ARE EMERGING-MARKET EQUITIES A SEPARATE ASSET CLASS?

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1. Introduction

Historically, fund managers and investors have considered emerging market equities as a separate asset class in making their portfolio allocation decisions. For example, an asset manager might be instructed to divide an institutional investor's portfolio into 20% emerging market and 80% developed market securities. Within these broad divisions, the asset manager would usually be given discretion to allocate his or her portfolio among individual country and/or industry securities based on their risk, return and correlation characteristics.

In recent years a number of economic, legal, accounting and financial developments have eroded the sources of separation between what had been thought of as "emerging" and "developed" country financial markets. For example, Henry (2000) and Bekaert, Harvey and Lumsdaine (1998) identify a whole spectrum of financial liberalization developments that have eased the flow of capital into and out of so-called emerging markets. These liberalizations include capital market reforms that have reduced the constraints and limits on foreign investors (such as those imposed on the proportion of shares a foreign investor might hold in domestic firms'equities), as well as the establishment of country funds.

Many of the initial liberalizations took place in the mid to late 1980s and have continued into the 1990s, even as emerging markets experienced considerable return volatility during this period. Part of this return volatility has been attributed to internal conditions (e.g., Mexico, Russia, Indonesia, etc.) while part has been attributed to the greater openness of emerging market economies to external shocks (so-called contagion-effects). Developed country markets have not been immune from either increased volatility or contagion emanating from emerging markets. For example, US and UK financial market volatilities were significantly impacted by both the Asian and Russian crises of 1997 and 1998.

This paper examines quantitative and qualitative evidence underlying the view that emerging market equities no longer represent a separate asset class and, relatedly, that world capital markets are becoming increasingly integrated. We find that empirical evidence strongly supports the view that the world's financial markets are becoming increasingly integrated and that the integration process encompasses emerging markets. As a result, the idea of rigidly separating emerging market and developed market pools of investable funds (along with adopting separate

performance benchmarks) seems no longer appropriate. Indeed, recent moves by international investors to benchmark their portfolios to MSCI's all-country world index (ACWI) and related world indexes – which include both emerging-market and developed market securities – seems a step in this direction.[1]

In Section 2 of the paper, we assess the empirical evidence indicating greater integration among the world's capital markets. This first set of tests involves an analysis of the correlation structures among individual country equity markets during the 1988-1999 period. Particular attention is directed towards analyzing individual country (MSCI) stock return correlation structures and efficient frontiers over the 1988-93 period, compared with the more recent 1994-1999 period. We also analyze the structure of the correlations among political risk indicators[2] for a similar group of countries over similar time periods.

The second set of tests involves analyzing the ability of global economic factors (after controlling for the effects of local economic factors) to explain the determination of monthly equity returns in emerging market countries during the 1988 to 1999 period and associated sub-periods. A final set of tests examines correlations among country return *volatilities* (rather than return *levels*) as well as the proportion of individual emerging market stock return volatilities that can be attributed to global rather than local factors.

In Section 3 we consider additional evidence supporting the notion of increased integration of emerging and developed country financial markets. This involves analyzing the growth in emerging market ADRs (and cross-border listings), the growth in foreign direct investment (FDI)

[1] See, Morgan Stanley Dean Witter, Emerging Markets Investment Research, Global Emerging Markets Strategy, October 20, 1999.

[2] In this case, changes in monthly indexes produced by Political Risk Services' International Country Risk Guide (ICRG) – see Erb, Harvey and Viskanta (1996).

in emerging market countries, trends in international capital flows and the growth in cross-border merger and acquisition (M&A) transactions among developed and emerging market countries. Each of these developments is supportive of the view that world capital markets are becoming more integrated.

In Section 4, developments relating to accounting, legal and other potential barriers to emerging market investment are examined and their impact on the trend towards increased world financial market integration assessed.

Section 5 presents a summary, and discusses the implications of the paper's findings for international asset allocation and performance benchmarking.

2. Quantitative Evidence Regarding Increased World Capital Market Integration

Table 1 shows the annualized returns and risks (standard deviations) for ten countries that were included at the inception of the MSCI-EMF index[3] in 1988, as well as countries that were included in the index later -- Korea (January 1992), Poland (April 1994), India (November 1992), South Africa (April 1995) and Taiwan (January 1991).[4] We also show the returns and risks on three commonly followed MSCI indexes: the Emerging Market (EM), the World (ACWI-free) and EAFE indexes.[5] Also included are the annualized equity returns and risks over the 1988-1999 period for four developed markets -- the US, Germany, the UK and Japan. The familiar pattern of higher emerging market returns (means) and high risks (standard deviations) compared to the (four) developed countries is clearly evident.

However, while individual returns and risks are clearly important for international portfolio allocation, key additional ingredients are the correlations among country returns. In particular, if correlations among emerging and developed market countries have increased with time, it would be consistent with the view that these countries' equity markets are converging towards a single asset-class (reflecting the greater integration of world capital markets) and that fund managers have a declining ability to achieve "gross" diversification gains by subdividing asset portfolios and countries into an emerging market group and a developed-market group.

The (monthly) return correlation relationships are analyzed in two different ways: (i) based on local returns, and (ii) based on US dollar adjusted returns. In turn, these data are divided into two equal sub-periods to test the degree to which correlations among emerging and developed countries have increased. The chosen sub-periods are 1988-1993 and 1994-1999. Since the 1997 Asian crisis may have had a distorting impact on returns and risks in the period immediately surrounding the crisis, the return correlations for the second sub-period (1994-1999) were also re-estimated excluding the April 1997 to October 1997 period.

[3] Argentina, Brazil, Chile, Greece, Jordan, Malaysia, Mexico (free) Philippines (free), Portugal and Thailand.
[4] The data sources are monthly returns collected by MSCI and JP Morgan. We analyze the 10 original EMF index countries plus Korea over the full 1988-1999 period. The returns for the other EMF countries are from their date of inclusion in the MSCI index until the end of 1999.

Overall, whether using local returns, dollar returns and including or excluding the immediate Asian crisis months, these correlations essentially tell the same story. This can be seen in Table 2 Panel A. It shows the dollar-adjusted return correlations among emerging and developed countries in each of the two sub-periods analyzed, as well as correlation-by-correlation tests as to whether emerging market – developed country (i.e., US, UK, Japan, Germany and World) correlations increased over the 1994-1999 period compared to the 1988-1993 period. As is evident from the bottom of Table 2 (Panel A), most emerging market - developed country correlations increased and became more positive from the first to the second sub-period, with many of these correlations falling into the .2 to .4 range during the 1994-1999 period. The (Z-ratio) test as to whether a correlation increased to a statistically significant degree, is significant at the 10% confidence level (or above) in well over one-third of the cases.

