Emerging Market Stocks: Higher Returns But at What Risk

George S. Swales, Jr., John S. Bowdidge and C. Edward Chang

Introduction

In the past two years, returns on many U.S. stocks have been flat or negative. Movement of most major indices has been within a comparatively narrow range. The Dow Jones Industrial Average (DJIA), for example, has repeatedly vacillated between 10,100 and 10,700. Increasing oil prices and interest rates, the war in Iraq, and slow economic growth have left restless investors uncertain about their future asset allocation and investment decisions. Anemic returns have left many investors in a quandary. This uncertainty has resulted in asking others where to invest money to reap higher returns, while at the same time exercising caution and recognizing the advantages of diversification for portfolios.

Much has been written about the benefits and risks of international investing. [Odier and Solnik, 1993; Solnik, 1995] Including foreign assets in a portfolio together with domestic securities can promote diversification. Such an approach may enhance portfolio returns, but expose the investor to significant financial and country risk. Under traditional valuation theory, changing exchange rates, together with capital gains and dividends, impact the total return on investment equation. In an attempt to increase portfolio returns, some investors venture beyond the confines of the familiar into the relative unknown of countries, whose economies and financial markets are emerging onto the world scene.

Emerging markets may offer an attractive investment alternative to investors who practice active portfolio management. Is there a relationship between an emerging market country's economic output and its markets returns? Are returns on these equities comparable with U.S. stocks? How variable are these returns and should investors include emerging market stocks in a portfolio? These questions serve as the guideposts for this exploratory research.

Literature Review

Investment risks inherent in emerging markets are plenty. External and internal events can cause, at times, drastic changes to a country's economy and its financial markets. Changing political climates, economic circumstances, budget deficits, supply and demand for commodities, inflation and interest rates can all impact economic and financial market growth rates of a given country.

In any given year, country events can cause a wide variation of economic output and stock market return growth rates in emerging market countries. In a similar manner, when

George S. Swales, Jr., John S. Bowdidge and C. Edward Chang are Professors at Missouri State University.

investors use fundamental analysis to determine intrinsic value, a nation's economy can be a critical element in determining industry performance. [Bodie, Kane and Marcus, 2005]

There are many meanings of the term "emerging markets." One definition focuses on investments and defines emerging markets as markets of less developed countries that potentially offer investors high returns, but are also markets fraught with high risks. [Jones, 2000]

International diversification can reduce the risk of a portfolio by as much as half, but as recent data show, correlations across markets have increased. [Bodie, Kane and Marcus, 2005; Longin and Solnik, 1995; Longin and Solnik, 2001] As a result, international diversification may have limited value, especially if asset returns are closely related.

Investors, wanting to increase the anemic returns on portfolios, may want to research emerging market stocks and bonds. Limited exposure to emerging markets can enhance portfolio performance, but returns on selected equities can be volatile. Asset allocation, through assigning different weights to selected equities based on returns, can provide substantial benefits. [Chong, 2004; Odier and Solnik, 1993] With the average Price-Earnings (PE) ratio currently around ten, some writers point out these stocks look like bargains and emerging equity securities could have above-average performance in the next decade. [Economist, 2004] With "baby boomers" retiring and selling equity holdings, future buyers will come from developing countries and provide support for the developed world's stock markets. [Burton, 2005]

Emerging market bonds, however, exhibited higher returns over the past five years than equities and offer the added feature of broader portfolio diversification. [Tan, 2004] Diversification of emerging country stocks and bonds is a balanced approach that can maximize returns, while controlling and managing risk. [Hoguet, 2004]

Investors may want to invest in mutual funds to diversify portfolios. A recent study notes that including emerging market equities in a diversified portfolio enlarges the efficient set of assets for investments, but concludes using aggregate diversified index funds of these equities does not improve portfolio performance. Country and stock selection strategies should be used in a global portfolio if the investor wants to achieve enhanced performance. [Nuno, 2004] Investing in mutual funds has resulted in several global emerging market funds producing positive absolute returns, albeit with a wide divergence of returns. [Citywire, 2005] The increased risk has resulted in a premium being placed on high-risk assets. [Ferliel, 2005] In the aggregate, emerging markets have increased their returns about 40% in the past year, with fast-growing countries exhibiting strong economies, trade surpluses and investment-grade bond ratings. [Landis and Anderson, 2005]

