Changing Spaces: Emerging Markets Investing

What the Changing Composition of Global Equity Markets Means for Investors

Over the past decade, emerging market equities have become a meaningful portion of global equity markets. In 2003, emerging equities accounted for just 4% of global equity market capitalization as measured by the MSCI ACWI index. Today that figure is close to 13%.

Many US institutions hold much less than 13% either due to a benchmark choice that explicitly allocates less (if anything) to emerging markets or due to an active bet relative to the benchmark. At the end of 2009, US pension plans on average allocated between 3-8% of their capital to emerging markets, while many had no exposure whatsoever.1

However, an increase in manager search activity suggests that pension plans are either increasing exposure to emerging markets or rotating their emerging markets managers. Research group EPFR reported that emerging equity fund inflows reached $80.3 billion in 2009 – the largest inflow in the asset class since the company began tracking this data in 1997.

For investors evaluating their exposure, three meaningful topics to weigh are:

I. How to approach risk budgeting and asset allocation in light of the global equity markets’ changing composition
II. The pros and cons of various investment styles
III. How inflation impacts emerging equities

This paper provides insight into these questions. Part I addresses asset allocation and portfolio risk. Part II analyzes fundamental and quantitative emerging market active managers. This section presents evidence that there are meaningful gains to holding a diversified portfolio of both fundamental and quantitative emerging equities managers. Lastly, Part III outlines the potential benefits to holding emerging equities in periods of rising inflation.

1“Surprisingly, the party’s like the last,” InvestmentNews, 8 November 2009.
PART I: RISK BUDGETING AND PORTFOLIO CONSTRUCTION

Ten years ago, investors who adopted a “no emerging markets” policy were missing out on just a fraction of the global equity market. But today they are missing nearly 13%. Even early emerging market investors who adopted a 5% allocation earlier in the decade – consistent with market cap at the time – and periodically rebalanced to 5% are today significantly underweight. This leaves many investors under-exposed to some of the fastest growing areas of the world.

Total Portfolio Risk Implications

Emerging markets have historically been more volatile than developed markets. Concerns about increased portfolio volatility and market exposure may explain, in part, investors’ under-allocation to emerging equities. The argument has often been made that the structural and governance challenges prevalent in emerging countries could create hazardous levels of portfolio risk for emerging equity investors. History has shown that these regions (arguably more so than developed countries) have suffered from a greater likelihood of political uncertainty and corruption, poor macroeconomic policy, and political and corporate disregard for the rule of law and shareholder’s rights. While it is true that emerging equities have been more volatile than developed equities, the portfolio impact tells a different story. Adding emerging equities has not significantly increased portfolio market beta or volatility given the modest increases required to approach market cap weights. Fear of significantly increasing overall portfolio risk because of an allocation to emerging equities is, in fact, overstated since a relatively small increase to emerging equities brings most investors to global cap weight.

To illustrate this, we modeled three all-equity portfolios with the following allocations to the MSCI Emerging Markets and MSCI World indices:

- **0/100 Portfolio** – reflects the investor who has no emerging markets exposure and invests solely in developed markets
- **5/95 Portfolio** – represents an investor whose emerging markets exposure was in line with global market cap years ago but today is under allocated to the asset class
- **Market Cap Portfolio** – a portfolio with allocations to developed and emerging equities in line with global market capitalization through time

We analyzed portfolio characteristics from 1998-2009 to understand the long-term impact of an under-allocation to emerging equities. We find that increased exposure to emerging markets resulted in virtually no change to realized market beta in our portfolios. In addition, moving from a developed only mandate to some emerging equities did not significantly increase portfolio volatility. However, an underweight to emerging equities meant a sacrifice in return on both an absolute and a risk-adjusted basis, despite the tiny fraction of global markets that

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<tr>
<td></td>
<td>0/100 Portfolio</td>
<td>5/95 Portfolio</td>
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<tr>
<td>Market Beta</td>
<td>0.97</td>
<td>0.99</td>
</tr>
<tr>
<td>Annualized Volatility</td>
<td>16.6%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Annualized Return</td>
<td>3.5%</td>
<td>3.9%</td>
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<tr>
<td>Sharpe Ratio</td>
<td>0.21</td>
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Source: Datastream and AQR. Based on monthly returns.