The effect of the increased correlations (integration) on the potential gains from simple country-by-country diversification are shown in Figures 1 and 2. Figure 1 compares the efficient mean-variance of returns frontier, based on monthly country index returns, for the 1988-93 period with the efficient frontier for the 1994-99 period. Figure 2 shows the efficient frontier for the whole period 1988-1999. From Figure 1 it can be seen that gains from simple country-by-country diversification were unambiguously lower in the 1994-99 period over all risk-return ranges except the very lowest. The flatter (less convex) frontier in the second sub-period (1994-99) reflects the more positive correlations among country returns reported in Table 2 (Panel A) above. This suggests that, increasingly, enhanced performance for asset managers will require strategies beyond simple asset allocations into country or regional baskets. Indeed, in the future such strategies will need to include increasing emphasis on industry and firm level analysis of emerging and developed country equity investments so as to best exploit informational and transaction cost advantages of asset managers.

While both economic and political factors are likely to impact the correlation structures shown in Table 2 (Panel A), it is also interesting to analyze the independent effects that political factors have had on return correlations. Indeed Mei (2000), among others, has found that political events have had significant effects on individual capital markets around the world. In Table 2 (Panel B), we use changes in Political Risk Guide's monthly index of political risk -- the ICRG political

[5] EAFE stands for Europe, Africa and Far East.

risk assessment -- which rates countries on a scale of 1 to 100 (a high rating means less risky and a low rating more risky)[6] to analyze political trends among emerging and developed market countries. As can be seen, while many political risk correlations are negative in both periods, there is a clear trend towards more positive (less negative) correlations in the most recent 1994-99 sub-period.

Further tests of significant differences between the two sub-period correlations of emerging market political risk rating changes and developed country political risk rating changes indicates that, in many cases, the trend towards more positive political rating correlations is statistically significant. This is shown at the bottom of Table 2 (Panel B) where over 80% of the political risk correlations of eleven emerging market countries with developed market countries show a significant increase for 1994-9 over 1988-93. Possible legal, accounting economic policy and regulatory effects underlying this increased integration are discussed in more detail in Section 4 of this study.

While the evidence seems to be clear that equity-return and political-risk rating correlations are increasing among countries, it is still not clear whether this means that global factors rather than local factors are more important in driving returns today than in the past. For example, international return correlations may still be highly dependent on correlations among local factors. In recent years, there has been considerable interest in the ability of a pre-selected set of common factors to explain (predict) emerging market country returns -- see the references in Errunza, Hogan and Hung (1999), for example. In their paper, examining the 1976-93 period and

[6] These ratings are subjective and based on the following factors and weights: (i) Economic expectations versus reality (12%), (ii) Economic planning failures (12%), (iii) Political leadership (12%), (iv) External conflict (10%), (v) Corruption in government (6%), (vi) Military in Politics (6%), (vii) Organized Religion in Politics (6%), (viii)

seven developed and nine emerging market countries (when financial market liberalization was in its early stages in many emerging markets),[7] the authors found that a US investor holding portfolios of US domestic stock, combined with ADRs , closed-end country funds and stocks of multi-national corporations could achieve many of the same return-risk characteristics of emerging market indexes without ever investing in non-US equities.

Here we analyze the degree to which a pre-determined, common set of domestic (local) and global factors can explain emerging market returns, and whether there is a significant effect of global factors on emerging market returns over and above the effects of local factors.

A summary of the results are presented in Table 3, where we show the degrees of fit (R^2) of the factor regressions and the F-test statistics, which indicate the degree to which global factors explain a given country's returns over and above the effects of local factors.[8] For example, in the first sub-period (1988-93), local factors explained 9.3% of Brazilian returns (R^2 =.093) while local plus global factors explained 28.2% of returns (R^2 = .282)[9]. The F test statistic (F=2.181) indicates that when global factors were added to local factors, it significantly enhanced the ability of investors to explain Brazilian equity returns through simple linear regression factor models. As is evident in Table 3, in addition to Brazil, global factors added significantly to the explanatory power of local factors in the determination of stock returns in Greece, Jordan, Malaysia, the Philippines and Thailand over the 1988-93 period.

The second half of Table 3 shows the ability of local and global factors to explain returns during the most recent 1994-1999 period. In 8 out of 10 cases the R^2 of local plus global factors is higher in the second (1994-1999) sub-period compared to the 1988-93 sub-period, with predictability (R^2) lying in the 23% to 40% range -- which is quite high for monthly returns. Moreover, in 6 out of 10 cases, global factors added significant explanatory power (over

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Law and order tradition (6%), (ix) Political terrorism (6%), (x) Civil War (6%), (xi) Political party development (6%), (xii) Quality of the bureaucracy (6%).

[7] Errunza, Hogan and Hung (1999).

[8] The relevant local factors included in the regression (similar to those used by Bekaert and Harvey (1998) and Harvey (1995))were all lagged one month. These factors were excess market return over the risk-free rate, market capitalization to GDP, balance of trade to GDP, inflation rate, percentage change in industrial production and where available short-term interest rates and the corporate bond index spread over treasuries. The relevant global factors (all lagged) included, excess return on the world market index, MSCI world index dividend yield, world inflation, percentage change in world industrial production, spread between the 10 year treasury yield and 3 month T.Bill

and above local factors) to the prediction of emerging market returns. Table 3 also shows the factor regression results for selected countries that were added to the MSCI index at later dates. In all but one case, global factors increased the explanatory power of the return equations, although these effects are not statistically significant due to the relatively short sample periods over which these return equations were estimated.

Table 4 supplements the results of Table 3 by comparing the explanatory power of a model in which the coefficients (return sensitivities) of the local and global factors are constrained to being constant over the whole 1988-99 period compared to a model in which the coefficients on the factors are allowed to shift once over time -- *i.e.,* in this case by allowing the 1994-99 period coefficients to take on different values compared to the 1988-93 period.

For all 10 emerging market countries (and for 5 of them significantly so), allowing the regression coefficients to "shift once over time" improves the explanatory power of the factor-return model. Moreover, in two of the five cases in which allowing for a regime (and thus coefficient) shift in 1994 did *not* significantly improve the fit of the model, when the regime shift was assumed to occur *after* a material capital market liberalization there was a significant effect on the explanatory power of the factor model. These two countries were Argentina (November 1989) and Brazil (May 1991).[9]

Overall, the results are consistent with a time-varying but increasingly predictable relationship among local and global factors, on the one-hand, and emerging market returns on the other.

In Table 5 we extend this analysis by examining the degree of response of emerging-market equity returns to global and local factors by using an econometric model of time-varying returns

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yield, the percentage change in the price of oil and the US bond spread (BBB 7-10 year corporate bonds over maturity matched treasuries).

[9] The liberalization dates were obtained from Henry (2000).

developed by Bekaert and Harvey (1997).[10] This model not only allows returns to be continuously time-varying in their relationship to local and global factors, but also allows returns to be non-normally distributed (in general, emerging market returns exhibit both skewness ("fat-tails") and kurtosis ("peakedness"). In particular, Bekaert and Harvey (1997) allow for the non-normality of returns by modeling the time-varying volatility of returns using a GARCH process.[11] Using this approach, we calculate both the average (conditional) correlations among emerging market returns and global returns over different time periods, as well as the proportion of the variance of local returns (on average) due to the variability of world factors -- see the correlation and variance columns in Table 5. A "conditional" correlation is like the relative effect of a shock in local factor loadings on local returns relative to the effect of a shock in global factor loadings on local returns.

