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An Examination of the benefits of Investing in Foreign Equities

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NORTHERN ILLINOIS UNIVERSITY

An Examination of the benefits of Investing in Foreign Equities

A Thesis Submitted to the

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In Partial Fulfillment of the

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Abstract: As globalization increases more attention has moved to foreign markets as investors look for additional gains and diversification. Emerging markets are popular because of the low correlation with other assets. Many investors expect higher returns from emerging markets due to the high risk attracted to them. When the correlation, mean return, standard deviation, and coefficient of variation emerging and other foreign assets are compared to other assets investors can determine what investment style will fall in line with the risk they are willing to take. The data from 1988-2006 shows that correlation between foreign equities has become more correlated over time, which will lower the diversification benefits of investing in them.

As markets evolve, investors are constantly looking for venues for investment that deliver higher returns. Due to the advancement of technology and the movement of capital and assets overseas, emerging markets are seen by many investors as an opportunity that could generate significant returns. The rise of globalization and the push for free trade has made it easier to receive information and move money anywhere around the world. Through globalization, many speculators are capturing the growth and potential prosperity of developing countries. As emerging markets continue to evolve, investors should explore how the investment benefits of these countries compare to those of developed countries. By analyzing this data investors can design an optimal investment portfolio for selected risk exposure.

Before looking at the data generated by emerging market indices, it is important to define "emerging markets." An "emerging market" is a country that accounts for a small percentage of global economic productivity, and that has a large share of its population with a low to middle per capita income. Most of the countries that fall into this category have implemented an economic development and reform program in order to make their markets more accessible worldwide (Heakal 2003). These markets tend to have a higher volatility, and thus, more risk attached to them. Despite these drawbacks, emerging markets have risen in popularity as an investment vehicle.

The rise of emerging markets has attracted many investors who are willing to incur substantial risk in order to achieve high returns. Many investors add emerging markets to their portfolio in order to increase diversity and global exposure. Investing in emerging markets is a very attractive option because it allows investors to get in at the ground floor and ride the expansion of the emerging market and its constituent

companies. Japanese and South Korean companies such as Toyota, Honda, and Samsung Electronics grew out of emerging markets and are now competitive global players. A more recent example is China's home appliance company, Haier, which is rapidly expanding in western markets (Sirkin 2006). Because emerging markets are attractive to investors, developing countries can expect to receive support and encouragement from developed nations. By emulating the markets of more developed nations, emerging markets develop rapidly. In addition, because information is easily accessible, the citizens of developing nations can observe the advantages of development. Developed countries will support a developing country because improving the economic condition of that country will help to stabilize the local government and quell any civil unrest in the area (Speidell et al. 2005). This can encourage the developing country to promote trade and investment by setting up favorable governmental policies and regulations.

Historically, the emerging market indexes have generated higher returns than the indexes of developed markets. In 2003 and 2004, the average annualized return in U.S. dollars for the Morgan Stanley Capital International Emerging Markets Fund (MSCI EMF) was 40.3%; the Morgan Stanley Capital International Europe, Australasia, and Far East Index (MSCI EAFE), which is a foreign developed market index, returned 29.6%; in comparison, the return of the MSCI USA Index was 19.6% (Beach 2006). Although emerging markets investments are more volatile, investors know that there is a strong chance they will be rewarded with higher returns. Every investment carries a risk associated with its country of origin. This risk can make investors unwilling to invest in specific countries because they fear political or social turmoil. The individual country risk for any emerging market is generally higher than that of a developed market. In most

cases, the correlation among emerging markets is low and investors can avoid individual country risk by investing in an emerging market index or fund (Beach 2006). The low correlation of emerging markets with one another has allowed investors to improve portfolio performance. The low correlation is attributed to emerging markets' segmentation from developed markets. A study by Campbell Harvey [1995] concluded that adding emerging market assets to a portfolio improved risk-adjusted returns by 50% (Fernandes 2004). Though much of the country risk can be reduced through diversification, emerging markets are exposed to substantial risk from other factors .

Because emerging markets are a relatively recent addition to the global investment scene, the current investment and management policies of developing countries are often not in line with global standards. These policies can greatly restrict what foreign investors are allowed to do and the protection they receive from the government. Foreign investors often notice a "home country bias," which places a higher priority on domestic investors than foreign ones. This bias can result in higher taxes, higher transaction costs, and restricted access to information for foreign investors (Tokat and Wicas 2004). Investing in funds of emerging markets typically involves higher operating costs because of the "home country bias." Since emerging markets are more volatile, managers must constantly reweight the portfolio to the country with the best performance. A \$5 million emerging market portfolio would incur 65 basis points in operating cost and a \$100 million emerging market portfolio would incur 23 basis points in operating cost, both of which are much higher than equally valued portfolios in developed markets (Masters 2002). This can diminish a return or discourage investors, because investing in the developing country puts them at a disadvantage.

