

REBALANCING TO ASIA

With emerging market equities favourably positioned to benefit from strong regional growth dynamics and ongoing regulatory reforms, our findings indicate that international equity portfolios are underallocated to emerging markets, and that portfolios are underallocated to Asia. This suggests that investors should review their Strategic Asset Allocation when positioning for future developments in capital markets.



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Is Strategic Asset Allocation over-reliant on past events?

Recent research literature suggests that international equity portfolios are underallocated to emerging markets. In response to the global financial crisis, and with the expected further development of emerging markets, we anticipate that there will be greater differentiation of equity market returns between developed and emerging markets as well as between regions. We also believe that global markets have become more differentiated as a result of regional integration, and that the next decade will exhibit greater disparity between regions as markets continue to undergo a period of deleveraging and return to trend levels of growth. Our findings indicate that international equity portfolios are underallocated to emerging markets and that portfolios are underallocated to Asia. This suggests that investors should review their Strategic Asset Allocation (SAA) when positioning for future developments in capital markets.

Emerging market equities are favourably positioned to benefit from continued structural adjustment policies, regional growth dynamics, increasing financial and trade openness, and other regulatory reforms. Many funds currently access emerging market exposure through international equity portfolios that are benchmarked against developed market indices rather than as separate strategic benchmark allocations. In Australian superannuation portfolios, for example, emerging market equities comprise between 5 per cent and 15 per cent of overall equity allocation, accessed mainly through global equity mandates. However, with emerging market equities currently comprising 31 per cent of global market capitalisation or 13 per cent of the MSCI All Countries World Index, and projected to grow substantially over the coming decade, is this optimal? Our analysis indicates that emerging markets, including Asia, should represent a larger component of equity allocation.

As a key driver of returns, SAA is a vital component of the investment process. While heavily reliant on past outcomes, the current challenge of SAA is to anticipate the longer-term ramifications of changes in the growth outlook resulting from the global financial crisis of 2007 and 2008, and from the subsequent massive fiscal stimulus and ongoing regulatory reforms. We propose the adoption of broader benchmarks for portfolios that incorporate both developed and emerging markets, since a reliance on developed market benchmarks fails to recognise the growing prominence of emerging markets.

Part (I) of this study examines the role of emerging markets as a separate allocation within a fund's SAA and, in Part (II), we seek to assess the risk-return optimising regional allocation within an international equities portfolio.

Qualitative rationale

Our expectations have been shaped by some compelling qualitative fundamental factors.

Part (I) of our analysis seeks to test the expectation that emerging market risk will play a more central role in international equity portfolios. Issues like corporate governance, transparency, liquidity and regulatory barriers are being addressed as emerging markets continue to grow and implement policies to encourage foreign investment. Increased analyst coverage and international scrutiny will, in turn, drive these economies to improve quality of oversight and regulatory reform, and encourage the adoption of global corporate governance and investment standards.

Emerging markets presently have healthy balance sheets, with average government debt to GDP of around 40 per cent, after reaching a high point of 50 per cent in the late 1990s. Asian countries were particularly well positioned in the recent global financial crisis, after having reduced public debt and built up foreign asset reserves following the Asian financial crisis of 1997-98.

By contrast, OECD countries have been running increasingly high fiscal deficits as a result of the global financial crisis, with public debt to GDP rising dramatically to over 100 per cent, up from an already high level of debt of around 70 per cent reached in the late 1990s. Developed economies are facing a negative outlook for their credit ratings, associated with tough policy measures being imposed to reduce fiscal burdens. Meanwhile emerging markets continue to face strong economic growth prospects and positive credit ratings, which will open up opportunities for investment. While valid concerns exist regarding inflation and asset price bubbles, emerging economies should be able to address these issues from a position of economic and financial strength.

Emerging markets are also expected to lead global economic growth in coming years. The IMF *World economic outlook* forecasts indicated in Table 1 show an increased significance of emerging markets within the global framework. Figure 2 illustrates the dramatic shift in the distribution of nominal GDP growth projected by Standard Chartered in *The super-cycle report*, with emerging markets driving global growth by 2030. Companies tend to benefit from increased earnings during periods of economic growth. This is also true at

a global level, with multinational companies deriving strong revenue growth internationally. As a result, the strong economic growth from the emerging market region, combined with improving corporate governance and information efficiency, should eventually be reflected in higher returns on equity, culminating in higher equity market returns within these markets.