Table 5 provides the strongest evidence of increased capital market integration in the 1994-99 period compared to the 1988-1993 period. In particular, for all countries except Jordan, the proportion of the (conditional) variance of local returns due to global factors is much higher in the most recent sub-period. A similar picture emerges if we look at (conditional) correlations. An extreme example is Argentina, where correlations were on average negative (-2.15%) in the 1988-93 period and became highly positive (55.41%) during 1994-1999.

The evidence from Tables 1-5, confirming enhanced integration of emerging markets with developed country markets has some clear and important implications for fund managers. In

[10] One conceptual way to think of the methodologies in Tables 3,4 and 5 is as follows: in Table 3 we analyze local versus global factor effects on emerging market returns assuming that the sensitivities of local returns to these factors (the "β" coefficients) are stable over each period analyzed. In Table 4 we allow these sensitivities (or β's) to shift once – either mid-way through the sample period or at the time of some liberalization event. Finally, in Table 5, the sensitivities (β's) are allowed to vary continuously.

[11] GARCH stands for Generalized Autoregressive Conditional Heteroskedasticity—see Engle (1982).

particular, simply allocating funds among indexes of different countries' stocks (so-called macro-bets) will no longer be sufficient to generate diversification benefits. The best-performing managers in the future are likely to be those that possess superior information at the micro-level in emerging markets – for example, being able to identify undervalued firms in Jordan or Thailand and/or investigating potential industry trends in individual emerging market countries (e.g., in which emerging market countries will the "new-economy" businesses be most successful?). This suggests that it will be those fund managers with superior research teams at the emerging market *firm* and *industry* levels who will be in the best position to place informed micro-bets that beat target and competitor benchmarks.

3. Economic Evidence of Enhanced Emerging Market-Developed Market Integration

In addition to statistical tests on returns and political risk ratings, it is possible to make a case that enhanced integration of emerging market and developed countries economies and capital markets has occurred using basic economic data.

Table 6 shows trade flows -- exports and imports -- between emerging market countries and OECD countries, both in dollar terms as well as a percent of emerging market country levels of GDP. As is apparent in the final column of Table 6, the proportion of emerging market exports to GDP increased by over 50% between 1985 and 1997, from 9% to 15%.

Table 7, and its annualized disaggregation Table 8, shows the scale -- both in number of transactions and in dollars -- of cross-border M&A activity among OECD and emerging market countries over the 1985-1999 period. Comparing 1985 - 1993 with 1994 -1999 in Table 8, the total number of cross border M&A deals and the dollar value of those deals in 1985-

93 were, respectively, 1,375 and $130,190 million. This compares to 4,218 and $455,872 million over the 1994-1999 period. Both numerically and in dollar value terms, the number of M&A deals tripled in the most recent six year sub-period (1994-99) compared to the prior nine year sub-period (1985-1993), indicating an acceleration in the growth of multinational corporate linkages, especially those spanning both developed and emerging-market country borders.

It should also be noted that many of these cross-border linkages do not simply reflect partial or passive ownership stakes by developed country investors. Indeed, one of the outcomes of the Asian crisis, in both the real and financial sectors, is that foreign investors demand a more active corporate governance role than they were previously willing to accept. For example, after the Asian crisis Korea raised its foreign ownership limits on telecom companies from 20% to 49% (with the exception of Korea Telecom). In 2001 Korea Telecom's foreign ownership stake will be raised from 20% to 33% when it is to be listed on the stock market. Both Commerzbank and Newbridge (a US private equity firm) now play an active corporate governance role in respectively the Korea Exchange Bank and Korea First Bank, in which they took equity stakes in the post crisis period. A similar trend can be found in Thailand with ABN-AMRO's purchase of the Bank of Asia and the Development Bank of Singapore's acquisition of the Thai Danu bank.

Table 9 shows the growth in foreign direct investment flows from developed (OECD) to developing countries during 1985-1998. Despite recurring crises in emerging market countries over the 1994-1998 period it is evident that FDI grew from $48 billion in 1994 to $82 billion in 1998. By comparison, over the whole 1985-93 period FDI amounted to $225 billion, or approximately $25 billion a year.

As noted earlier, in their 1999 study Errunza, Hogan and Hung analyzed the ability of U.S. "home" investors to replicate the returns of emerging

market countries by forming portfolios of domestically traded equities along with ADRs, country funds and multinational corporations' stocks. Specifically, they found that they could generate portfolios that were highly correlated with emerging market country returns over the 1976-1993 period. One component of these replicating portfolios were emerging-market company ADR's. Since 1993, the number of ADR programs, and in particular the number of ADRs from emerging market countries, has continued to expand. For example, the Bank of New York (the principal sponsor of U.S. ADRs) reports the total number of ADR programs as 986 in 1993, increasing by over 45% to 1438 in 1999.

Tables 10 and Table 11 show the number and value (capital raised) of emerging market ADRs (as well as their regional composition) over the 1985-1999 period. The total number of emerging market ADRs was 199 in 1993, growing to 367 by the end of 1999 (an increase of over 50%), even in the face of the Asian crisis and the strict US GAAP accounting and other disclosure requirements imposed by the SEC during this period -- see Section 4 below. In terms of capital raised, the average amount per year for 1985-1993 was $2.3 billion. This compares to $2.1 billion for 1994-99. If the crisis years 1997-98 are excluded, the average capital raised per year post-1993 was $2.8 billion per year.

Among the reasons for the growth in cross-border listings from emerging market countries are the empirical findings that:

- Share prices react favorably to cross-border listings;
- Trading volume increases on average, and in many cases domestic trading volume increases as well;

- Exposure to local factor risk is significantly reduced with only a small increase in global market risk and foreign exchange risk -- see Karolyi (1998); and

- Cross border listings help lower the cost of capital for firms in emerging markets, thereby further integrating these firms with the world economy (i.e., emerging market firms increasingly face cost of capital similar to that in developed countries – see Henry (2000)).

Of course US ADR's are only one component of emerging market cross-listings, a material number of cross-listings (such as GDR's) have occurred on the London and other European exchanges.

Finally, Figure 3 shows net (monthly) portfolio capital flows into 10 emerging market countries grouped into a total category as well as Asian and non-Asian categories. The effects of both the 1994 Mexican Tequila and 1997-8 Asian and Russian crises are evident by the negative net capital flows into these countries around, and immediately following, these crisis events. Nevertheless, capital flows are very sensitive to underlying economic conditions. As can be seen from Figure 3, by the end of 1999 net capital flows were almost back to their pre-Asian crisis 1996 levels. This, in part, reflects the dramatic recent spurt in economic growth rates of a number of the emerging Asian countries – such as Malaysia and Thailand. Indeed, the World Bank,[12] projects that average growth rates for developing countries overall is likely to reach 4.6 % in 2000 and reach the even higher level of 4.8% in 2001-2002. If this growth spurt continues (see, Section 4) the demand for net international capital will continue to intensify among emerging market countries.