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2The MSCI World and MSCI Emerging Markets indices (net) had realized volatilities of, respectively, 16.6% and 24.9% from 2000-2009.
3The beta was calculated to the MSCI ACWI Index (net), given this is representative of the market cap portfolio.
consisted of emerging countries in the early part of the decade.

These results have been consistent in recent years as well. Starting in 2005, the beta of emerging equities to the ACWI index increased meaningfully, rising from 1.21 to a high of 1.91 before declining again in 2009. But over the past five years, the three portfolios we modeled maintained almost identical market betas. Five-year volatilities have also been comparable. The return imbalance is more pronounced recently than over the long-term, which is consistent with the recent increased prevalence of emerging equities in the global market. [See long- and short-term analysis results in Summary Table A].

Let us revisit the under-allocated investor with a 5% weight to emerging equities. As emerging markets expanded, this portfolio realized gradually increasing tracking error (TE) versus the MSCI ACWI benchmark. Here, horizon matters. Over the past ten years, the 5/95 Portfolio realized a TE of 0.5%. This figure is misleading, though, since the portfolio’s emerging exposure was in line with market cap from 2001-2003, during which time the 5/95 Portfolio had a negligible TE of 0.1%. Examined over the past 3 years when emerging markets began to significantly increase in the ACWI index, the 5/95 Portfolio had a TE of almost 1%.

A portfolio with zero allocation to emerging markets realized even greater TE relative to the ACWI index. Measured over the decade, the 0/100 Portfolio had a 1.1% TE. But over the past three years as the world

Active Risk Implications

Having addressed the portfolio risk concerns about investing in emerging equities, let us now examine the active risk of an underweight to emerging equities. Though we have illustrated that portfolio-level risk is insubstantial, there are meaningful active risk implications from being underweight emerging equities given investors’ limited active risk budgets.

Consider the average pension plan with a 3-8% allocation to emerging markets. This is a meaningful tactical or “active” bet in light of emerging equities’ aggressive recent growth. In March 2010, the portion of world equity markets consisting of emerging equities peaked to its highest level ever at 12.8%. [See Figure A].

![Figure A: Emerging Markets Weight in MSCI ACWI Index](image)

Source: Datastream and AQR.

*Calculated as the rolling 3-year beta of the MSCI Emerging Markets index to the MSCI ACWI index (net).
Benchmark choice will vary by investor and portfolio, but the point remains that the meaningful growth of emerging equities means many investors are underweight emerging equities and potentially taking active risk against their benchmark. This also means that investors with dated policy portfolios that have not been reassessed within the past three to five years could be underweight emerging equities if the equity component of their policy portfolio allocated to developed versus emerging equities in proportion to the world cap weights.

This discrepancy will likely perpetuate and compound if factors persist that contributed to emerging markets growth relative to developed markets. There is economic and demographic evidence that this could happen. Today emerging economies make up 46% of world GDP compared to approximately 10% twenty years ago, and emerging market economies are projected to grow three times faster than developed market countries going forward. Steadily decreasing fiscal deficits and downward trending government debt repayments might also contribute to positive conditions for economic growth in emerging countries relative to developed countries. In addition, emerging countries are home to over 50% of the world’s population today and over the last twenty years have grown by over 20%. The World Bank forecasts emerging markets’ future population growth to be twice the rate of developed countries, with emerging markets

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*This is, of course, true of all asset classes through periods of expansion and contraction. Though it is critical to note TE changes in asset classes that undergo aggressive change in a relatively short period of time, such as in the case of emerging equities.*

*Source: International Monetary Fund*

*Emerging market countries have steadily decreased fiscal deficits over the past twenty years. This is good news for emerging markets growth, since high fiscal deficits are typically remedied by increased government borrowing or by printing money. These actions can result in higher interest rates and increased inflation, which both inhibit economic growth. Conversely, developed nations’ fiscal deficits have slowly continued to climb, and have increased dramatically in the past few years.*

*As a percentage of government spending, emerging countries’ debt repayment has decreased in the past decade. Collectively, debt repayments have gradually decreased from a high of approximately 45% of government spending in 2000 to less than 32% today. With diminishing debt repayment, emerging countries governments can dedicate more spending to infrastructure investments and other investments that can contribute to GDP growth. [Source: Datastream and AQR].*

*Source: Datastream and AQR*
population forecasted to increase by approximately 23% versus developed markets' 10%. If these conditions persist, portfolios with minimal exposure to emerging equities may find their TE steadily increasing overtime.

