

Emerging market equities: an Australian perspective

Emerging markets should be viewed as a high-risk, but potentially high-return, sub-class of world equities rather than a diversification opportunity. In addition, a positive correlation with the Australian dollar can help to offset the impact of equity fluctuations, enhancing the attractiveness of emerging markets for Australian investors.



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EMERGING MARKETS should be approached as a high-risk but potentially high-return sub-class of world equities. Risks related to emerging markets include: a relatively high beta and illiquidity; sensitivity to the world economy and investor risk appetite; and propensity towards volatility, including occasional crises. Additional returns may arise from both risk compensations and alpha contributions. A positive correlation between the relative returns from emerging markets and the A\$ can dampen the impact of equity fluctuations, enhancing attractiveness for Australian investors. On the other hand, diversification benefits are limited, given a high correlation with other equities.

The objective of this article is to assist investors deciding their allocation to emerging markets, rather than provide recommendations or return forecasts. While our analysis is partly based on historical returns, care should be taken in extrapolating from this, given limited data and the constantly evolving nature of emerging markets.

Nature of emerging markets

Emerging markets are a high-risk, high-return equity investment. Table 1 reviews monthly A\$ returns on emerging markets, world equities and Australian equities from January 1988 through February 2008. Over this 20-year period, emerging markets outperformed world equities by 7.1% p.a. and Australian equities by 2.5% p.a., while being commensurately more volatile. During this period the annualised standard deviation for returns from emerging market equities was about 22% compared with around 14% for world equities and 13% for Australian equities. Emerging markets demonstrate greater negative skewness and 'fat tails' (kurtosis), indicating a higher frequency of extreme movements.

Emerging market performance has been episodic, including a number of crises. Figure 1 contains three extended performance episodes. Emerging markets

TABLE 1: Summary statistics for equity returns, January 1988 to December 2006

Equity Return Index <i>Jan 1988 - Feb 2008</i>	Emerging Markets <i>MSCI (total return)</i>	World ex. Australia <i>MSCI (net dividends)</i>	Australia <i>S&P/ASX300</i>	AS/US\$
Cumulative A\$ Returns	14.4%	7.3%	11.9%	1.3%
Analysis of Monthly A\$ Returns				
Mean (pa*)	15.9%	8.0%	12.1%	1.76%
Standard Deviation (pa*)	21.9%	14.3%	12.9%	9.8%
Skewness	-0.29	-0.06	-0.25	-0.07
Kurtosis (>0 => 'fat tails')	1.32	0.80	0.42	0.30
Analysis of Monthly US\$ Returns				
Mean (pa*)	17.4%	9.3%		
Standard Deviation (pa*)	22.7%	13.8%		
Skewness	-0.66	-0.42		
Kurtosis (>0 => 'fat tails')	1.62	0.71		

*Monthly mean multiplied by 12. Standard deviation estimated as square root of monthly variance by 12.
Data sources: MSCI, S&P.

outperformed developed world equities by 23.0% p.a. between December 1987 and September 1994; underperformed by 15.4% p.a. between September 1994 and September 2001; and then outperformed by 19.1% p.a. between September 2001 and February 2008. The underperformance episode coincided with Latin American and Asian crises of the mid-1990s, and the post technology boom fallout. The MSCI Emerging Markets Index plunged in A\$ terms by 25% during the Latin American crisis and 42% during the Asian crisis.

