis

When deviating from the market-proportional approach, a natural first question is: what represents a reasonable allocation? One simple methodology is to conduct an analysis evaluating the diversification impact of various combinations of Swiss and global equities over time. Figure 5 shows the results of a volatility analysis since 1985. The focus on volatility assumes that over the long term, returns across developed countries should be more similar than different. In this framework, a 100% equity portfolio was constructed along with several balanced portfolios of stocks and bonds, varying between completely invested in the home country and completely invested in the global equity portfolio.

The downward-curving lines for the portfolios indicate that overweighting Switzerland relative to the global equity market would have resulted in incrementally lower levels of volatility over the period studied – up to a point. Too large of an overweight would actually have increased volatility. Figure 5 suggests that a modest overweight (30–50 percentage points) reduced volatility by approximately 25–75 basis points relative to the global equity index, depending on the equity allocation. According to Vanguard's research, the average Swiss investor overweighted Swiss equities by 47 percentage points, so he was on track for volatility reduction. This window should not be expected to persist, however. On a forward-looking basis, any overweight represents a suboptimal risk-return trade-off relative to the broad equity market.

Much of the benefit of a Swiss overweight was due to the moderate correlations between the Swiss market and the global equity market, along with relatively lower volatility earlier in the time period. The benefit of the Swiss overweight was found to be highly dependent on the timeframe considered; when a 100% equity portfolio was used with shorter windows (not pictured), the results were mixed.

Figure 5: A Swiss overweight has its trade-offs



Notes: Swiss equities represented by the MSCI Switzerland Index. Global equities represented by the MSCI World Index through 1987, and the MSCI All Country World Index thereafter. Swiss bonds are represented by the Citi Swiss GBI Index through 1999 and the Barclays Swiss franc Aggregate thereafter. Global bonds are represented by the Citi WGBI Index to 1999 and the Barclays Global Aggregate thereafter. Hedged global bonds are represented by the Citi WGBI Hedged Index to 1999 and the Barclays Hedged Global Aggregate Index thereafter. All data in Swiss francs, from 1 January 1985 to 31 December 2013.

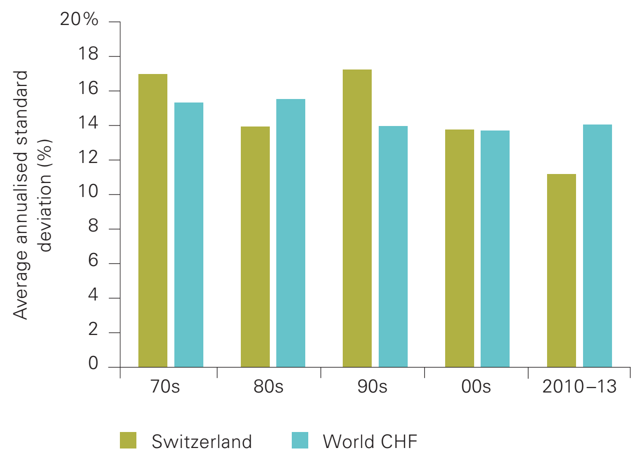
Sources: Vanguard calculations, using data from Thomson Reuters Datastream, Morningstar, and FactSet.

Time-varying nature of volatility and correlation

Optimisation can serve as a helpful starting point for portfolio construction, but given it is often run based on historical data, its backward-looking bias and time-period sensitivity are considerable weaknesses. The primary drivers of differences in the trade-off between expected return and volatility are changes in relative volatilities and correlations to the global equity market. Figure 6 presents the average rolling 12-month standard deviations of the Swiss and global markets over the past five decades; Figure 7 presents the average rolling 12-month correlation of Switzerland's equity market to the global market over the same period.

Holding all else constant, increasing the portfolio weight for Swiss equities exposes an investor to higher volatility than that for the entire market. Therefore, a Swiss overweight implies embracing additional volatility without necessarily gaining any expected return. In this framework, taking on additional volatility can sometimes improve a portfolio's variance – this condition is true when assets in the portfolio are negatively correlated. The decision to overweight Switzerland could be justified from a volatility perspective if its equity returns were not highly correlated with the broad equity market's return. The idea behind this strategy is that Switzerland offers a risk exposure that is different from that of the rest of the world. Equity correlations over time, however, have been increasing, challenging the effectiveness of this strategy. And in the end, regardless of what the ex-post historical volatility of a portfolio turns out to be, on a forward-looking basis, the portfolio with the lowest expected volatility will be the one that is most diversified.