Let’s put this tracking error in perspective. A typical pension plan may carve out between 1-2% of its equity portfolio for returns from active risk. This means that the active risk of being underweight emerging equities is equivalent to half (and, in some cases, possibly all) of a portfolio’s active risk budget. This is a non-trivial contribution to active risk, especially if emerging markets growth continues at an accelerated pace. In addition, a portfolio will be subject to a “surprise” risk if the active risk target fails to factor in the emerging market underweight.

If, for example, a portfolio consumes 2% active risk in other areas of the portfolio and is also underweight emerging equities, then that portfolio is realizing an active risk of over 2% and exceeding its risk target.

An underweight to emerging markets may be an inefficient use of a portfolio’s limited active risk budget, especially if this bet is unintended and the risk budget is constrained. When tough decisions and tradeoffs must be made, consuming such significant risk on an underweight to emerging equities may be a foregone opportunity to take active risk in other areas of the portfolio. This is a significant consequence and a non-trivial consideration when thinking through portfolio composition and emerging markets exposure. This is especially relevant, and something of a contradiction, for investors who expect emerging markets to grow faster and for those equity markets to perform better than the developed world. An underweight to an asset class can be justified if one has a strong negative view and conviction that it will underperform going forward, but an underweight to an asset class that one expects to perform as well or better than others is contradictory and a negative expected return decision.

**PART II: IMPLEMENTATION CONSIDERATIONS**

When thinking about implementing (or increasing) emerging equity exposure, a relevant question is how to allocate capital to managers with different investment approaches. Building an optimal portfolio includes debating the merits of active versus passive management and fundamental and quantitative styles. As an active manager of quantitative emerging market equity portfolios, we obviously believe in active management and favor a quantitative approach. This section, though, is meant to offer insight into the performance of emerging markets equity managers more broadly.

**Active versus Passive Management**

Active management is by definition most appropriate in markets that are less efficient. In our view, emerging markets present just such an opportunity due to a variety of factors. Financial market regulations play a role, as short-selling is prohibited in some markets which can prevent inflated valuations from being corrected quickly. In addition, government intervention – which is seemingly more frequent in emerging countries than developed countries – such as changes in tariffs, import restrictions, or currency management can result in more exploitable inefficiencies. Also, compared to developed equities, fewer sophisticated managers and institutional investors participate in emerging equities, which means there is less capital in the space to profit from inefficiencies, leaving potentially greater opportunities for skilled active managers to earn excess returns.

To assess how active managers have fared in practice, we analyzed a universe of emerging market active managers – fundamental and quantitative – and we focused on larger institutional money managers whose assets represent approximately half of the emerging market universe.

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12Source: The World Bank
13Based on historical correlations
14To illustrate this in more detail, let’s assume that an investor has a bullish view of developed versus emerging equities and has chosen to overweight developed and underweight emerging. Let’s also assume this investor expects a one-year risk-adjusted return of 0.5 (which is a reasonable information ratio for a long-only active bet) from this tilt. Using historical volatilities, if one expects an information ratio of 0.5 from being overweight developed versus emerging equities, then the implied expected return of this choice is 7% (Expected Return = Sharpe Ratio*Volatility). In other words, one expects developed equities to outperform emerging equities by 7%. However, if developed equities underperform emerging equities, then this investor will realize a negative information ratio. [Source: Datastream and AQR]
15Data source is the eVestment Alliance manager database. We sampled a universe of 40 emerging equity managers. Of the 40 managers, 20 self-classified as fundamental managers and 20 self-classified as quantitative managers. We did not override any self-classifications.
Although there is some size and survivorship bias in this data set, we think these managers represent a solid cross-section of active emerging equity institutional money managers and we found evidence that these managers added value over time. The average 5-year information ratio (IR) was 0.21 and the average since inception IR was 0.43.\textsuperscript{16} An equal-weighted portfolio of emerging equity managers had a 5-year IR of 0.66 and a long-term IR of 0.85.\textsuperscript{17} Independent of one’s view on emerging equities, there is evidence that active management is effective in this asset class.