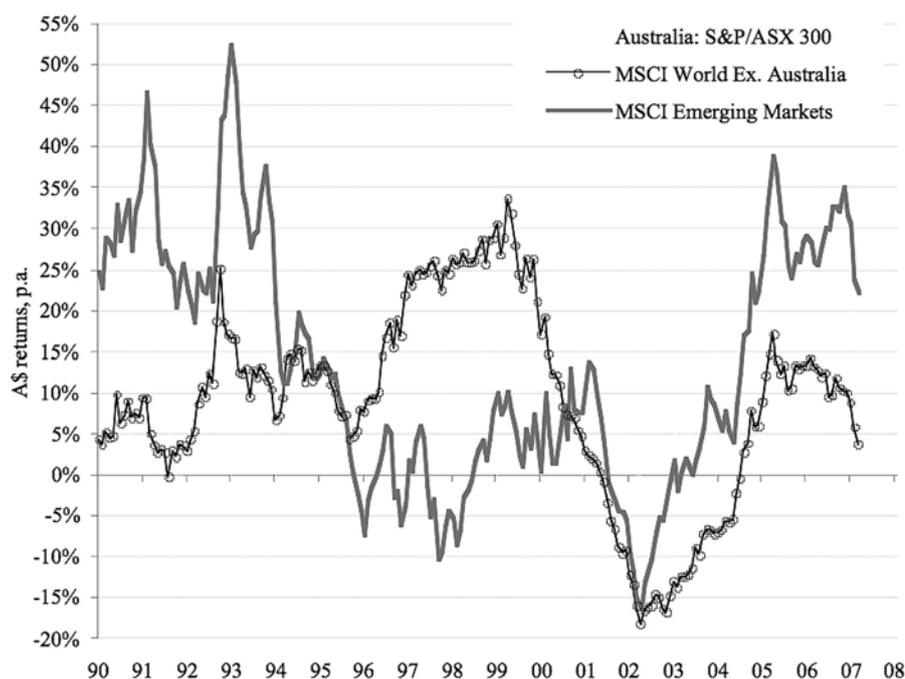
Emerging markets have a high beta compared to world equities. Figure 2 plots beta estimates based on rolling 60-month windows of US\$ returns. In addition to traditional beta estimates (the dashed line), alternative estimates are provided by summing the regression coefficients for coincident, one-month lagged and two-month lagged world equity returns (the heavy line).¹ The

alternative estimates account for serial correlation in the return series, and fluctuate around an average of 1.36. One-for-one substitution of emerging markets equities for world equities therefore tends to raise the beta exposure of a portfolio, i.e. an investor takes on more equity risk.

Emerging markets can be a risky investment partly because they are weighted towards commodities and other economically sensitive sectors, and away from consumer-related areas. Relative to the MSCI World (excluding Australia) Index as at December 2007, the MSCI Emerging Markets Index was overweight in materials (+11.8%), utilities (+5.6%), and energy plus oil (+5.5%). Underweightings in health care, consumer discretionary, and consumer staples amounted to 17.2%.

One perception is that emerging markets sit within a class of 'risk' assets that are sensitive to the global economy, investor risk appetite and (more arguably) global liquidity

FIGURE 1: Rolling 3-year A\$ returns



Data sources: MSCI, S&P.

conditions. This class of assets is also thought to include the A\$.² Figure 3 illustrates the positive correlation of the relative performance of emerging markets and the A\$/US\$, which has been clearest since the mid-1990s. Such a correlation can dampen the volatility of emerging markets for A\$-based investors, as the A\$ tends to fall when emerging markets are relatively weak (and vice versa).

Arguments for investing in emerging markets

This section considers six arguments of a longer term or 'structural' nature for investing in emerging markets (notwithstanding the risks identified previously). Our analysis supports most of the arguments to varying degrees, although we suggest that the case for emerging markets as a diversification option is relatively weak.

Strongest arguments:

1. Capturing a return premium

The scope for higher returns is the first argument usually offered for investing in emerging markets. Table 1 revealed that historically a substantial premium has been available. We consider this argument valid, but believe returns should be tied to compensation for risk rather than past performance. Risk compensations can be expected not only for high beta/volatility, but also for relative illiquidity. The latter reflects greater transaction costs including market impact, which may worsen in times of market weakness (Masters, 2002). On the other hand, we caution against relying on higher economic growth rates to generate higher equity returns. Ritter (2005) points to a lack of evidence for an association between economic

growth rates and equity returns. Other important considerations include whether earnings exceed expectations, and whether growth occurs in conjunction with value-creating returns on investment.