Part (II) of our analysis reflects the increased prominence of emerging markets led by Asia. Standard Chartered's report projects an increase in China's share of nominal global GDP from 9 per cent to 24 per cent, while India's share is expected to grow from 2 per cent to 10 per cent by 2030. By contrast, the United States, EU-27, and Japan would comprise only 29 per cent of nominal global GDP in 2030, down from 60 per cent in 2010. If this scenario eventuates, we expect a coincident increase in portfolio allocation to Asia.

Although many issues remain, emerging markets have made significant headway towards developing well-functioning, liquid financial markets. Asian economies comprised 66 per cent of equity issued globally in 2009. Other recent studies project that Asian equity markets will comprise around 50 per cent of global equity market capitalisation by 2030. Currently, Asian equity markets comprise 28 per cent of global equity market capitalisation, and 18 per cent of the MSCI ACWI benchmark. Over the next two decades, the weight of emerging market equity within the MSCI ACWI benchmark is expected to double from its current level of 13 per cent. A study by Goldman Sachs forecasts that in 20 years, China's equity market capitalisation will reach \$41 trillion, to become the largest in the world, compared with \$34 trillion in the United States.

Finally, while the United States, European Union and Japan account for 60 per cent of global output, they comprise less than 20 per cent of the world's population. The remainder of the global population is predominantly made up of emerging market economies, which will also provide support for the growth outlook of these economies going forward.

Data and methodology

In Part (I) of our analysis, we constructed a Markowitz portfolio optimiser to determine the optimal allocation between developed and emerging market equities based on MSCI global equity indices on a local currency basis.

FIGURE 1: Current account positions and international reserves by region



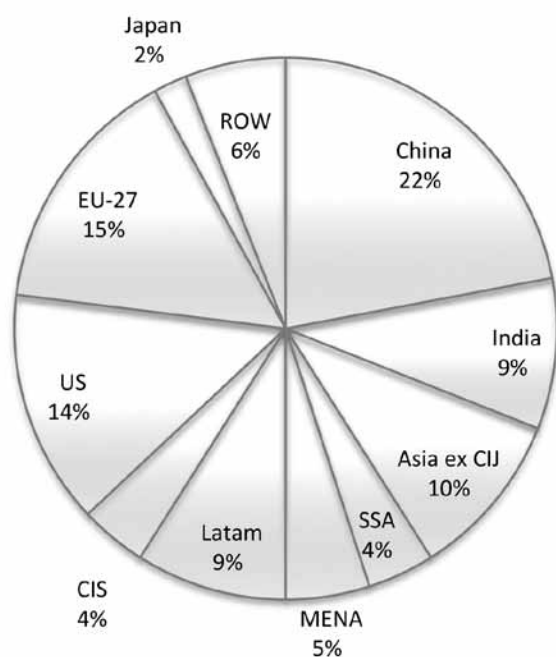
*Index, 2000 = 100; three-month moving average

Source: IMF World Economic Outlook 2010.



Over the next two decades, the weight of emerging market equity within the MSCI ACWI benchmark is expected to double from its current level of 13 per cent.

FIGURE 2: 'Two-thirds of global growth to 2030 will come from EMs' according to super-cycle report by Standard Chartered Research. % of total (based on real 2009 prices and dollars)



Sources: IMF, Standard Chartered Research.

Similarly, in Part (II) we used an optimiser to determine the optimal allocation by region, dividing the world into four regions: the Americas; Europe and Middle East; Asia Pacific ex Japan; and Japan. This component of the study assumes that neutral fund allocations within each region will not discriminate between developed and emerging markets, and will be allocated in proportion to their free float adjusted market capitalisations. The optimiser was run for each region assuming both short-selling constrained and unconstrained approaches.

