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Emerging Markets:
What Role Should They Play, If Any, in a Portfolio?

Overview:

Many investors shy away from investing in emerging markets because they consider such investments as ranging from highly risky to speculative. Although investing in emerging markets is risky, that fact alone should not preclude investors from considering allocating some portion of their portfolios to the emerging markets asset class. Modern Portfolio Theory tells us that adding more volatile assets to a portfolio can actually reduce the risk of the overall portfolio, if they provide increased diversification. Another reason to consider investing in emerging markets is how an efficient market will appropriately price emerging markets. Because emerging markets are highly risky, the result is higher expected returns. We advise investors to at least consider allocating a portion of their equity holdings to emerging markets. But before deciding what, if any, percent they should allocate, they should have a thorough understanding of the nature of emerging market risk and a recognition of their personal risk tolerance.

Emerging Markets Are Risky

Most investors intuitively assume that emerging markets is a risky asset class. But how does one determine an actual degree of risk? One important type of risk is volatility (measured by standard deviation). Riskier assets often experience greater price volatility. The challenge is providing meaningful information in an environment in which reliable data is scarce. Live (actual performance) data is available in the form of three Dimensional Fund Advisors (DFA) emerging market funds.

DFA Emerging Markets fund (inception May 1994)
DFA Emerging Markets Small Cap fund (inception March 1998)
DFA Emerging Markets Value fund (inception April 1998)

In addition, professors Eugene Fama and Kenneth French have generated simulated data, which extends back to 1987. This simulated data reflects how the above funds could have been expected to perform had they existed before their actual inception. We still consider 1987–2003 a short timeframe in which to establish strong conclusions, but because it is the extent of data that is currently available (rounding DFA fund data to the nearest full year), we believe it is worth considering possible ramifications from the existing data.

To date, the data indicates that emerging markets have indeed experienced high volatility. For example, from 1987–2003, emerging markets, emerging markets small-cap, and emerging markets value (as measured by the live and simulated data described above) experienced annual standard deviations of 34.2 percent, 36.7 percent, and 38.3 percent, respectively. This compares to a standard deviation of 18.0 percent for the S&P 500 Index, 21.8 percent for the DFA Micro Cap and 19.6 percent for the MSCI EAFE Index.

Our first observation is that, at least on a stand-alone basis, emerging markets appear to be risky from the perspective of volatility. However, one argument made for investing in emerging markets is that they have low correlation with other asset classes. The low correlation might result in a lower volatility for the overall portfolio. Let's examine the available data to see if this has been the case.

Is There Any Diversification Benefit?

The good news is that the correlations of returns of the three emerging market asset classes with the S&P 500 Index are all relatively low. From 1987–2003, the correlations of emerging markets, emerging markets small-cap, and emerging markets value with the S&P 500 Index were 0.40, 0.25, and 0.43, respectively. Over this time period, adding small amounts (for example, 5–10 percent) of any of these asset classes reduced volatility and improved portfolio returns relative to an S&P 500-only strategy. However, as the allocation to any of the emerging markets asset classes increases to 15–20 percent, the historical diversification benefit wanes and volatility increases.

Table I below shows the effect that adding an allocation to each of the emerging markets asset classes had on return, volatility, and Sharpe Ratio (which is a measure of risk-adjusted return). In Table I, we use allocations to each asset class of 5 and 10 percent. Keep in mind that a 100 percent allocation to the S&P 500 Index earned an average return of 13.5 percent, experienced volatility of 18.0 percent, and achieved a Sharpe Ratio of 0.48 over this same period.

Allocations to the Emerging Markets Asset Classes (1987–2003) Average Annual Return/Volatility/Sharpe Ratio			
Asset Allocation	S&P 500 Index/ Emerging Markets	S&P 500 Index/ Emerging Markets Small-Cap	S&P 500 Index/ Emerging Markets Value
95/5	13.8%/17.8%/0.50	14.1%/17.6%/0.52	14.1%/18.0%/0.52
90/10	14.1%/17.8%/0.52	14.7%/17.4%/0.56	14.7%/18.2%/0.55

Table I: Annualized Returns, Volatility and the Sharpe Ratio

You can see that, as the allocation to emerging markets increased, three things happened to each portfolio:

- The realized rate of return increased.
- The volatility of return typically decreased, although it did increase with a 10 percent allocation to emerging markets value.
- The risk-adjusted return, as measured by the Sharpe Ratio, increased.