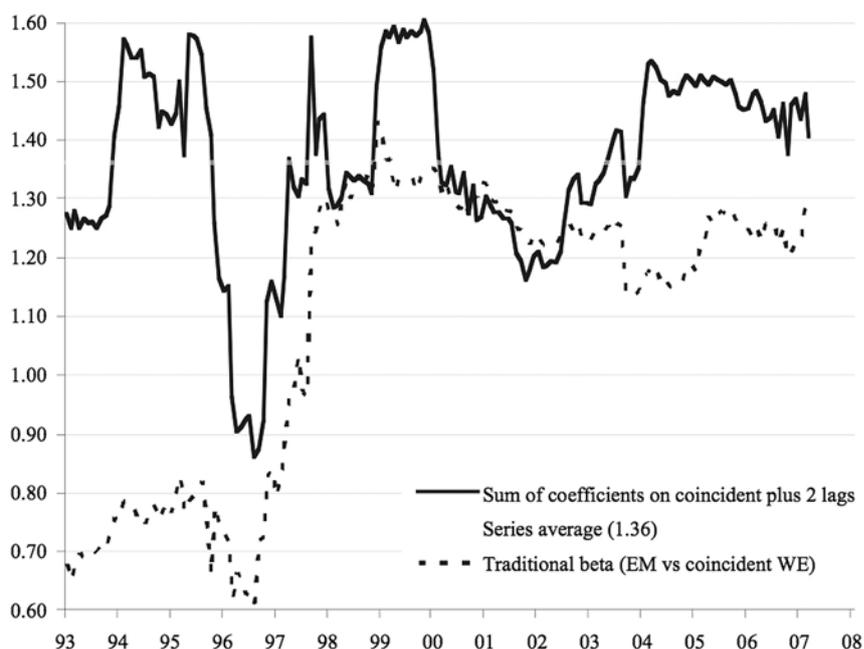
2. Implications of the correlation with the A\$

Figure 4 highlights that the rolling beta of emerging markets is considerably lower when expressed in A\$ terms, averaging 1.08 since 1993 compared to 1.36 in US\$ terms. This result derives from differing correlations of world equities and emerging markets with the A\$, and illustrates the reduced risk of investing in emerging markets for Australian investors. If emerging markets are priced to compensate global investors for their high US\$ beta, then A\$-based investors might benefit from reduced risk without commensurately lower returns.

3. Alpha opportunities

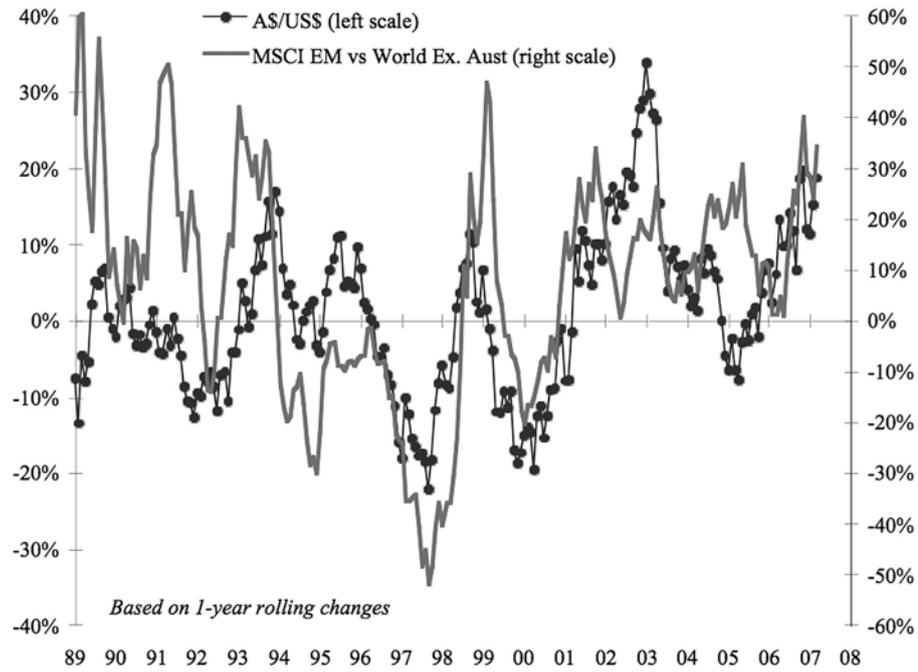
Active emerging market managers have historically generated relatively high alpha, which has a low correlation with other equity-based alpha sources. Alpha generation is accommodated by less efficient markets, reflecting lower sell-side analyst coverage, more insiders, greater private client involvement, short-selling constraints and weaker regulation. In addition, differences in currency and sovereign risk allow managers to create value by using individual judgement and expertise when selecting countries for investment (see Chen et al. 2006). For the period March 1992³ to January 2008, gross median fund manager returns exceeded the benchmark by 1.72% p.a. in emerging markets, 0.58% p.a. for the world (excluding Australia), and 1.09% p.a. in Australian equities. The performance differential between emerging market and world equity managers exceeded the difference in

FIGURE 2: Beta estimates for emerging markets versus world equities (based on rolling 60-month windows of US\$ returns)



Data sources: MSCI, Datastream.