Our use of the MSCI Indices in this study was based on their popularity as benchmarks for international equity portfolios, as well as data availability and comparability, and the avoidance of issues associated with dual listing of equities. In Part (I) we used the MSCI World Index as a proxy for developed equity markets, with the MSCI Emerging Market index representing emerging market equities. These indices represent approximately 85 per cent of each market's free float-adjusted market capitalisation, according to which they are also weighted, and cover large-cap and mid-cap securities.

In Part (II), the MSCI All Country (AC) regional indices for the Americas, Europe and Middle East, and Asia Pacific ex-Japan were used to represent the different regional markets. These indices are broad measures of global equity markets, including securities across the large-, mid- and small-cap segments in both developed and emerging markets. Japan was treated as a separate allocation from the Asia Pacific (APAC) region due to its substantial size and macroeconomic characteristics, which are significantly different from the other countries that comprise the Asia Pacific region. In May 2010, these regions made up 98.93 per cent of the MSCI All Countries

TABLE 1: GDP weights of countries in the MSCI AC World Index

	GDP % of AC World		GDP growth Inflation		
	2010	2015	5yr ave	5yr ave	
AC World	-	-	5.6%	2.8%	
AC AMERICAS	35.0%	33.6%	4.7%	2.4%	
CANADA	2.8%	2.5%	3.8%	2.4%	MSCI WORLD
UNITED STATES	25.8%	24.3%	4.3%	1.8%	
BRAZIL	3.6%	3.8%	6.6%	5.6%	MSCI EM
CHILE	0.4%	0.4%	8.1%	3.4%	
COLOMBIA	0.5%	0.5%	6.7%	3.5%	
MEXICO	1.8%	1.8%	6.1%	3.9%	
PERU	0.3%	0.3%	6.9%	2.4%	
AC ASIA PACIFIC	30.3%	34.1%	8.0%	2.8%	
AUSTRALIA	2.2%	2.0%	3.9%	3.4%	MSCI WORLD
HONG KONG SAR	0.4%	0.4%	6.9%	3.1%	
JAPAN	9.5%	8.8%	3.9%	0.2%	
NEW ZEALAND	0.2%	0.2%	4.0%	3.4%	
SINGAPORE	0.4%	0.4%	5.1%	2.7%	
CHINA	10.1%	13.4%	11.7%	2.9%	MSCI EM
INDIA	2.5%	3.2%	11.0%	7.3%	
INDONESIA	1.2%	1.5%	9.8%	5.7%	
KOREA	1.7%	1.8%	6.8%	3.7%	
MALAYSIA	0.4%	0.4%	8.0%	2.8%	
PHILIPPINES	0.3%	0.4%	8.6%	4.9%	
TAIWAN PROVINCE OF CHINA	0.8%	0.9%	8.2%	2.1%	
THAILAND	0.6%	0.6%	7.4%	2.9%	
AC EUROPE & ME	33.4%	31.1%	4.1%	2.9%	
AUSTRIA	0.6%	0.6%	2.5%	2.1%	MSCI WORLD
BELGIUM	0.8%	0.7%	3.1%	2.4%	
DENMARK	0.5%	0.5%	3.5%	2.4%	
FINLAND	0.4%	0.4%	2.8%	2.0%	
FRANCE	4.5%	4.0%	2.9%	2.1%	
GERMANY	5.8%	5.0%	2.4%	1.9%	
GREECE	0.5%	0.4%	0.9%	2.0%	
IRELAND	0.4%	0.3%	3.7%	0.8%	
ISRAEL	0.4%	0.4%	5.5%	3.0%	
ITALY	3.6%	3.1%	2.4%	2.2%	
NETHERLANDS	1.4%	1.1%	2.0%	1.6%	
NORWAY	0.7%	0.6%	3.0%	2.8%	
PORTUGAL	0.4%	0.3%	1.4%	1.7%	
SPAIN	2.4%	2.1%	2.3%	1.8%	
SWEDEN	0.8%	0.8%	6.2%	2.4%	
SWITZERLAND	0.9%	0.8%	2.0%	1.0%	
UNITED KINGDOM	4.0%	3.9%	5.0%	2.6%	
CZECH REPUBLIC	0.3%	0.4%	9.6%	2.3%	MSCI EM
HUNGARY	0.2%	0.2%	4.3%	4.0%	
POLAND	0.8%	0.8%	6.6%	3.2%	
RUSSIA	2.6%	3.4%	11.1%	7.3%	
TURKEY	1.3%	1.4%	7.2%	6.7%	
AFRICA	1.2%	1.2%	6.8%	7.3%	
EGYPT	0.4%	0.5%	9.5%	10.4%	MSCI EM
MOROCCO	0.2%	0.2%	6.5%	2.5%	
SOUTH AFRICA	0.6%	0.6%	5.1%	6.4%	
MSCI WORLD	69.5%	63.5%	3.7%	1.8%	
MSCI EM	30.5%	36.5%	9.4%	4.5%	