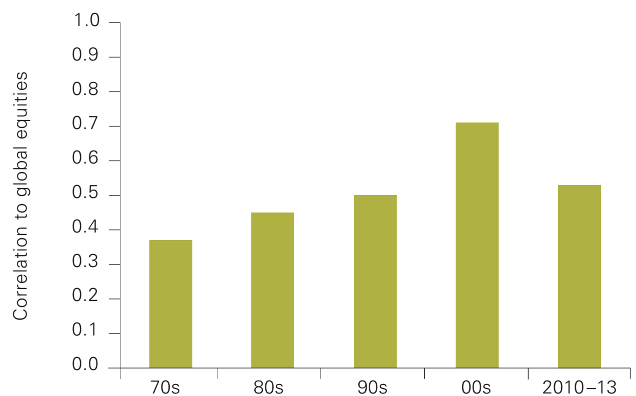
Figure 6: Swiss equities are often more volatile than the market as a whole



Notes: Switzerland represented by the MSCI Switzerland Index. Global equities represented by the MSCI World Index through 1987, and the MSCI All Country World Index thereafter. All data in Swiss francs. All data as at 31 December 2013.

Sources: Vanguard calculations, using data from Thomson Reuters Datastream and Morningstar.

Figure 7: Correlation with the global market is increasing



Notes: Switzerland represented by the MSCI Switzerland Index. Global equities represented by the MSCI World Index through 1987, and the MSCI All Country World Index thereafter. All data in Swiss francs. All data as at 31 December 2013.

Sources: Vanguard calculations, using data from Thomson Reuters Datastream and Morningstar.

3 For more on the case for hedging currency exposure in fixed income centric portfolios, see Westaway & Thomas, 2013

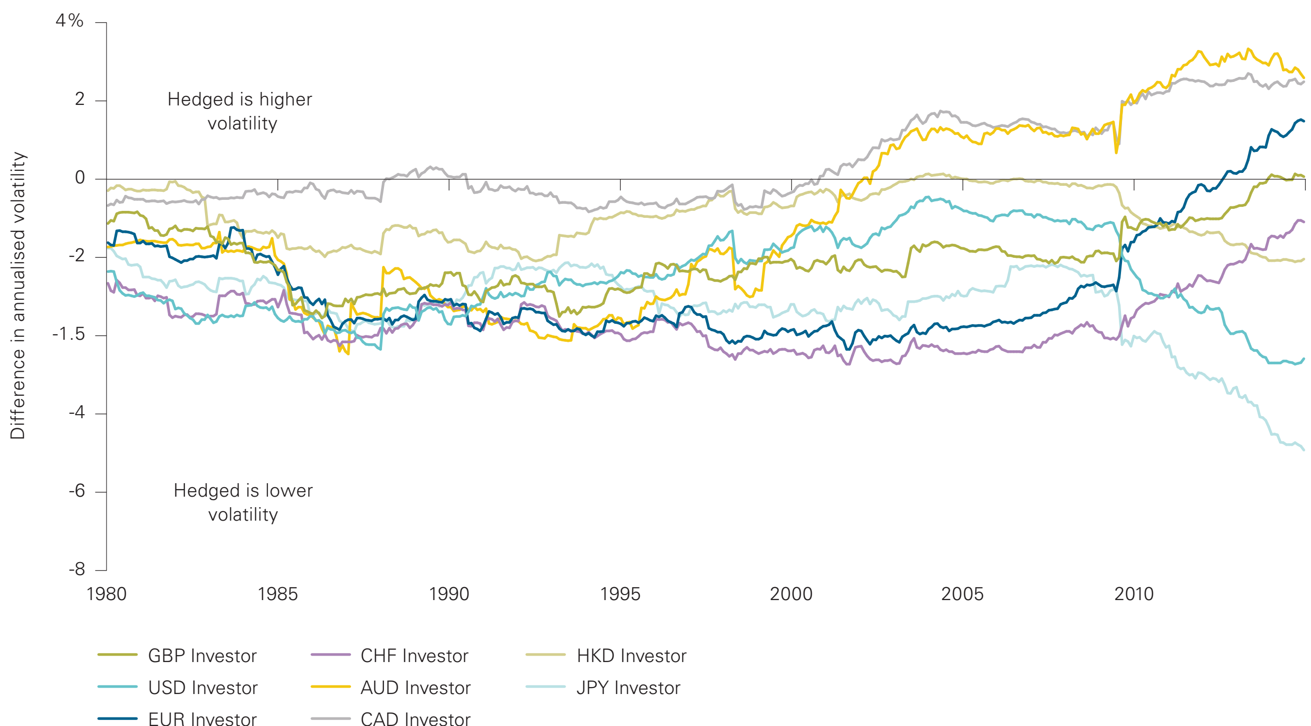
4 For more on the hedging decision in global equities see Lebarge, 2010.