FIGURE 3: Emerging markets versus world equities and A\$/US\$



Data sources: MSCI, Datastream.

FIGURE 4: Emerging markets beta in A\$ versus US\$ rolling 60-month betas (based on summing coincident and two lagged co-efficients)



Data sources: MSCI.

TABLE 2: Required emerging markets excess returns for unchanged Sharpe ratio
(based on hypothetical substitution for world equities using historical data)

Assumed Portfolio Re-Allocation			Required Excess Return: Emerging Markets - World Equities	
Emerging Markets Unhedged	World Equities Unhedged Hedged		10 Years Data (Mar'98-Feb'08)	Full Sample (Oct'89-Feb'08)
+3.0%	-3.0%		2.1%	1.3%
+3.0%	-1.5%	-1.5%	1.4%	1.0%
+3.0%		-3.0%	0.8%	0.8%

Data sources: MSCI, S&P, Citigroup, UBS Warburg, Datastream.

management fees of around 50bps–60bps p.a. Furthermore, excess returns for emerging market managers had a modest correlation of 0.19 with world equity managers, and 0.15 with Australian equity managers.

Figure 5 plots the time series of median beta and risk-adjusted alpha estimates for emerging market managers, estimated by regressing manager versus benchmark index returns in A\$ terms over 48-month rolling windows (36 months minimum). Over the whole period, beta estimates average 0.96. Alpha averages 2.9% p.a. and is consistently positive. While there is some hint of reduced alpha through time, estimates have averaged 2.1% p.a. since 2001 and are largely contained within the 1–3% range. This amounts to a net contribution of near 1% p.a. (allowing for management fees of about 1.2% p.a.).

Supportive arguments:

4. Broadening the investment opportunity set

Emerging markets increase the opportunities for both stock and country selection. However, these additional opportunities do not automatically bring benefits. Choice is only valuable if opportunities can be effectively exploited.

5. Benefits of structural change

Structural reform in emerging markets increased significantly following the crises of the mid-1990s. Reforms included financial liberalisation, inflation stabilisation programs, privatisation, improved capital allocation and better corporate management and governance. Several academic studies show that reforms can lead to higher returns without increasing market volatility.⁴ Structural reforms can reduce risk by limiting the probability of crisis. They can also improve return prospects during the transition period, via the beneficial effects on profitability and cost of capital. Offsetting that, the process of structural reform is rarely smooth.

Weaker arguments:

6. Diversification benefits

A high correlation with other equities considerably weakens the diversification benefits from investing in emerging markets. As at March 2007, the rolling 60-month correlation of the MSCI Emerging Markets versus the World (excluding Australia) index stood at 0.83 in US\$ terms and 0.72 in A\$ terms, while correlation versus the ASX/S&P 300 was 0.78 in A\$ terms. These correlations have risen persistently from the 0.30 to 0.60 range in the mid-1990s. As we shall show below, substitution of emerging markets exposure for world equities exposure can actually boost portfolio variance.

Investment implications

This section evaluates the potential impact of substituting emerging markets for a portion of world equity exposure. It commences with an analysis of the historical impact of such a substitution on a hypothetical balanced Australian portfolio. The portfolio comprises: 35% Australian equities; 35% world equities (50% hedged); 13% Australian bonds; 10% world bonds (fully hedged); and 7% Australian cash. Such an approach is useful to the extent that the historical covariance matrix might remain relevant going forward.⁵

Figure 6 plots the mean and standard deviation of portfolio returns at different emerging market allocations over the past five and 10 years, as well as the full period of data availability (since October 1989). The mean and standard deviation both increase with the allocation to emerging markets over all time periods. This exercise illustrates that one-for-one substitution of emerging markets for developed world equities would have resulted in a shift along the risk/return spectrum. The increase in standard deviation is smaller when unhedged emerging markets are substituted for hedged world equities, as this best captures the risk reduction benefits of the correlation with the A\$.

Figure 6 is based on historical returns. As historical mean returns can be a poor guide for future expected returns, we refocus the analysis to estimate the return at which an emerging markets allocation would have delivered an

equivalent risk/return for the portfolio, i.e. an unchanged Sharpe ratio. Our estimates are based on a 3% emerging markets weighting⁶ funded out of world equities over both the past 10 years, and since October 1989 (i.e. the full sample). Results are reported in Table 2. The emerging markets exposure would have generated an unchanged Sharpe ratio at returns in excess of world equities of between 0.8% and 2.1% p.a., depending on time period and hedging assumptions. The required return sits at the lower end of the range (0.8% p.a.) when emerging markets are substituted for hedged world equities.