Source: IMF World Economic Outlook 2010.

World Index (ACWI). As a point of clarification, the MSCI World Index consists only of developed markets, while the MSCI Emerging Market Index comprises only emerging markets. The MSCI ACWI Index includes all of the countries from both the MSCI World Index and MSCI Emerging Market Indices as displayed in Table 1, making it a broader measure of the investible international equity universe. For the purposes of this analysis, the ACWI region that was unaccounted for was Africa, which includes Egypt, Morocco and South Africa. Given its small size, we expect that its exclusion would not have a significant impact on the results of this study.

We assumed that volatility and covariance between the different regions would remain close to their historical averages over the next 10 years. Variance and covariance estimates in this study were calculated using daily returns for each benchmark in local currency terms, gross of dividends from January 2001 to November 2010. Daily data were used to include the impact of shorter-term transient effects between different markets.

Currency is expected to be a significant contributor to returns between different regions, particularly with many central banks such as those within Asia seeking to diversify their foreign exchange reserves away from the US dollar. However, in the absence of reasonable forecasts of future currency movements, we used data expressed in local currency terms.

Expected returns used long-term returns on equity (ROE), payout ratios and dividend yields for each region, and were calculated using the expression:

$$E(R) = ROE * (1 - \text{payout ratio}) + \text{div yield}$$

The period used for long-term ROE data was 90 months, the maximum period over which this data was available in Bloomberg.

Table 2 provides a data summary. Emerging markets had the highest expected returns, suggesting that they would continue to deliver relatively high sustainable returns on equity. Interestingly, the variance of the emerging market data was not substantially higher than for developed markets. By region, the Americas had the highest expected returns. However, the data implied a relatively high level of volatility relative to other regions, as well as a higher likelihood of tail events. Japan performed poorly on a risk-adjusted basis, with the lowest level of expected returns, but the highest levels of volatility.

Table 3 shows the correlation between each region as well as the aggregate global developed and emerging markets. Emerging market returns had a high correlation of 0.87 with Asian countries, which comprise around 56 per cent of the emerging market index. By contrast, the developed market index was most highly correlated with the Americas, which was expected given the high weight of the United States in both indices. Japan was more correlated with emerging market equities than

TABLE 2: Summary characteristics of data used in Parts (I) and (II) of this analysis

	MSCI World	MSCI EM	AC APAC xJ	MSCI Japan	AC Eur&ME	AC Amer
LT ROE	12.98	14.74	12.90	6.33	14.17	14.33
Payout ratio	0.39	0.33	0.46	0.52	0.45	0.31
Div yield	2.48	2.46	2.90	1.99	3.42	1.93
E(R)	10.46%	12.33%	9.88%	5.06%	11.20%	11.78%
Mean (annualised)	2.21%	15.24%	11.81%	-1.32%	-0.21%	3.86%
Standard Deviation (annualised)	0.1749	0.1781	0.1822	0.2346	0.2137	0.2140
Sample Variance (annualised)	0.0306	0.0317	0.0332	0.0550	0.0457	0.0458
Kurtosis	7.6135	7.3677	5.4209	7.0603	6.0213	8.4640
Skewness	-0.0668	-0.2100	-0.3125	-0.0391	0.0573	0.0211
Range	16.01%	16.11%	13.95%	23.86%	17.18%	19.80%
Minimum	-6.90%	-7.34%	-6.42%	-9.91%	-8.05%	-8.93%
Maximum	9.11%	8.77%	7.53%	13.95%	9.13%	10.87%