Investors in emerging markets also face currency exchange risk and political risk. As a nation develops, the government may take actions that discourage further foreign investment in the country. One such course of action is the nationalization of assets. This was recently the case with Venezuela, which is privatizing its oil fields. Emerging markets are often located in politically unstable areas. Political instability discourages investment because the outlook for the country is uncertain. One of the main reasons that investors look at emerging markets is for diversification. With the expansion of the global economy, emerging markets are beginning to establish higher correlations with other markets (Speidell 2002). A higher correlation makes it less profitable to invest in emerging markets because the diversification benefits are diminished. Investors also need to determine which is more attractive: to invest in emerging markets or developed international markets.

The purpose of this analysis is to observe the performance of several asset classes, including emerging and developed markets securities. The research focuses on the diversification benefits associated with emerging market equities and the change in the benefits over time. Data from 1988 to 2006 on the Morgan Stanley Capital International Emerging Markets Fund Index (MSCI EMF) is compared to various developed markets securities to determine trends and correlation between the asset classes. Data from the Morgan Stanley Capital International Europe, Australasia, and Far East (EAFE) index is compared with domestic securities to determine if international markets have similar correlations to domestic markets. The correlations and returns provide investors with insight regarding the allocation for an optimal portfolio over this time period.

Before looking at the correlation of the asset classes, it is informative to evaluate the risk and return characteristics of the alternative asset classes. Table 1 shows the average return, standard deviation, coefficient of variation, the maximum return, and the minimum return generated from 1988 to 2006. The data was calculated from the monthly returns generated over this period. The risk data is generally consistent with expectations. Emerging markets are the most volatile, followed by U.S. small caps, EAFE, S&P 500, long-term corporate debt, and 30-day U.S. T-bills as the least volatile. It is interesting to note that, during the period; the EAFE had a lower average return than long-term U.S. corporate debt, but was also more volatile than both corporate debt and the S&P 500. By simply looking at the returns and deviations of the asset classes, investors can determine the risk associated with each asset and decide where to invest.

The coefficient shows the amount of volatility an asset had over the holding period. EAFE has the largest volatility risk attached with it. Emerging markets have the second highest volatility and risk attached with it followed closely by U.S. small caps. The fact that EAFE has a higher volatility risk of the equity assets attached to it would not be expected by investor because it consists of companies in developed markets. The reason the volatility is greater higher for EAFE is because it has a low average return and a high standard deviation. The lower average return could be the result of economic or political actions over the data period which hindered growth. The coefficient of variation is higher with equity than debt which an investor would expect. U.S. corporate debt has a lower volatility than equity but still has a moderate amount of risk attached to it because of the default risk and the uncertainty of interest rates over longer periods of time. The

asset with the lowest risk is T-bills which would not come as a surprise to investor due to the fact the T-bills have low holding periods and fixed returns.

Table 1

Calculations based on the monthly returns generated from 1988-2006	S&P 500	U.S. Small cap	Long term U.S. Corporate Bond	U.S. 30 Day T-bill	EAFE	MSCI EMF
Average Return	1.039%	1.288%	0.749%	0.366%	0.720%	1.408%
Standard Deviation	3.953%	5.459%	2.079%	0.165%	4.660%	6.578%
Coefficient Variation	3.806	4.239	2.777	0.450	6.472	4.671
Max. Return	11.430%	23.580%	6.310%	0.787%	15.614%	18.979%
Min. Return	-14.458%	-20.100%	-8.813%	0.061%	-13.907%	-28.914%

The correlation of the MSCI EMF with the S&P 500, U.S. small-cap stocks, long-term U.S. corporate bonds, the 30-day U.S. T-bill, and the EAFE index is examined for two nine-year sub-period, as well as, the overall period from 1988 to 2006. The correlation results are shown in Table 2. Emerging markets (EMF) have the highest overall correlation with U.S. small caps, followed closely by the S&P 500 and EAFE. The correlation of the EMF with long-term U.S. corporate debt and U.S. 30-day T-bills is considerably lower, one would expect since these are fixed income indices. Since 1988, the correlations between emerging markets and other assets have changed drastically. Until recently, emerging markets had a relatively low correlation with the S&P 500, but in the years 1997 through 2006 the correlation switched dramatically from its previously low correlation to a significantly higher positive correlation. Likewise the correlation between emerging markets and the other equity assets shows a stronger positive relationship as time progresses. This may be due to the fact that globalization has opened

new markets and technology has increased the amount of information investors can receive regarding emerging markets. The emerging markets show the highest overall correlation with U.S. small cap stocks; this may be because both emerging markets and small-cap stocks are the most volatile equity investments considered. Another factor which could attribute the high correlation between the assets in the fact that many of the companies in the EMF have a small market cap compared to U.S. and developed foreign firms. The similarities of the asset classes would justify the higher correlation because similar assets classes tend to move in the same general direction.