Decision points for an emerging markets allocation

Setting asset allocation often involves judgement, given the unreliability of both historical data and optimisers. Decision points that may help guide investors in determining their own investment policy with respect to emerging markets are listed below.

1. Treat emerging markets as an equity sub-class.

Exposure might be structured within the context of world equity weightings.

2. Focus on whether expected returns are adequate given risk. As emerging markets are likely to increase portfolio risk, a key question is whether expected returns are sufficient to justify any allocation. Assuming the

calculations of Table 2 are relevant,⁷ investors should be confident that returns of at least 1%–1.5% p.a. in excess of world equities are achievable.

3. Identify and evaluate the potential sources of additional returns. Two potential sources of excess returns that might be sustained were identified previously:

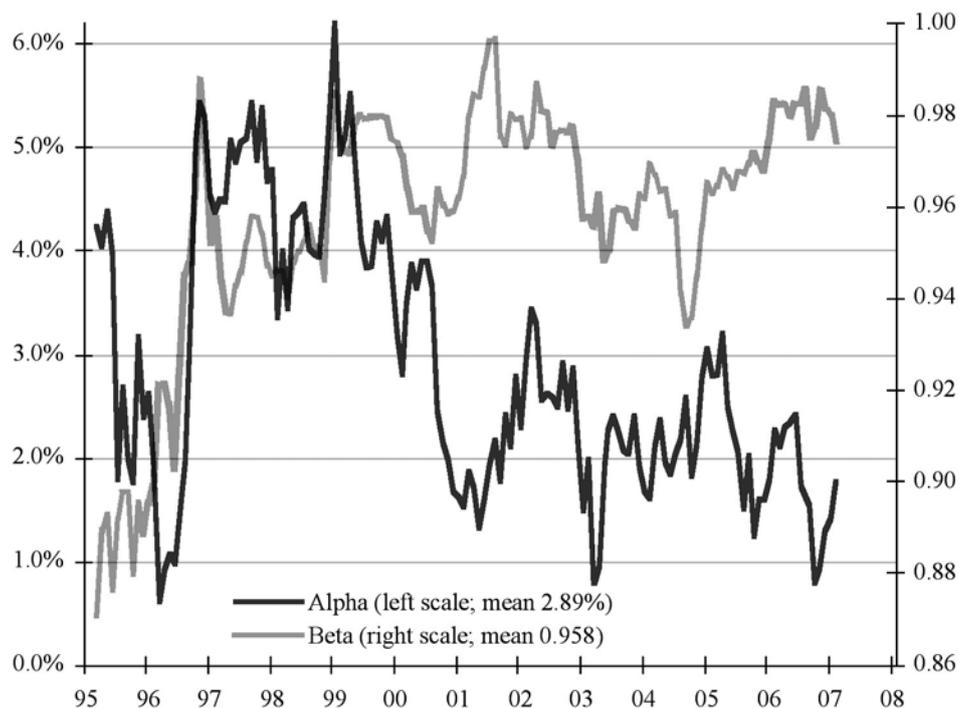
- a) *risk compensations* – beta and illiquidity risk should generate compensating returns. As a starting point, a beta of 1.36 versus world equities implies additional expected returns of at least 1.1–1.4% p.a. with a 3–4% p.a. equity risk premium.
- b) *alpha contributions* – the median emerging market manager has been able to generate additional alpha of around 0.5% p.a. after fees. Alpha might be further augmented by effective manager selection, especially as emerging market managers run relatively high tracking errors (about 8%).

The investment outlook should be continually re-evaluated, as returns can fluctuate markedly over the short to medium term. Relevant considerations when judging more immediate prospects might include the broad outlook for global economies and markets, relative valuations and the ongoing influence of structural change.