TABLE 3: Correlation of data used in Parts (I) and (II) of this analysis

	MSCI World	MSCI EM	AC APAC xJ	MSCI Japan	AC Eur&ME	AC Amer
MSCI World	1.000					
MSCI EM	0.655	1.000				
AC APAC xJ	0.441	0.873	1.000			
MSCI Japan	0.377	0.595	0.679	1.000		
AC Eur&ME	0.823	0.634	0.443	0.329	1.000	
AC Amer	0.921	0.469	0.222	0.138	0.579	1.000

with developed markets, which was surprising since it comprises 10 per cent of the developed market index, and is not in the emerging market index. The relatively low correlation between regions lent credence to the idea of performance being differentiated by region. Consequently, while the expected returns and standard deviation inputs in Table 2 are fairly close together, we expect that the output of the optimiser may be magnified due to the significant covariance between each region.

Results

Table 4 presents the results of Part (I) of our analysis. Being a two-asset portfolio, we note that the results reflect the only range of outcomes possible for each level of expected return. Portfolio 5 was the solution that maximised the reward-to-risk ratio under both short-selling constrained and unconstrained scenarios. This portfolio had an expected annual return of 11.6 per cent, with an allocation of 58 per cent to emerging markets, and 42 per cent to developed markets, significantly higher than current international equity portfolio allocations. Interestingly, this result is consistent with predictions in a paper by Goldman Sachs that emerging market equities will grow to 55 per cent of global market capitalisation by 2030. It is also in line with the shorter-term economic growth forecasts presented in Table 1, which also suggest that the emerging markets will increase to 36.5 per cent of the world index by 2015.

Table 5 presents the results of the regional optimisation for Part (II) of the analysis. Assuming no short selling constraints, the reward-to-risk optimising portfolio was

Portfolio 14 with an expected annual return of 12.0 per cent, allocating 71 per cent to APAC ex-Japan, short 24 per cent to Japan, 14 per cent to Europe and the Middle East, and 40 per cent to North and South America.

One interesting element of this result is the long and short positioning between APAC and Japan, constituting a net long 46 per cent exposure to the APAC region up from its current weight in the MSCI ACWI of 22 per cent. The Americas' exposure of 40 per cent is lower than its current weight of 52 per cent in the MSCI ACWI, but higher than its current GDP weight of 35 per cent as a proportion of MSCI ACWI countries reported in Table 1. Overall, the results of this optimisation imply that regional allocations towards Europe and the Middle East and the Americas should be reduced in favour of the APAC region.

If short-selling was constrained, Portfolio 20 would be optimal, with an expected annual return of 11.0 per cent, and an allocation of 37 per cent to APAC ex-Japan, 16 per cent to Europe and the Middle East, 48 per cent to the Americas, and no Japanese exposure. Compared with the unconstrained scenario, APAC exposure would reduce by 9 per cent in favour of other regions. At 48 per cent, the Americas exposure is much closer to its current weight of 52 per cent in the MSCI ACWI than in the previous scenario. The main deviation of the optimised allocation from a passive indexed MSCI ACWI portfolio would be an increased allocation to the APAC region of 15 per cent, reducing exposure to Europe and the Middle East by 9 per cent and exposure to the Americas by 4 per cent. This is in line with the qualitative view that Asia will continue to lead global growth in the coming decade.