Empirically, active management is about as effective in emerging equities as it is in developed equities. An analysis of a sample of developed equity managers resulted in an average 5-year IR of 0.29 and an average since inception IR of 0.35.\textsuperscript{18} An equal-weighted portfolio of these managers resulted in a 5-year IR of 0.88 and a long-term IR of 0.72.\textsuperscript{19} Though, as mentioned above, we have reason to believe that over a long horizon active management could be even more effective in emerging markets.

**Fundamental and Quantitative Styles**

We extend the analysis of emerging equities managers’ performance to assess the portfolio diversification benefits of holding both fundamental and quantitative managers. We acknowledge that a survivorship and reporting bias is something to be mindful of with respect to performance.\textsuperscript{20} Despite these caveats about absolute performance, the relationship between different styles and behavior of manager returns is a powerful takeaway from this data. More noteworthy in our analysis may be the evidence we found in favor of manager style diversification in a portfolio of active emerging equities managers. In Summary Table B we present monthly correlations of active returns within and across manager styles. The performance of fundamental and quantitative managers have very low correlation to one another (0.10 correlation), which suggests that an investor could benefit from holding both fundamental and quantitative emerging equity managers.

In this case, style diversification can be as meaningful as diversification by capital or asset allocation. Some investors may feel strongly that one style is more suited for their portfolio and investment philosophy, but one would have to have very high conviction to compensate for the lack of diversification gained from holding both fundamental and quantitative managers. The point of any kind of diversification is to hold things that have different behaviors in different environments.

The correlation between styles is lower than the intra-style correlations, though in absolute terms fundamental and quantitative managers also have low correlations within peer groups. Correlations within quantitative managers (0.15 correlation) are slightly lower than within fundamental managers (0.23 correlation), indicating a slightly higher degree of variation among quantitative managers over the long-term. These results suggest that not only could it be beneficial to hold both fundamental and quantitative styles, but that diversification will be further improved through holding multiple fundamental and quantitative managers.

**Summary Table B: Long-Term Pairwise Correlations**

<p>| Source: eVestment Alliance manager database and AQR. Based on monthly returns excess of identified benchmark since inception of strategies. |</p>
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<th>F</th>
<th>Q</th>
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<tbody>
<tr>
<td>F</td>
<td>0.23</td>
</tr>
<tr>
<td>Q</td>
<td>0.10</td>
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\textsuperscript{16}Information Ratio = Excess Return / Realized Volatility. We assess performance using information ratio as opposed to excess return alone to account for managers’ assumed tracking error, which can vary significantly by manager.

\textsuperscript{17}The long-term IR is calculated from November 1992 to December 2009. We start in November 1992 because this is the point at which we have performance data for at least five emerging equities managers and we wanted a minimum number of investors to constitute a portfolio of managers.

\textsuperscript{18}Data source is the eVestment Alliance manager database. We sampled a universe of 75 emerging equity managers. Of the 75 managers, 46 self-classified as fundamental managers and 29 self-classified as quantitative managers. We did not override any self-classifications.

\textsuperscript{19}The long-term IR for the equal-weighted developed equity portfolio was calculated over the same horizon (November 1992 to December 2009) as the equal-weighted emerging equity portfolio to make the IR calculations comparable over the long-term. However, there were meaningfully more managers and greater diversification in the developed equity portfolio in November 1992 as the portfolio consisted of fifteen managers versus the five managers in the emerging equity portfolio.

\textsuperscript{20}Managers self-report to the eVestment database, which suggests that underperforming managers may choose to not report their performance. But these results remain instructive in evaluating skilled active managers.
Recent speculation about the commoditization of quantitative equity management has lead to assertions that the performance of quant managers and the characteristics of their factors have become indistinguishable in recent years. The data actually suggests the opposite. Diversification characteristics have not only maintained their long-term properties but actually improved in recent years. We observed the pairwise correlations among and within manager styles from 2005-2009 and find that all correlations – including correlation within quantitative managers – are even lower than they are over the long-term. In addition, the relative correlations over the past five years is consistent with the long-term results. That is, the correlation between styles remains the lowest (0.09), followed by correlations within quantitative managers (0.12) and fundamental managers (0.16). And, from a position of admitted self interest, the “same same and not so different” criticism of quantitative managers in emerging equities seems mistaken.