4. Other Factors Leading to Greater Integration Between Emerging and Developed Markets

[12] The World Bank (2000).

Historically, a major barrier to increased capital market integration has been the diverse accounting standards adopted by countries around the world. Accounting standard-diversity often forces investors into having to compare "apples with oranges," and inhibits their ability to achieve the degree of informational transparency required to appropriately evaluate performance across firms (and equities) in different countries. Interestingly, the Asian crisis and the inadequacy of the accounting standards in a number of the countries most directly affected by the crisis has added a sense of urgency to the search for a degree of harmonization in accounting standards internationally.

According to a number of observers -- see, for example, Choi (1999) -- the question is no longer whether we should have a set of high quality international accounting standards, but when and how this might be achieved. One important milestone has been the work of the International Accounting Standards Committee (IASC), which has completed a harmonized set of international accounting standards. The International Organization of Securities Commissions (IOSCO) is in the process of reviewing IASC's proposed standards. If these standards pass IOSCO scrutiny, it is likely that IOSCO will recommend their use by all reporting entities for cross-border capital raising and listing purposes. A key player in the final endorsement will be the SEC, which is coming under considerable pressure from US exchanges such as the NYSE to view these standards as an adequate "substitute" for US GAAP in order to avoid driving-away potential and current international listings.

A second historic barrier to capital market integration has been differences across countries in the legal codes and rules covering shareholder and creditor rights. In a recent paper LaPorta, Lopez-de-Silanes, Shleifer and Vishny (1998) examined 49 different countries. Their results imply that English-origin (common law) countries had the strongest investor protections, with French civil law countries offering the weakest. German and Scandinavian-civil-law countries fell somewhere in the middle. Importantly, one variable analyzed in explaining investor protection was the per capita GDP (income) of each of the 49 countries. In general, emerging market countries have relatively low per-capita GDP while developed countries have relatively high levels. Specifically, the authors found that per-capita GDP was unrelated to shareholder rights as well as to debtholder rights across the 49 countries in their sample. Indeed, if anything, they found that creditor rights were stronger in poorer (low income) than in richer (higher

income) countries, possibly due to the fact that poor countries need to adapt their laws to facilitate secured lending in the absence of the alternative sources of finance normally available in advanced countries. The authors also found no statistical link between the per capita income of a country and shareholder concentration. That is, on average, corporations in emerging market countries are no more concentrated in ownership than those in developed market countries.[13]

It is also increasingly being recognized that emerging market countries have strong incentives to pursue policies in the *future* that deal with the remaining barriers facing foreign investors. Recent World Bank research[14] suggests that development of local equity markets is strongly linked to an emerging market country's economic growth process. In particular, the evidence suggests that:

> (i) Countries that had more-liquid stock markets in 1976 tended to grow much faster than those which did not.
>
> (ii) Higher levels of stock market liquidity, measured by the turnover ratio (trading volume divided by market capitalization) tended to be associated with more rapid growth.

These findings, in turn, suggest that net international portfolio capital flows play a critical role in the emerging-market economic growth process (as discussed in Section 3). In particular, they can contribute disproportionately to market liquidity, especially in the presence of local mutual funds, which buy and sell in response to new client investments and redemptions. They can also force securities prices into line with those prevailing on global markets. Increased international portfolio flows, can also encourage an upgrading of the infrastructure underlying trading systems such as: clearance and settlement systems, payment systems, and custody services. And, can improve the process of corporate governance, serving as a bellwether for local portfolio investors, who may find encouragement from a significant foreign presence in the marketplace.

[13] Although they did find the degree of legal enforcement to be worse in poorer (low-income) countries than high-income countries.

[14] Levine, 1996.

Edwards (2000) examines the linkage between economic performance and capital mobility, notably whether higher capital mobility is associated with higher rates of economic growth – after controlling for other factors – and whether this linkage is different for developed and emerging market countries. He concludes that there is a strong statistical link between capital-account openness and economic performance (growth and total factor productivity) but that this linkage only manifests itself after the country has reached a certain degree of development in its domestic financial market. Based on this evidence, there appears to be a "threshold" beyond which integration between a developing country's financial market and global financial markets clearly makes itself felt.

In an exhaustive analysis of the empirical problems encountered in attempting to document international financial integration, Buch and Pierdzioch (2000) suggest that there is no single, comprehensive measure of the degree of international capital mobility. Nevertheless, they document a particularly sharp rise in capital flows in the second half of the 1990s and relate this to GDP growth, increased trade flows, deregulation of capital flows and the expanding size and sophistication of domestic financial systems.

Hull and Tesar (2000) show that there is a direct link between the level of economic development and the level of financial intermediation and that when a country e.g., an emerging market country, integrates into the global capital market, cross-border capital flows tend to be dominated by foreign direct investment and equity.

Table 12 indicates the profile of long-term capital flows to developing countries from 1990 to 1999. Both direct and portfolio equity investment rose dramatically, although the latter fell back after the financial crises of 1997-98. But, as Table 13 shows, the structure of capital flows to developing countries has shifted dramatically during the 1990s. While official capital flows and bank lending have declined portfolio flows and particularly foreign direct investment inflows have increased significantly. Within the realm of private-sector capital flows, the lower panel of Table 13 shows the dominance of foreign direct investment as a source of capital for developing countries during the 1990s.

Table 14 shows the similarities and differences in financial flows of developed and developing countries during two periods, 1988-92 and 1993-98, (the most recent data available). Foreign direct investment dominated, and equity investments increased from the first period to the second period while bank lending declined for both groups of countries. Thus, Table 14 suggests that there has been a strong degree of similarity in capital flow trends among developed and developing countries over the last decade or so.

The pursuit of global capital flows over recent years (such as shown in Table 14) also has encouraged emerging market countries (often with IMF and World Bank

encouragement) to pursue policies that provide an economic environment which holds out the prospect of good, long-term, risk-adjusted returns for international investors.

These reforms include the basics: strong macro and micro-economic policies that seek to transform the country's economic system from what was commonly a centralized, socialistic, import-substituting, foreign aid-dependent system into what is becoming the "consensus" model of an open-market, low inflation, deregulated, private-sector oriented economy of the future. Many emerging market countries have already moved in this direction, notably several in Latin America and Eastern Europe. Privatization, the elimination of government subsidies and the removal of restrictions on foreign investment have all been powerful tools in accelerating this transition process.