TABLE 4: Results for Part (I), developed/emerging portfolio optimisation

	MSCI World	MSCI EM	Portfolio Mean	Portfolio Variance	Portfolio Std Dev	Reward/Risk
1	97.60%	2.40%	10.50%	0.030	0.174	0.605
2	70.96%	29.04%	11.00%	0.027	0.163	0.676
3	52.63%	47.37%	11.34%	0.026	0.161	0.707
4	44.32%	55.68%	11.50%	0.026	0.161	0.714
5	41.67%	58.33%	11.55%	0.026	0.161	0.716
6	17.69%	82.31%	12.00%	0.028	0.169	0.712
7	0.00%	100.00%	12.33%	0.032	0.178	0.692
8	-8.94%	108.94%	12.50%	0.034	0.184	0.679
9	-35.58%	135.58%	13.00%	0.043	0.206	0.630

TABLE 5: Results for Part (II), regional portfolio optimisation

Short selling allowed								
	AC APAC xJ	MSCI Japan	AC Eur&ME	AC Amer	Portfolio Mean	Portfolio Variance	Portfolio Std Dev	Reward/Risk
10	30.92%	32.17%	5.69%	31.22%	9.00%	0.024	0.156	0.575
11	44.25%	13.30%	8.44%	34.01%	10.00%	0.023	0.151	0.661
12	46.55%	10.04%	8.91%	34.49%	10.17%	0.023	0.151	0.672
13	57.59%	-5.58%	11.19%	36.80%	11.00%	0.024	0.154	0.715
14	70.92%	-24.45%	13.94%	39.59%	12.00%	0.027	0.163	0.734
15	84.25%	-43.33%	16.69%	42.39%	13.00%	0.032	0.179	0.726
16	97.58%	-62.20%	19.44%	45.18%	14.00%	0.040	0.199	0.703
Short selling restricted								
	AC APAC xJ	MSCI Japan	AC Eur&ME	AC Amer	Portfolio Mean	Portfolio Variance	Portfolio Std Dev	Reward/Risk
17	30.92%	32.17%	5.69%	31.22%	9.00%	0.024	0.156	0.575
18	44.25%	13.30%	8.44%	34.01%	10.00%	0.023	0.151	0.661
19	46.55%	10.04%	8.91%	34.49%	10.17%	0.023	0.151	0.672
20	36.51%	0.00%	15.56%	47.93%	11.00%	0.025	0.158	0.696
21	30.71%	0.00%	17.32%	51.97%	11.10%	0.026	0.162	0.685
22	22.01%	0.00%	19.95%	58.04%	11.25%	0.029	0.169	0.664
23	7.52%	0.00%	24.34%	68.15%	11.50%	0.034	0.186	0.619

Concluding remarks

Our analysis indicates that emerging markets should represent a much higher allocation within equity portfolios. The current practice of allocating to emerging markets within international equity portfolios that are benchmarked against developed market indices fails to recognise the increasing prominence of emerging markets within international equity markets. Rather, it relegates emerging markets to being a source of high tracking error risk for portfolios. We suggest a more optimal means of incorporating this exposure would be to include emerging markets as a separate strategic allocation, or to use a more inclusive benchmark for the international equity component, such as the MSCI AC World Index. The choice of benchmark for international equity portfolios is an important consideration, since the present use of developed market indices creates a bias towards developed markets. This is not optimal on a risk-adjusted

basis if developed market equities are expected to comprise a less dominant part of global equities markets in the future.

From a regional perspective, our analysis supports a rebalancing of international equity portfolios towards Asia, out of the other regions. While APAC comprised 22 per cent of the MSCI ACWI in May 2010, our results favour an allocation to APAC of at least 36 per cent, coinciding with the projected growth profile of this region. Qualitative factors support our result, pointing towards improving fundamentals that will drive the economic outperformance of this region relative to the rest of the world over the next two decades. In their strategic allocation reviews, investors would be well advised to consider the importance of changing regional dynamics.

Optimisers are sensitive to inputs; for example, assumptions about the current stage in the business cycle of the countries in each region or the impact

of idiosyncratic risk factors could vary the outcome significantly. We used simplistic expected return calculations in this study, which we have assumed to be conservative estimates of future market returns. In practice, portfolio managers may choose to adjust these inputs according to their outlook, or run different risk-return scenarios to determine a range around their strategic allocations. While our analysis makes a strong overall statement regarding regional allocations, it could be refined through further analysis. As a starting point, however, we hope that this analysis will inspire further, more in-depth research and consideration of portfolio allocation decisions in the future. ■

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