Other investors may like the benefits offered by Exchange-Traded-Funds (ETFs). ETFs offer diversification, relatively low cost when compared with mutual funds, tax benefits, and trade much like a stock so the investor has more control over the timing of investment decisions. ETFs are now appearing in the portfolios of some investment managers. [Landis and Anderson, 2005] MSCI Emerging Market Index Fund ishares, administered by Barclays Global Fund

Advisors, attempts to replicate the price and yield performance of MSCI Emerging Markets Free Index. Eight of their top ten holdings are international ADRs. [AMEX, 2005]

The literature search highlights several questions. Is there a relationship between a country's GDP and its markets return? How have stock market indexes for a selected group of emerging market countries performed over time in comparison with a U.S. stock index? How variable are these returns? Can including emerging market securities in a portfolio reduce risk? This research seeks to answer these questions.

Methodology

The researchers selected indices from sixteen international countries and the United States for analysis. These countries represent a cross-section of emerging markets in Latin America, the Middle East and Asia.

Gross Domestic Product (GDP) and market return growth data for these countries for 2000 through 2004 were gathered. Pearson Product Moment Correlation coefficients were then calculated to determine the relationship between GDP and stock return data.

To focus on stock returns for each of the sixteen emerging market countries, year-over-year changes in equity market data were gathered for the 2000 through 2004 time period. Means and standard deviations were calculated as were Pearson Product Moment Correlation coefficients. Results are discussed below.

Results

Table I shows selected emerging market country GDP growth rates and their respective change in stock market returns for the most recent year available at the time this research was conducted, 2004. The data in the Table indicates all countries selected for this study had positive increases in GDP and stock returns, which is unusual. Eleven of the sixteen emerging market countries had GDP growth rates higher than the United States. All of the emerging market countries had higher market returns than the 9.10% S&P 500 return.

If Table I were expanded to cover the five year period, a wide variation in both measures among the countries selected for this research would be evident. Over the five year time period, many countries displayed negative GDP and/or stock return data. Thus,

higher growth in GDP is not necessarily reflected in positive stock returns or returns of the same magnitude and vice versa.

Table II displays Pearson Product Moment Correlation coefficients between GDP growth rates and stock market returns for each of the sixteen emerging market countries for the five year time period. Inverse associations between GDP growth and stock market returns listed in local

currency were found for ten of the sixteen countries studied. When returns were expressed in dollars, positive associations between GDP growth and stock market returns were calculated for ten countries. While many of the calculated associations between the variables were large, only Egypt's negative associations were statistically significant at the .05 level.

The aggregate Pearson Product Moment Correlation coefficients between all sixteen emerging market country's GDP growth and their respective equity market returns in local currency and dollar terms for 2000 through 2004 are displayed in Table III. An inverse relationship was found to exist between GDP growth rates and market returns in local currency in each of the five years studied. The association between GDP growth and market returns in dollar terms, however, varied by year: positive in 2002 and 2003, but negative in 2000, 2001 and 2004. This later finding shows the impact currency exchange rates had on market returns. The relationship between GDP growth rate and local currency market return was statistically significant at the .05 level in 2001 and 2002.

Table IV shows the mean and standard deviation data for the sixteen emerging market countries and the DJIA for the United States. Investors in many countries experienced negative equity returns in 2000, 2001, and 2002. The number of countries with negative equity returns, however, declined in 2003. Returns for the sample were positive for all selected countries and the United States in 2003 and 2004.

The mean returns over the five-year period for each emerging market country ranged from a low of 0.62% in the Philippines to 51.11% in Venezuela. Five countries had lower standard deviation of returns than the Philippines. One country had a higher standard deviation of returns than Venezuela. The lowest and highest standard deviations of returns were 15.14% in South Africa and 75.74% in Egypt, respectively. The mean and standard deviation of returns for the DJIA over that time period were lower than any of the emerging market countries studied, with an exception of standard deviation in South Africa.

Table V shows the mean return Pearson Product Moment Correlation coefficients for each of the sixteen countries studied and the DJIA. The weakest and strongest association of mean returns over the five year period is between the USA DJIA and Columbia and Israel, respectively. Statistically significant correlations at the .05 level were found to exist between the returns of the United States and the following emerging equity markets: Brazil, Chile, Israel and Venezuela.