Governments' that want to attract international portfolio investment are increasingly clear about the importance of creating and maintaining the basic conditions for viable capital markets.[15] Fundamental to this process is a functioning financial system that embraces a viable banking industry, insurance and securities industries and well as local pension and mutual funds. Banks in many emerging market countries have often been large, subsidized, bureaucratic institutions that possess few skills in finance and have driven customers to transact in parallel (or unofficial) markets. Many of these banks have been burdened with loans to non-performing state-owned enterprises or to large domestic corporate combines deemed "too big to fail." Increasingly a number of emerging market countries have taken drastic steps to separate this debt from the rest of the banking system by establishing separately managed "bad banks," as repositories for this debt, and establishing government sponsored bad loan corporations to absorb and workout this debt similar to the Resolution Trust Corporation that was established in the US to resolve Savings and Loan failures in the 1980's and 1990's.

Indeed, the acceptance of the good-bad bank model and the RTC model in countries such as Thailand, Korea and Malaysia suggest a greater willingness in these countries to more flexibly adjust their economies and financial systems over the long-term and to adopt successful features of western developed country responses to financial crises (of which both the good-bad bank model and RTC are good examples).

Some developing countries such as Thailand have also created new markets in government securities, as a competitive alternative for borrowers and depositors (partly in response to the effect of the Asian crisis on their budget deficits). Countries like Korea, the Philippines, Poland and Colombia have also established domestic commercial paper markets as well.

While few emerging market countries currently have the economic capacity or the political will to adopt far-reaching free-market policies (and the free-market paradigm) all at once, gradual but steady approaches seem to be working for a number of countries. Successfully rebuilt emerging market countries like South Korea, Taiwan, Singapore, and Chile have all moved purposefully in that direction, but only at a pace that could be accommodated by accompanying political feasibility, infrastructure-building and propensity to withstand external shocks. Other countries, that have tried hard to accept the free-market paradigm (Mexico, Argentina, Brazil, and perhaps India), have had considerable success despite some disappointments. The most powerful point of the new paradigm, however, is that countries recognize the net economic benefits of positive international capital inflows. Thus, a consistent barometer of their efforts, flawed as it may be from time to time, is in the capital they are able to attract from international investors as they further integrate with the world economy.

[15] Walter, 1993.

5. Summary and Conclusions

This paper has taken a wide-ranging look at the case for viewing emerging market countries equities as a similar asset class to developed countries equities. While a number of frictions and barriers still remain to full capital market integration, especially in the areas of legal enforcement and accounting standards, the underlying liberalization of emerging market capital markets, their increased openness to FDI, the growth of ADRs and similar cross listings, the growth of country funds as well as the surge of cross-border M&A transaction -- along with developments in information and other technologies -- have significantly enhanced the degree of integration and financial flows among the world's capital markets. Indeed, a core contribution of this paper consists of correlation and factor tests that show the extent to which capital market integration has accelerated in recent years, both economically and politically. In sum, it is hard to argue today that the 10 to 15 largest emerging market countries should be viewed as a separate asset class from those countries considered to be developed.

Indeed, as a result of the world's capital markets becoming more integrated, portfolio managers and investors will have to increasingly refocus their portfolio decisions on micro-level rather than macro-level developments. Only those managers that can consistently identify under-performing firms and industries in individual emerging markets are likely to be able to consistently beat other portfolio managers and relevant benchmarks.

Bibliography

4. J. Amer and J-P Mei, "Measuring International Economic Linkages with Stock Market Data, *Journal of Finance*, 1996, pp. 1743-1763.
5. W. Bailey and Y.P. Chung, "Exchange Rate Fluctuations, Political Risk and Stock Returns: Some Evidence from an Emerging Market," *Journal of Financial and Quantitative Analysis*, 1995 pp. 541-561.
6. W. Bailey, Y.P. Chung and J-K Kang, "Foreign Ownership Restrictions and Equity Price Premiums: What Drives the Demand for Cross-Border Investments," *Journal of Financial and Quantitative Analysis*, 1999, pp. 489-511.
7. A. Bhattacharya et al., "Private Capital flows to Developing Countries" (Washington, D.C.: World Bank, 1997).
8. G. Bekaert and M. Urias, "Diversification, Integration and Emerging Market Closed-End Funds" *Journal of Finance* 1996, pp. 835-869.
9. G. Bekaert and C. Havey, "Emerging Equity Market Volatility" *Journal of Financial Economics* 1997, pp. 29-77.
10. G. Bekaert and C. Harvey, "Foreign Speculators and Emerging Market Equity Markets," Working Paper, Stanford University, 1998.
11. G. Bekaert, C. Harvey and R.L. Lumsdaine "Dating the Integration of World Equity Markets," Working Paper, Stanford University, 1998.
12. G. Bekaert, C. Erb, C. Harvey and T.E. Viskanta, "Distributional Characteristics of Emerging Market Returns and Asset Allocation," *Journal of Portfolio Management*, 1998 pp. 102-116.
13. C.M. Buch and C. Pierdzioch, "The Growth and the Volatility of International Capital Flows: Reconciling the Evidence," paper presented at a conference on *The World's New Financial Landscape: Challenges for Economic Policy*, Kiel Institute for World Economics, June 19-20, 2000.
14. F. Choi, "Recent Developments in International Financial Reporting," speech at the annual Meeting of Chartered and Certified Accountants, 1999.

15. S. Edwards, “Capital Flows and Economic Growth: Are Emerging Economies Different?” Paper presented at a conference on *The World’s New Financial Landscape: Challenges for Economic Policy*, Kiel Institute for World Economics, June 19-20, 2000.

16. R. Engle, “Autoregressive Conditional Heteroscedasticity with Estimates of the Variance of United Kingdom Inflation,” 1982 pp. 987-1007.

17. C. Erb, C.R. Harvey and T.E. Viskanta, “Expected Returns and Volatility in 135 Countries,” *Journal of Portfolio Management*, 1996, pp. 46-58.

18. C. Erb, C.R. Harvey and T.E. Viskanta, “Political Risk, Economic Risk and Financial Risk," *Financial Analysts Journal*, 1996 (Nov/Dec), pp. 29-46.

19. V. Errunza, K. Hogan and M-W Hung, “Can the Gains from International Diversification be Achieved without Trading Abroad,” *Journal of Finance*, 1999 pp. 2075-2107.

20. W.N. Goetzmann and P. Jorion, “Re-Emerging Market,” *Journal of Financial and Quantitative Analysis*, 1999 pp. 1-32.

21. C. Harvey, “Predictable Risk and Returns in Emerging Markets,” *Review of Financial Studies*, 1995, pp. 773-816.

22. P.B. Henry, “Stock Market Liberalization, Economic Reform and Emerging Market Equity Prices,” *Journal of Finance*, forthcoming 2000.

23. L. Hull and L.L. Tesar, “The Structure of International Capital Flow,” paper presented at a conference on *The World’s New Financial Landscape: Challenges for Economic Policy*, Kiel Institute for World Economics, June 19-20, 2000.

24. S. Hwang and S. Satchell, “Empirical Identification of Common Factors in Emerging Market Returns,” *Emerging Markets Quarterly* 1999 (Winter) pp. 7-26.