Currency hedging

One significant concern that Swiss investors could have about investing abroad is currency risk. Holding non-Swiss franc denominated securities exposes investors to fluctuations in the exchange rate, which could in turn change the value of their holdings. Investors can theoretically mitigate these risks by hedging against currency fluctuations. It is worth noting, however, that long-term gross returns are expected to be equal regardless of whether or not hedging is used. It can reduce risk relative to an unhedged portfolio in the long run, but over shorter windows, the results can be quite varied.

The effectiveness of hedging currency depends primarily on the overall volatility of the portfolio. This measure influences the secondary driver: the correlation between the portfolio and foreign currencies. Less volatile portfolios (generally, those with a fixed income focus) see greater benefits from hedging because the correlation has a small effect – hedging can carve out currency volatility cleanly[3]. The reverse is true for more volatile (generally, equity-focused) portfolios. The correlation between foreign currencies and the portfolio matters. Hedging can, in some cases, harm the portfolio because the effect of currency on the holdings themselves is quite large – carving out currency volatility can become problematic. Hedging an equity portfolio requires a strong degree of confidence in expected future correlations; taking the wrong side is costly, and history does not serve as a useful guide. Figure 8 presents historical currency correlations and the impact of hedging over time, demonstrating that the currency correlations are not persistent – and they are equally likely to be positive or negative. Properly hedging equities is therefore a harder (and potentially costlier) exercise than hedging fixed income, so Swiss equity investors must weigh these expenses against any benefits they would gain at the margin.[4]

Figure 8: Dynamic correlations lead to time-varying hedge impact



Notes: Figure shows the 10-year rolling difference in volatility of monthly returns between a global developed equity portfolio with the currency hedged versus unhedged
Source: Vanguard, based on data from MSCI and the International Monetary Fund.

3 For more on the case for hedging currency exposure in fixed income centric portfolios, see Westaway & Thomas, 2013

4 For more on the hedging decision in global equities see Lebarge, 2010.

Conclusion

In light of empirical analysis and qualitative considerations, this paper demonstrates that market-cap proportional diversification among global equities provides a reasonable starting point for Swiss investors. Strict adherence to the principle would indicate an allocation to Swiss equities close to 3%. That said, we have also demonstrated that diversification benefits can be achieved through less than fully market proportional allocations. Higher allocations to Swiss equities may also be considered reasonable because they would allow investors to benefit from exposure to both global and European equities, while remaining sensitive to investor preferences. However, over time and as global markets become more integrated and home bias less relevant, this decision may warrant revisiting.

References

Chan, Kolak, Vicentiu Covrig, and Lilian Ng, 2005. What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide. *Journal of Finance* 6: 1495–1534.

LaBarge, Karin Peterson, 2010. *Currency Management: Considerations for the Equity Hedging Decision.* Valley Forge, Pa.: The Vanguard Group.

Philips, Christopher B., 2012. The role of home bias in global asset allocation decisions. Valley Forge, Pa.: The Vanguard Group.

Rowland, Patrick F., and Linda L. Tesar, 2000. *Multinationals and the Gains from International Diversification*. NBER Working Paper No. 6733. Cambridge, Mass.: National Bureau of Economic Research.

Stock, James H., and Mark W. Watson, 2003. *Understanding Changes in International Business Cycle Dynamics.* NBER Working Paper No. 9859 Cambridge, Mass.: National Bureau of Economic Research.

Westaway, Peter and Charles Thomas, 2013. Going global with bonds: Considerations for euro area investors. Valley Forge, Pa.: The Vanguard Group.

Connect with Vanguard® > global.vanguard.com

Important information

This document is directed at professional investors and should not be distributed to, or relied upon by retail investors. The material contained in this document is not to be regarded as an offer to buy or sell or the solicitation of any offer to buy or sell securities in any jurisdiction where such an offer or solicitation is against the law, or to anyone to whom it is unlawful to make such an offer or solicitation, or if the person making the offer or solicitation is not qualified to do so.

The information on this document does not constitute legal, tax, or investment advice. You must not, therefore, rely on the content of this document when making any investment decisions.

The value of investments, and the income from them, may fall or rise and investors may get back less than they invested.

Past performance is not a reliable indicator of future results. The performance data does not take account of the commissions and costs incurred in the issue and redemption of shares.

Issued by Vanguard Investments Switzerland GmbH.

© 2014 Vanguard Investments Switzerland GmbH. All rights reserved.

VISG-2014-12-04-0819