Table 2

Year	MSCI EMF Vs. S&P 500	MSCI EMF Vs. U.S. Small cap	MSCI EMF Vs. Long term U.S. Corporate Bond	MSCI EMF Vs. U.S. 30 Day T- bill	MSCI EMF Vs. EAFE
1988-1996	0.378	0.459	0.064	-0.011	0.392
1997-2006	0.714	0.689	-0.050	-0.165	0.765
1988-2006	0.590	0.604	-0.001	-0.057	0.582

Emerging markets have a low correlation with both long-term and short-term U.S. debt. The correlation between these asset classes has also changed significantly since 1988. The correlation between long-term U.S. corporate bonds and the MSCI EMF evolved from a correlation near zero in the 1988-1996 sub-period to a slightly negative correlation in the 1997-2006 sub-period. The substantial change in correlation between the first and second sub-period in this time period could be related to the rapidly expanding economy during the late 1990s, which moved capital from debt investments to equity investments in order to capture the larger equity returns. A similar change in correlation can be seen in the 30-day U.S. T-bill verses the MSCI EMF based on the standard deviation reported in Table 1. The T-bill showed very stable returns on a month-

to-month basis, whereas emerging markets had much more volatile returns. Since T-bills have a short maturity and guaranteed payment, their volatility is relatively low; equity, on the other hand, has a much longer holding period, and its returns are impacted by a greater variety of events and factors.

Emerging markets show the highest correlation with U.S small-cap stocks, but the correlations between emerging markets, EAFE, and the S&P 500 are also similarly high. The correlation with the EAFE index has increased rapidly since 1988. This correlation grew from 0.392 in the 1988-1996 sub-period to 0.765 in the 1997-2006 sub-period. The overall correlation from 1988 to 2006 was 0.582, which is extremely close to the S&P 500 overall correlation of 0.590. This suggests that equity markets are much more likely to move in tandem regardless of whether or not the markets are developed. Since emerging markets tend to exhibit similar patterns, an investor needs to assess how other international securities correlate with other assets to determine where to invest overseas.

To evaluate how international markets perform with respect to other assets, the EAFE was compared to the S&P 500, U.S. small caps, long-term U.S. corporate bonds, and the 30-day U.S. T-bill. The results are shown in Table 3. The correlation of the asset classes with the EAFE is similar to the correlation between emerging markets and other asset classes. The EAFE does have a higher correlation with the S&P 500, which is likely because both indexes consist of stable companies that are located in developed markets. The EAFE has a lower correlation with U.S. small caps, which can be attributed to the difference in risk attached to these securities. EAFE has a low correlation with long-term U.S. corporate bonds and 30-day U.S. T-bills, which can be attributed to the different characteristics of these asset classes. The correlation of the asset classes with the EAFE

supports the idea that equity markets have a positive correlation with each other and generally move together. An investor should look at how different asset classes are correlated to determine the allocation of a portfolio.

Table 3					
Year	EAFE Vs. S&P 500	EAFE Vs. U.S. Small cap	EAFE Vs. Long term U.S. Corporate Bond	EAFE Vs. U.S. 30 Day T-bill	EAFE Vs. MSCI EMF
1988-1996	0.433	0.283	0.189	-0.055	0.392
1997-2006	0.790	0.625	-0.062	-0.087	0.765
1988-2006	0.618	0.468	0.055	-0.065	0.582

When diversifying a portfolio, a U.S. investor may choose to invest in only one of the foreign market funds, because past data supports a high correlation between these funds. The correlations suggest that, as globalization has advanced and access to information increased throughout the world, emerging markets have become more highly correlated to each other and to developed markets. This may attract new investors to emerging markets because they have an increased sense of security knowing that the economies of these countries are more stable. Other investors may choose not to invest in emerging markets because they can invest in more developed markets and still capture most of the changes in the market, but with reduced exposure.

The data and calculations shown help investors know the past performance of the foreign assets and suggest the direction these assets could move in the future. The calculations show that although emerging markets are generally considered riskier investments, they move in the same general direction as other equity classes tested. The calculation of standard deviation and coefficient of variation show that the riskiest asset over this period of developed foreign markets (EAFE). This is an unexpected

development as most investors would believe that emerging markets would be the riskiest asset class to get into. The correlation shows that the relationship between equity assets has increased its positive relationship as time progress. The correlations between foreign equities and U.S. debt have remained at a low or negative correlation.

The data suggest that the correlation between equity assets will continue to show increasing positive correlation. Since emerging markets are appealing because of the lower correlation to other assets and markets, many investors add emerging markets to portfolios to increase diversification. If the correlation continues to increase it will *diminish the diversification benefits* of foreign equities, this could make investors less willing to invest in them.

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