The Risks of Investing in Emerging Markets

The historical evidence indicates that emerging markets are highly volatile. The high volatility alone can scare off many investors. However, an asset class can be risky without exhibiting high volatility. For example, it might be that the data is period specific, and the risk has just not manifested itself — at least not yet. In the case of emerging markets, however, many risk factors make investing in them intuitively risky. Some reasons why emerging markets are risky include the following:

- **Lack of a strong regulatory body** — Without regulations that protect investor interests, the risk increases that unscrupulous traders using inside information could take advantage of other investors. Even with regulations in place, there must be a strong regulatory body in place to enforce such policies. As the regulatory environment improves, markets become safer. "Mandatory disclosure … made the information that firms disclosed more credible. As investors became more informed, the volatility of securities prices was reduced." [1]
- **Lack of consistent accounting standards** that give investors confidence in the accuracy of data. "Study after study has shown that better accounting standards help make firms more transparent, making it easier for them to inspire confidence in investors."[2]
- **Political risks** — Emerging market countries are often characterized by governments less stable than those of developed countries. There may also be a lack of democratic government, and/or a greater potential for the expropriation of property.

Lack of strong financial markets — Emerging markets often lack strong banking systems. Thus, these markets often face financial crises when credit becomes difficult or impossible to obtain. This might explain why the value and the size premiums have been higher in the emerging markets than they have been in the developed markets. Small-cap and value companies not only have fewer choices in terms of raising capital, but as generally weaker credits (and often without assets that can be pledged as collateral), they can be the first ones to be cut off from funding during any liquidity crises — thus investors demand a risk premium. For the period 1987–2003, the size premium in the United States was 1.95 percent. In comparison, the emerging markets size premium was almost triple that figure. The same is true of the value premium, which in the United States was 2.4 percent. (Historically, when the United States was an emerging market it too often faced banking and liquidity crises.)

Currency risk — The currencies of emerging markets countries are often highly volatile, contributing to the high volatility of returns of the asset class in U.S. dollar terms.

Default risk — Some emerging markets, such as Argentina and Brazil, have experienced episodes of default on their sovereign debt. Defaults, or even the potential for default, can create substantial risk in the capital markets.

Lower levels of market liquidity — Low liquidity can lead to higher trading costs. Other transaction-related fees (for example, custodial fees and taxes) are also likely to be greater in an emerging market. According to Joshua Feuerman, manager of the State Street Global Advisors (SSgA) Emerging Markets Fund, a round-trip purchase and sale of a block of stock in a typical emerging market costs about 4.5 percent of the value of the stock. “It’s a disgustingly expensive asset class to trade in.”[3] Lower levels of liquidity and greater trading costs create more risk, for which investors seek compensation through higher expected returns.

The Importance of Investor Discipline

Some of these risks, such as political risk, can be diversified away by owning a mutual fund that invests in many emerging markets. But not all the risk is diversifiable. Thus, investors must be compensated for taking this nondiversifiable risk with a higher expected return. Based on the data currently available, it appears that the markets have in fact delivered those higher returns, but investors benefited only if they had the discipline to stay the course. A great illustration of this point is the performance of the three emerging market asset classes. Emerging markets outperformed the S&P 500 Index by almost 3 percent per annum during the 17 years from 1987–2003 but provided negative returns for the nine-year period beginning in 1994. Similarly, emerging markets small-cap provided negative returns for the eight-year period beginning in 1995. The longest period of negative returns for emerging markets value was the five-year period beginning in 1994.

Emerging markets have experienced high volatility and long periods of poor performance. Because of this, investors’ enthusiasm for investing in the asset class is also subject to high volatility. Thus, perhaps the biggest risk to investors in emerging markets is the risk of not being there. Far too many investors are chased out of the asset class when times are bad. As investors grow discouraged, they convince themselves that investing in emerging markets was a bad idea, and that they should never have invested in them in the first place. Thus, only those with extreme discipline should even consider investing.

Small-Cap and Value Stocks

As we have discussed, emerging markets are riskier but seem to have delivered on the related expectation of higher returns. Additionally, because of the types of risks we discussed (especially the ones related to capital access), we should expect that the size and value premiums in the emerging markets would be greater than they have been in developed countries. Again, the evidence indicates that this has been the case. We can see some evidence of the greater degree to which emerging market equities are distressed (priced for greater risk) by comparing the price-to-earnings (P/E) and book-to-market (BtM) ratios of emerging market asset classes (as proxied by DFA funds) with their comparable U.S. asset classes.