**Figure C: Manager Style Correlations**

![Manager Style Correlations](image)

Source: eVestment Alliance manager database and AQR. Based on monthly returns excess of identified benchmark. Long-term is calculated from since inception of strategies and short-term from 2005-2009.

**PART III: INFLATION CONCERNS AND THE ROLE OF EMERGING EQUITIES**

It is timely and relevant to address the topic of emerging equities now. A case can be made that emerging equities exposure can help hedge a portfolio against rising inflation. For investors concerned about inflationary pressures on their portfolio and struggling with their developed versus emerging equities exposure, our research in this area may be interesting.

An increased exposure to unhedged emerging equities may help protect against rising inflation. Buying unhedged emerging equities is a good proxy for exposure to the local currencies, which have historically exhibited very strong hedging characteristic in periods of increasing inflation in the United States. Compared to other asset classes traditionally referred to as strong inflation hedges (e.g. gold, TIPS, commodities), emerging currencies have historically produced a higher risk-adjusted return in environments of both absolute rising inflation and relative inflation.21 (See Figures D and E).

It is critical that the emerging equities exposure be unhedged. While historically less effective than pure exposure to emerging currencies, economic intuition suggests that unhedged emerging equities should deliver some of the inflation hedging properties of emerging currencies, and empirically this has proven to be true as seen in Figures D and E. In fact, the relative performance of unhedged emerging equities has historically outperformed gold and TIPS and have been on par with commodities on a risk-adjusted basis.

In addition, the performance of emerging equities versus developed equities is worth noting too. A long exposure to emerging market equities has historically been a more effective hedge than developed equities during periods of rising inflation and relative inflation in...

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21Arguably, the more important metric to assess an asset’s inflation hedging characteristics is the relative performance of assets in rising versus declining inflation periods. That is, the difference between performance in periods of rising inflation versus periods of declining inflation. This helps mitigate some of the noise of factors endogenous to inflation that have influenced historical asset performance and isolate the inflation sensitivity of an asset class. In this section, “relative performance” of assets refers to the relative performance in rising versus declining inflation periods. In addition, the methodology used in this analysis is detailed in AQR’s paper *Inflation in 2010 and Beyond* (Katz and Palazzolo). To measure historical increasing or decreasing inflation, we classify inflation “regimes” based on the cross-section of increasing or decreasing levels of inflation and industrial production growth. We then examine how asset prices have performed in these environments.
Developed markets are a less efficient hedge because inflation in developed countries tends to be highly correlated to inflation in the United States. As the US Dollar weakens so too do the currencies of developed nations. Conversely, the currencies of emerging countries tend to appreciate with respect to the US Dollar because inflation in emerging countries is less sensitive to inflation in the United States. Lastly, allocating from developed equities to emerging equities is by definition a reduction in exposure to the United States which helps mitigate the impact of US inflation on the overall portfolio.

**Figure D: Performance of Various Asset Classes in Increasing vs. Decreasing US Inflation**

(Sorted by Performance Difference in Increasing/Decreasing Inflation Regimes)

![Figure D: Performance of Various Asset Classes in Increasing vs. Decreasing US Inflation](image)

Source: Datastream, Barcays Capital and AQR. Data from 1970 (or when the asset class data becomes available) through 2009.

**Figure E: Relative Performance of Asset Classes**

![Figure E: Relative Performance of Asset Classes](image)

Source: Datastream, Barcays Capital and AQR. Data from 1970 (or when the asset class data becomes available) through 2009.

**FINAL NOTE**

With the average pension plan under-allocated to emerging equities relative to the world cap weighted portfolio, investors seeking increased exposure will be faced with questions of risk budgeting and manager selection. As the world changes and the space evolves, investors will be challenged to keep pace, especially in emerging markets where growth is forecast to outpace developed markets and to compose an increasingly greater share of world GDP. Increasing exposure to emerging markets does not meaningfully increase total portfolio risk, though an underweight to emerging markets results in a significant active risk in the context of the total portfolio relative to a cap-weighted benchmark. Increasing exposure also means addressing questions about manager style and approach. Among active managers, there is a portfolio diversification benefit to holding both fundamental and quantitative managers that seek to capitalize on the inefficiencies of the asset class. Tackling these critical issues are important as the world has changed – and continues to change – and understanding the impact of asset allocation and investment decisions becomes more critical as plans look to compensate for a painful recent market cycle and look ahead to an uncertain future.
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