Conclusions

There is ample evidence that investing in emerging markets can be risky. Many factors, some of which a specific country or region may have little control over, can readily affect economic and investment returns. Authors of this research found there can be a wide variation in GDP growth between different countries in any given year. In addition, equity returns of these countries may not be always associated with economic activity and also display wide variation. Assessing financial and country risk prospects will help the investor make appropriate long-term investment, asset allocation, and portfolio selection decisions.

Nevertheless, investors continue to search world-wide for investments that can enhance the value of their holdings. This research found that portfolio returns can be increased by carefully selecting and adding emerging market equities and bonds into the asset allocation mix. It has been shown that including low correlation assets in a portfolio can reduce risk. Although this could be done by individuals, lack of resources and information may lead some investors to seek mutual funds or ETFs to further diversify holdings.

Investors can increase their portfolio returns. In some years, returns on emerging market equities exceed (at times greatly) domestic investments. Emerging financial markets may exhibit strong growth in coming years. The growth potential of these markets is recognized, but investors should also be aware of the risks involved in ownership of these securities. Through active investment management, inclusion of emerging country equities in a portfolio can reduce total risk, while increasing aggregate return.

References

American Stock Exchange, "iShares," June 24, 2005, www.amex.com.

Bodie, Zvi, Alex Kane and Alan J. Marcus, Investments, sixth edition, 2005, McGraw-Hill/Irwin, New York, New York, pp. 906-931.

Burton, Jonathan, Marketwatch, "Boomer Bust: U.S. Stock Market's Future Depends on Developing Nations," June 1, 2005.

Chong, Florence, "Emerging Stocks Can Smarten Up a Portfolio," The Australian, August 25, 2004.

Citywire Financial Publishers, "Sector Watch: Hunting for Hidden Treasure," February 17, 2005.

Ferliel, Ayse, "Performance Up for Emerging Markets," Financial Times Business Limited, May 9, 2005.

Hoguet, George R., Pensions and Investments, June 28, 2004, p. 34.

Jones, Charles P., Investments, 7th edition, 2000, John Wiley & Sons, Inc., New York, New York, p. 15.

Landis, David and Jessica Anderson, Kiplinger's Personal Finance, "The Secret Strength of Stocks," Financial Times Business Limited, July, 2005

Longin, Francois and Bruno Solnik., "Is The Correlation In International Equity Returns Constant: 1970-1990?," Journal of International Money and Finance, 1995, Vol. 14, No. 1, pp. 3-26.

Longin, Francois and Bruno Solnik. "Extreme Correlation Of International Equity Markets," Journal of Finance, April 2001, Vol. 56, No. 2, pp. 649-676.

Nuno, Fernandes, "Portfolio Disaggregation in Emerging Market Investments," Journal of Portfolio Management, Winter 2004, Vol. 31, Issue 2, p. 41.

Odier, Patrick and Bruno Solnik. "Lessons For International Asset Allocation," Financial Analysts Journal, 1993, Vol. 49, No. 2, pp. 63-77.

Solnik, Bruno, "Why Not Diversify Internationally Rather Than Domestically?," Financial Analysts Journal, 1995, Vol. 51, No. 1, pp. 89-94.

Tan, Kelvin, "Personal Wealth: Emerging Market Bonds Rally," The Edge Publishing PTE LTD., Singapore, September 20, 2004.

The Economist, "In Search of a Golden Egg," December 29, 2004, www.economist.com.

Table I
Emerging Markets and United States
GDP Growth Rates and Stock Market Returns: 2004

Country	GDP Growth (%)	Stock Market Return (%)	
		In Local Currency	In US Dollar
Argentina	8.30	27.50	26.00
Brazil	6.10	17.50	25.60
Chile	6.80	21.90	28.50
Columbia	2.40	87.00	114.80
Czeck Republic	3.60	54.80	76.70
Egypt	4.30	102.40	100.30
Hungary	3.70	54.30	77.30
India	7.40	12.40	17.40
Indonesia	5.00	45.10	31.10
Israel	3.40	17.90	19.20
Mexico	4.40	46.80	47.40
Philippines	6.30	26.60	24.90
Poland	4.80	25.20	57.10
South Africa	3.80	21.20	43.60
Turkey	4.50	33.90	39.10
Venezuela	15.80	34.20	50.80
USA (S&P 500)	4.00	9.10	9.10

Source: Compiled from data in *The Economist*, January 1-7, 2005.