P/E Ratios and Book-to-Market (BtM) Comparisons Between Emerging Market Asset Classes and Funds (Indices) (Data as of June 30, 2004. P/E ratios exclude negative earnings.)			
Fund	P/E	Fund	BtM
S&P 500 Index	19.7	S&P 500 Index	0.37
Emerging Markets	14.3	Emerging Markets	0.54
DFA US Small Cap	20.0	DFA US Small Cap	0.48
Emerging Markets Small-Cap	11.0	Emerging Markets Small-Cap	0.80
DFA US Large Value	15.7	DFA US Large Value	0.82
Emerging Markets Value	11.3	Emerging Markets Value	1.03

Table II: Comparative Valuation Ratios

Note that in each case the emerging market fund has a lower P/E ratio and a higher BtM than its U.S. counterpart. The result is that emerging market companies have higher costs of capital. And the flip side of a higher cost of capital is a higher expected return to the providers of that capital (investors).

Which of the three emerging markets asset classes should investors consider when building portfolios? Again, the data we have is only available for a relatively brief 17–year period but the historical evidence *suggests* that if investors are able to accept the high risks of investing in emerging markets and remain disciplined during the long term, then they might as well take on the incremental risk of small-cap and value stocks. (See the Appendix for details.)

Portfolio Diversification Benefits

Although we have looked solely at the correlation and diversification benefits of emerging markets relative to U.S. equities, one should also note the diversification benefits of emerging markets relative to other international equity asset classes. From 1987–2003, emerging markets equity had annual correlations of 0.62, 0.65, and 0.54 with international large-cap, international large-cap value, and international small-cap, respectively. (The data on the asset class of international small-cap value is only available beginning in 1995. For the period 1995–2003, the correlation of emerging markets returns to international small-cap value returns was 0.77.) This data shows that emerging markets can be an effective diversifier of international equities as well as U.S. equities.

Summary

Investors in emerging markets take on considerable risk. The risks associated with emerging market asset classes go well beyond the simple notion of volatility. In this paper, we identified the risks that contribute to the greater price volatility experienced by these asset classes, such as political and regulatory risks (including lack of regulations and standards by unstable governments) and a series of financial risks stemming from weaker financial markets (including currency and default risks). However, one of the biggest risks associated with investing in emerging markets remains an investor's inability to remain invested in the asset class after long periods of poor performance.

By examining the available data on emerging markets asset classes and their impact on portfolio diversification, we can conclude that a small allocation to emerging markets can provide effective diversification with both international and U.S. equities. Because of the increased risk of emerging markets asset classes, they have delivered higher expected returns.

Only those investors who have a strong commitment to staying the course during many years of underperformance should consider investing in the asset class. These highly disciplined investors can benefit from the expected risk premium, but investors who might panic and sell when prices are low may do more harm than good to their long-term portfolio performance and thus are best to avoid the risk entirely.

[1] Raghuram G. Rajan and Luigi Zingales, **Saving Capitalism From the Capitalists**. Crown Business, New York, 2003.
[2] Ibid.
[3] Richard A. Oppel, Jr., **Untangling Emerging Markets**. *New York Times*, January 24, 1999.

APPENDIX

The following table provides the annualized returns and standard deviation for the three emerging markets asset classes from 1987–2003. It also includes the correlation of returns of each asset class with the S&P 500 Index.

Fund	Annualized Return (%)	Standard Deviation (%)	Correlation of Returns with S&P 500 Index
Emerging Markets	14.8	34.2	0.40
Emerging Markets Small-Cap	20.0	36.7	0.25
Emerging Markets Value	20.7	38.3	0.43

Table III: Summary Statistics

Correlation of Returns

An investor who has made the decision to include an allocation to emerging markets in their portfolio may wish to make additional choices concerning which of the three emerging markets asset classes would be most suitable. Using the correlation of returns from the three asset classes can provide some answers. By considering the correlation of returns for the period 1987–2003, we can compare one emerging markets asset class to another to determine whether it is possible to substitute one asset class for another in a portfolio:

The correlation of returns of emerging markets small-cap to emerging markets was 0.92.
The correlation of emerging markets value to emerging markets was even higher at 0.98.

The correlations found between emerging market asset classes are higher than those found between similar U.S. funds. It appears that investors in the emerging markets small-cap and emerging markets value asset classes can expect greater returns, more effective diversification and more efficient portfolios than can be expected by investors who choose the emerging markets asset class. Thus, investors both willing and able to take the risk of investing in emerging markets should consider allocating at least some (or even all) of their emerging markets allocation to the emerging markets small-cap and emerging markets value asset classes.

The emerging markets small-cap and emerging markets value asset classes provided significantly greater returns (35 and 40 percent greater, respectively) with only moderately higher volatility (7 and 12 percent greater, respectively). Of course, investors should not be fooled into thinking that the historical results provide anything like a guarantee that the future will provide similar results. That is the nature of risk.