4. Take into account the relation with the A\$.

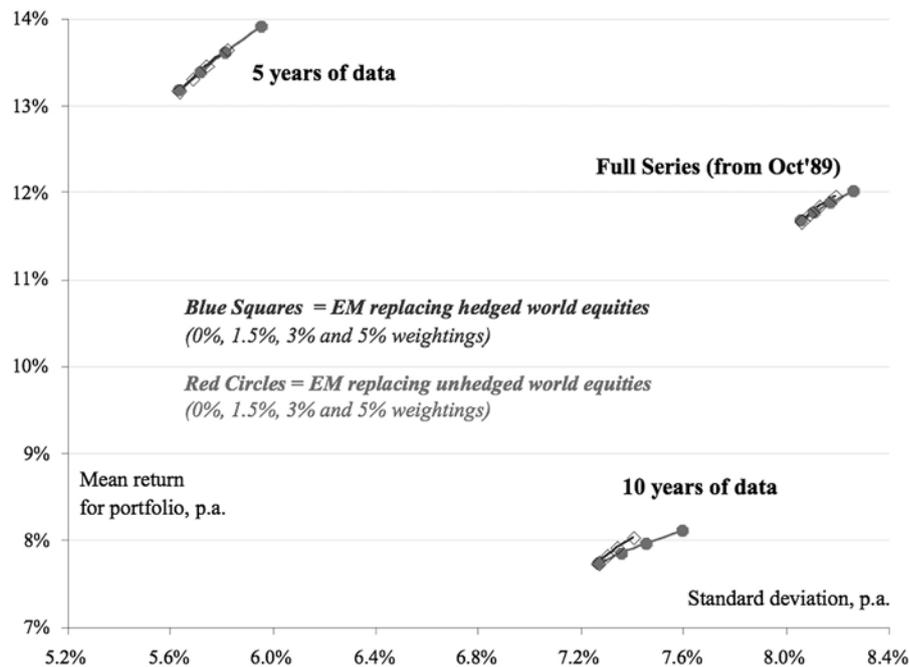
The correlation with the A\$ might be viewed as firming up the rationale for investment, as it enhances prospects

FIGURE 5: Emerging markets: median manager alpha and beta based on regressions using 48-month rolling windows of returns



Data sources: Mercer Investment Consulting, MSCI.

FIGURE 6: Portfolio return and risk versus emerging market weight – emerging markets substituted for world equities



Data sources: MSCI, S&P, Citigroup, UBS Warburg, Datastream.

for attractive risk-adjusted returns for Australian investors. The implications for hedging should also be addressed (although the appropriate response depends on hedging approach).⁸

5. Consider any broader objectives. Investors should reflect on how characteristics, such as the potential for extended performance episodes and dramatic swings, relate to their investment objectives. Such characteristics call for a long-term perspective. Investors might also consider the relevance of aspects like ‘peer risk’ and ‘regret’.

Conclusion

Evaluation of emerging markets should be based on whether they offer sufficient returns to justify the added risk. Additional returns may arise as compensation for beta and illiquidity risk, as well as alpha contributions. Also, the relation between emerging markets and the A\$ potentially improves the risk/return balance for A\$-based investors.

Notes

- 1 This is a version of the Dimson (1979) method for estimating beta.
- 2 Both the relative performance of emerging markets and the A\$ share a similar relation with series like commodity prices and the VIX index. The latter can be considered market-based indicators of the world economy, and investor uncertainty and/or risk appetite respectively. Details can be provided on request.
- 3 Manager returns are sourced from Mercer Investment Consulting. March 1992 was chosen as a starting date, when data for 10 emerging market managers becomes available. The database contained 33 managers in January 2008.
- 4 See for example Bekaert and Harvey (2000); Boubakri and Cosset (1998); Henry (2000a, 2000b, 2002); Johnson et al (2000); Kim and Singal (2000); and Prasad, Rogoff, Wei, and Kose (2004).
- 5 Estimates assume end-month rebalancing, and asset returns in line with benchmarks. Results are indicative, and do not represent an investable strategy.
- 6 The emerging market universe was 11.3% of total world equities at December 2007 according to MSCI, up from 8.2% as at December 2006. Note that 8%–11% of a 35% allocation to world equities amounts to approximately 3%–4% of the total portfolio.
- 7 The calculations may be considered valid for investors with comparable portfolios to that analysed, and who believe that the historical covariance matrix is reliable.
- 8 Ideally hedging policy should be set in an overall portfolio context. Analysis using the baseline portfolio as a reference point and 60-month rolling correlations over the past 10 years suggests that substitution of 3% emerging market for world equity exposure lowers the historical optimal hedge ratio by approximately 3% on average. The latter is consistent with substituting unhedged emerging market exposure for hedged world equity exposure.

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