Table II
Emerging Market Countries
Pearson Product Moment Correlation Coefficients: 2000-2004
GDP Growth Rates and Stock Market Returns

Country	In Local Currency	In US Dollar
Argentina	-0.0184	0.7068
Brazil	-0.5352	-0.4938
Chile	0.0435	0.0231
Columbia	-0.2897	-0.0896
Czeck Republic	0.4055	0.3795
Egypt	-0.9490*	-0.8853*
Hungary	-0.4672	-0.5471
India	0.7173	0.7147
Indonesia	-0.1558	-0.3299
Israel	0.2755	0.3438
Mexico	-0.3479	-0.3733
Philippines	0.4404	0.3983
Poland	0.4920	0.5437
South Africa	-0.6235	0.1127
Turkey	-0.4979	0.0958
Venezuela	-0.4819	0.4776

* Significant association at the .05 level

Table III
Emerging Market Countries
Pearson Product Moment Correlation Coefficients: 2000-2004
GDP Growth Rates and Stock Market Returns (n=16)

Year	In Local Currency	In US Dollar
2000	-0.2883	-0.2519
2001	-0.7025*	-0.0896
2002	-0.6932*	0.4112
2003	-0.4303	0.2812
2004	-0.2806	-0.2969

* Significant association at the .05 level

Table IV
Emerging Markets and United States Equity Return Data
Yearly Performance 2000-2004

Country	2004	2003	2002	2001	2000	Mean	SD
Argentina	28.30%	104.20%	77.70%	-29.10%	-24.30%	31.36%	59.62%
Brazil	17.80%	97.30%	-17.00%	-11.00%	-10.70%	15.27%	47.81%
Chile	21.30%	48.50%	-15.60%	9.10%	-3.00%	12.06%	24.57%
Columbia	86.20%	61.70%	54.00%	39.60%	-28.60%	42.60%	43.21%
Czeck Republic	56.60%	43.10%	16.80%	-17.50%	-2.30%	19.32%	30.75%
Egypt	105.30%	116.70%	1.80%	-30.50%	-42.90%	30.10%	75.74%
Hungary	57.20%	20.30%	8.90%	-9.20%	-11.10%	13.23%	27.80%
India	13.10%	72.90%	3.50%	-17.90%	-20.70%	10.20%	37.83%
Indonesia	44.60%	62.80%	8.40%	-5.80%	-38.50%	14.29%	40.31%
Israel	19.00%	60.70%	-25.60%	-6.90%	1.50%	9.75%	32.70%
Mexico	46.90%	43.60%	-3.90%	-13.00%	-21.60%	10.39%	32.45%
Philippines	26.40%	41.60%	-12.80%	-21.80%	-30.30%	0.62%	31.55%
Poland	24.60%	33.80%	3.30%	-33.50%	1.80%	6.01%	25.99%
South Africa	21.90%	12.00%	-11.20%	26.50%	2.80%	10.40%	15.14%
Turkey	34.10%	65.00%	-14.00%	64.10%	-32.30%	23.38%	44.72%
Venezuela	34.90%	177.00%	22.00%	-3.70%	25.40%	51.11%	71.81%
USA (DJIA)	3.20%	28.40%	-16.80%	-7.10%	-6.80%	0.30%	15.41%

Source: Compiled from data in *The Wall Street Journal*, "Year in Review," January 2001-2005.

Table V
Emerging Equity Market Return
Correlation Coefficients with the DJIA

Country	Correlation Coefficient
Argentina	0.4999
Brazil	0.9795*
Chile	0.9707*
Columbia	0.3190
Czeck Republic	0.5812
Egypt	0.7771
Hungary	0.3770
India	0.8793
Indonesia	0.7354
Israel	0.9940*
Mexico	0.7441
Philippines	0.8380
Poland	0.6709
South Africa	0.3622
Turkey	0.6161
Venezuela	0.9216*
USA (DJIA)	1.0000*

* Significant association at the .05 level