25. G.A. Karolyi, “Why Do Companies List Shares Abroad?: A Survey of the Evidence and Its Managerial Implications,” *Financial Markets, Institutions and Instruments*, 1998, (No. 1), pp. 1-60.

26. R. Levine, “Stock Markets: A Spur to Economic Growth,” *Finance and Development*, (March) 1996.

27. R. LaPorta, F. Lopez-de-Silanes, A. Shleifer and R. Vishny, “Law and Finance,” *Journal of Political Economy*, 1998, pp. 1113-1155.

28. J-P Mei, “Political Risk, Financial Crisis and Market Volatility,” Working Paper. Dept. of Finance, Stern School, N.Y.U., 1999.

29. Morgan Stanley Dean Witter, *Emerging Market Investment Research*, “Structural Improvements to the Bull Case,” 1999 (October).

30. M.A. Mussa, A. Swoboda, J. Zettelmeyer and O. Jeanne, “Moderating Fluctuations in Capital Flows to Emerging Market Economies,” paper presented at a conference on Key Issues in Reform of the International Economic and Monetary System, May 28-29, 1999.

31. D. Rodrik and A. Velasco, “Short-term Capital Flows,” National Bureau of Economic Research Working Paper No. 7634, 1999.

32. K.G. Rouwenhorst, “Local Return Factors and Turnover in Emerging Stock Markets,” working Paper, Yale School of Management, 1999.

33. I. Walter, *The Battle of the Systems: Control of Enterprises in the Global Economy* Kiel: Institut für Weltwirtschaft, 1993.

34. I. Walter and R. C. Smith, *High Finance in the Euro-zone* London Financial Times, Prentice Hall, 2000.

35. World Bank Global Development Finance (2000), www.worldbandk.org/prospects/gdf2000.

Table 1 : Summary Statistics

Country	Annualised Mean	Std.Dev	Coefficie Skewnes	Excess Kurtosis	Bera - Jarque chi sq
ARGENTINA	0.26067	0.56394	0.70722	0.82992	16.2486
BRAZIL	0.2175	0.65638	-1.3793	5.39802	222.02
CHILE	0.22143	0.26573	-0.5347	-0.5007	8.42313
MEXICO	0.25104	0.37698	-1.0001	-0.3786	25.0371
GREECE	0.19937	0.3619	1.10875	0.458	30.9759
JORDAN	0.00257	0.15971	-0.4348	-0.6834	7.38928
KOREA	0.05304	0.408	0.42268	0.66818	7.01489
MALAYSIA	0.08515	0.35807	-0.2025	-0.0853	1.03538
PHILIPPINES	0.08602	0.35462	-0.0818	-1.0244	6.50185
THAILAND	0.0499	0.43353	-0.4382	-1.0834	11.7321
PORTUGAL	0.05479	0.22331	0.35944	-1.3886	12.2254
POLAND	0.11657	0.42503	-0.4193	2.70127	1.9152
INDIA	0.0076	0.28443	0.25756	-0.5624	38.3292
SOUTH AFRICA	0.02363	0.30986	-1.3994	4.98873	28.4893
TAIWAN	0.05952	0.33458	-0.2846	0.17875	13.8055
EMERGING MARK	0.15671	0.24325	-1.186	1.1706	42.2692
World Free	0.09827	0.13887	-0.5869	-1.6945	25.6711
EAFE	0.06396	0.17136	-0.2737	-2.4196	37.182
US	0.14772	0.13163	-0.6748	-1.2411	20.31
GERMANY	0.12584	0.20276	-0.6026	-1.006	14.8898
UK	0.09062	0.16229	0.05652	-2.8562	49.366
JAPAN	0.00972	0.26684	0.0689	-2.3163	32.531

Table 2 Panel A: Correlations in returns

1st half 1988-93

	* ARGENT	* BRAZIL	* CHILE	** MEXICO	* GREECE	* JORDAN	* KOREA	* MALAYS	* PHILIPP	* THAILAN	* PORTUG	* EMERG	World Free	* EAFE
* ARGENT	1													
* BRAZIL	0.056592	1												
* CHILE *	0.03435	0.151247	1											
* MEXICO	0.263119	0.042786	0.081589	1										
* GREECE	0.163129	0.187125	-0.02821	-0.0544	1									
* JORDAN	-0.04359	0.05667	0.163514	-0.07022	-0.03169	1								
* KOREA	-0.07967	-0.079	-0.1005	0.219209	-0.16444	-0.06903	1							
* MALAYS	-0.05866	0.105919	0.090675	0.25893	0.084772	0.078795	0.287188	1						
* PHILIPP	0.104816	0.130132	0.115969	0.053993	0.241206	0.116982	0.09104	0.509557	1					
* THAILAN	0.048288	0.01887	0.189048	0.282379	0.224316	0.14201	0.107764	0.613307	0.463433	1				
* PORTUG	0.121448	0.216857	0.053401	-0.08793	0.500151	-0.19128	0.025725	0.277084	0.253198	0.186497	1			
* EMERG	0.19977	0.728094	0.301807	0.390413	0.319034	0.060756	0.136078	0.601182	0.420191	0.490122	0.364882	1		
World Free	-0.04601	0.216249	-0.03927	0.243001	0.176273	0.073808	0.333711	0.556577	0.329184	0.366556	0.476118	0.467325	1	
* EAFE *	-0.1052	0.209611	-0.10338	0.158892	0.18834	0.037155	0.338052	0.509233	0.280336	0.303951	0.486377	0.413706	0.961044	1
US	0.167098	0.130242	0.142976	0.366546	0.052573	0.147415	0.157405	0.416948	0.301127	0.356736	0.222422	0.386513	0.639988	0.406177
GERMANY	-0.07267	-0.05002	0.019958	0.165078	0.291088	-0.06397	0.041549	0.375251	0.263083	0.318072	0.350163	0.231565	0.595284	0.578084
UK	-0.05013	0.086013	-0.02733	0.130641	0.152987	0.01667	0.313531	0.446777	0.191839	0.194372	0.413393	0.316996	0.780382	0.729146
JAPAN	-0.18482	0.152538	-0.11131	0.04495	0.054973	0.150058	0.260912	0.387739	0.166606	0.210884	0.342603	0.248158	0.857836	0.905913

2nd half 1994-99

	* ARGENT	* BRAZIL	* CHILE	** MEXICO	* GREECE	* JORDAN	* KOREA	* MALAYS	* PHILIPP	* THAILAN	* PORTUG	* EMERG	World Free	* EAFE
* ARGENT	1													
* BRAZIL	0.597158	1												
* CHILE *	0.615292	0.645323	1											
* MEXICO	0.74577	0.6416	0.521534	1										
* GREECE	0.311882	0.261893	0.38772	0.290733	1									
* JORDAN	0.023939	0.122475	0.201602	0.141234	0.258933	1								
* KOREA	0.226578	0.188357	0.309285	0.198207	0.227709	0.132292	1							
* MALAYS	0.3559	0.252382	0.47302	0.280127	0.253301	0.108207	0.334707	1						
* PHILIPP	0.493251	0.381491	0.528407	0.412888	0.225992	0.009549	0.282391	0.672319	1					
* THAILAN	0.464746	0.362721	0.445383	0.390815	0.188502	0.024133	0.599315	0.608456	0.717757	1				
* PORTUG	0.260025	0.507853	0.298937	0.33345	0.650941	0.24585	0.109831	0.212048	0.295263	0.264854	1			
* EMERG	0.744008	0.751196	0.795423	0.763191	0.434852	0.172826	0.417242	0.662632	0.686573	0.683538	0.517029	1		
World Free	0.590846	0.504061	0.556106	0.571961	0.39439	0.202019	0.400502	0.456728	0.578521	0.570948	0.506904	0.721673	1	
* EAFE *	0.514466	0.476669	0.509278	0.491306	0.369292	0.239869	0.451896	0.435152	0.51835	0.513146	0.483039	0.652346	0.929	1
US	0.566506	0.448346	0.501448	0.546221	0.344546	0.123088	0.278289	0.39655	0.548441	0.542168	0.383035	0.6673	0.902737	0.683004
GERMANY	0.255907	0.334161	0.284618	0.305253	0.392834	0.057146	0.11496	0.372776	0.457509	0.436025	0.492524	0.487133	0.697625	0.667402
UK	0.412784	0.36726	0.342711	0.403364	0.321014	0.212424	0.229032	0.332275	0.375888	0.377494	0.480353	0.484023	0.766994	0.770213
JAPAN	0.313401	0.306076	0.339005	0.28434	0.055923	0.24241	0.538672	0.218111	0.234397	0.354657	0.178925	0.387294	0.607734	0.759089

Table 2 Panel A (continued)

Tests for Significance in correlations difference in the 2 periods

test stat = Z	(X1-X2)/(sqrt(1/(N1-3)+1/(N2-3)))					0.169642								
US	**2.792247**	**2.072846**	**2.400795**	**1.347266**	**1.807455**	-0.14609	0.749235	-0.14409	**1.800204**	**1.379851**	1.045783	**2.347089**	**4.295266**	**2.379704**
GERMANY	**1.971946**	**2.343565**	**1.607733**	0.876549	0.680206	0.714821	0.435609	-0.01696	**1.324782**	0.812367	1.02426	**1.747514**	1.042481	0.863367
UK	**2.883351**	**1.762683**	**2.266518**	**1.74643**	**1.052687**	**1.173275**	-0.53812	-0.79746	1.184949	1.180462	0.493661	1.178489	-0.19666	0.553819
JAPAN	**3.013909**	0.957732	**2.73955**	**1.458463**	0.005616	0.566679	**1.975905**	-1.10505	0.41654	0.9235	-1.03846	0.914656	-3.41763	-3.00744
World	**4.273763**	**1.974846**	**3.928693**	**2.372474**	**1.407989**	0.77159	0.455359	-0.79397	**1.876445**	**1.559105**	0.23934	**2.38434**		
1% critical v	2.326342													
5% critical v	1.644853													
10% critica	1.281551													

Table 2 - Panel B : Correlations of political risk

	Argentina	*Brazil*	*Chile*	*Greece*	*Jordan*	*Korea*	*Malaysia*	*Mexico*	*Phillipines*	*Portugal*	*Thailand*
Argentina	1										
Brazil	-0.16182	1									
Chile	0.856883	-0.21318	1								
Greece	0.51817	-0.26869	0.351889	1							
Jordan	0.734959	-0.03648	0.6595	0.62026	1						
Korea	0.815113	-0.09924	0.656019	0.503642	0.861073	1					
Malaysia	0.883631	-0.22205	0.899821	0.447219	0.543644	0.627405	1				
Mexico	0.741845	-0.21545	0.817453	0.25047	0.385745	0.496279	0.854453	1			
Phillipines	0.622302	-0.20972	0.497609	0.678137	0.869311	0.753403	0.398654	0.215383	1		
Portugal	-0.17533	0.340268	-0.41521	0.265993	0.262991	0.083849	-0.46204	-0.52546	0.333587	1	
Thailand	0.42907	0.063485	0.416419	0.266002	0.643499	0.466769	0.196917	0.164707	0.705749	0.324213	1
US	-0.58077	0.155248	-0.50905	-0.67141	-0.64058	-0.64758	-0.61308	-0.36569	-0.45678	0.050738	-0.00626
UK	-0.63625	0.304486	-0.74172	-0.0388	-0.20899	-0.4054	-0.76917	-0.68029	-0.16004	0.711713	-0.10223
Japan	-0.88933	0.134216	-0.82533	-0.35762	-0.61143	-0.74383	-0.85787	-0.77997	-0.44174	0.370808	-0.18764

	Argentina	*Brazil*	*Chile*	*Greece*	*Jordan*	*Korea*	*Malaysia*	*Mexico*	*Phillipines*	*Portugal*	*Thailand*
Argentina	1										
Brazil	-0.5733	1									
Chile	-0.57275	0.530477	1								
Greece	-0.45585	0.525132	0.908401	1							
Jordan	0.066976	0.052111	-0.15532	0.061646	1						
Korea	-0.04626	0.132068	0.278244	0.254649	-0.22024	1					
Malaysia	-0.52496	0.53126	0.873081	0.904803	-0.05279	0.22557	1				
Mexico	0.384152	-0.03388	-0.60049	-0.65138	-0.19111	-0.03424	-0.64267	1			
Phillipines	-0.71999	0.815266	0.655072	0.54331	-0.22563	0.050195	0.602631	-0.14225	1		
Portugal	-0.38113	0.526824	0.878388	0.868004	-0.23808	0.326921	0.879266	-0.56851	0.580604	1	
Thailand	-0.42941	0.481215	0.853326	0.769808	-0.37827	0.384106	0.853259	-0.41314	0.619384	0.900646	1
US	-0.45882	0.345962	0.731075	0.553398	-0.6327	0.272639	0.567165	-0.25993	0.654168	0.69583	0.746903
UK	-0.50406	0.714771	0.761278	0.643099	-0.42007	0.246685	0.740331	-0.19978	0.816799	0.793804	0.840087
Japan	-0.59867	0.653252	0.877491	0.846516	-0.12752	0.223537	0.871661	-0.50295	0.698646	0.855458	0.817397

Table 2 - Panel B : Correlations of political risk

Significant differences in correlations of political risk

	Argentina	*Brazil*	*Chile*	*Greece*	*Jordan*	*Korea*	*Malaysia*	*Mexico*	*Phillipines*	*Portugal*	*Thailand*
US	0.618437	0.967171	**6.289047**	**6.211362**	0.039998	**4.66672**	**5.985414**	0.536305	**5.633982**	**3.271462**	**3.819535**
UK	0.670365	**2.080681**	**7.622144**	**3.458106**	-1.07044	**3.306913**	**7.65515**	**2.436786**	**4.953877**	0.416309	**4.778802**
Japan	**1.474004**	**2.632195**	**8.63555**	**6.106526**	**2.454047**	**4.90584**	**8.770965**	**1.404865**	**5.783241**	**2.457811**	**5.096859**

FIGURE 1

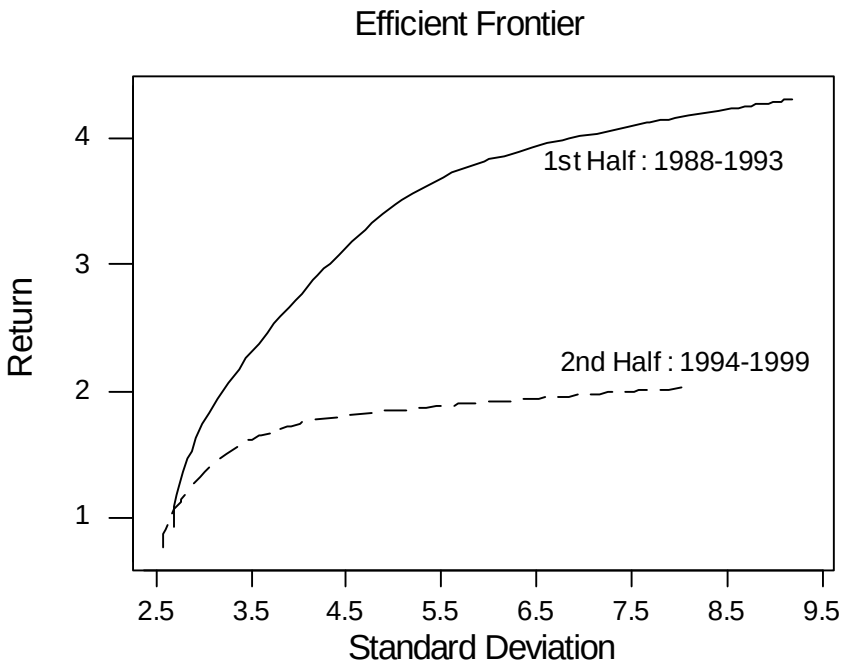
Efficient Frontier
Return
4
3
2
1
1st Half : 1988-1993
2nd Half : 1994-1999
2.5
3.5
4.5
5.5
6.5
7.5
8.5
9.5
Standard Deviation

FIGURE 2

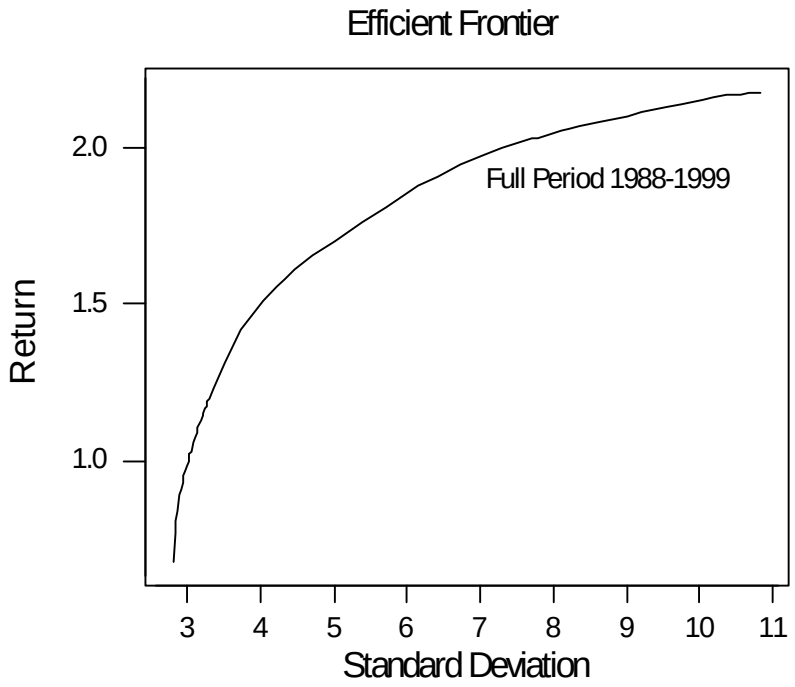
Efficient Frontier
Full Period 1988-1999
Return
2.0
1.5
1.0
3
4
5
6
7
8
9
10
11
Standard Deviation

Table 3 - Effect of world factors in subperiods

Results of F tests

	Period1	*1988-1993*			*Period2*	*1994-1999*		
	R2 local	**R2 local+global**	**F**	**prob**	**R2 local**	**R2 local+global**	**F**	**prob**
Argentina	0.099	0.204	1.112	0.368	0.181	0.237	0.584	0.766
Brazil	**0.093**	**0.282**	**2.181**	**0.049**	0.219	0.299	0.928	0.492
Chile	0.125	0.287	1.817	0.102	**0.016**	**0.250**	**2.549**	**0.024**
Mexico	0.114	0.250	1.451	0.204	0.191	0.249	0.621	0.737
Greece	**0.139**	**0.393**	**3.349**	**0.005**	**0.122**	**0.288**	**1.906**	**0.085**
Jordan	**0.078**	**0.243**	**1.837**	**0.097**	**0.142**	**0.322**	**2.197**	**0.048**
Korea	0.050	0.118	0.638	0.723	0.294	0.401	1.481	0.192
Malaysia	**0.059**	**0.251**	**2.119**	**0.056**	**0.257**	**0.398**	**1.905**	**0.086**
Phillipines	0.188	0.266	0.848	0.553	**0.143**	**0.409**	**3.666**	**0.003**
Thailand	**0.198**	**0.442**	**3.502**	**0.004**	**0.059**	**0.352**	**3.684**	**0.002**

Countries with insufficient data for split estimation

	R2 local	**R2 local+global**	**F**	**prob**	**period of estimation**
India	0.10	0.28	1.75	0.11	Feb 94 - Dec 99
Poland	0.12	0.20	0.59	0.75	Mar 95 - Dec 99
South Africa	0.27	0.37	0.48	0.85	Mar 95 - Dec 99
Taiwan	0.28	0.48	1.39	0.25	Sep 96 - Dec 99
Latin	0.08	0.16	0.74	0.63	Feb 94 - Dec 99
Asia	0.29	0.22	0.84	0.56	Feb 94 - Dec 99

Local factors :(all lagged) : excess market return,market capitalisation to gdp,trade to gdp inflation, change in industrial production,and where available short term interest rate and bond index spread over US treasuries

Global factors :(all lagged) : excess world index return,MSCI world index dividend yield, world inflation, change in world industrial production,difference between 10 year bond yield and 3 month US T bill,change in priceof oil, US bond spread (BBB 7-10 year corporate bonds over US treasury)

Table 4 - Effect of changing world factors

	Results of F tests	Do world factors change over time?	test for differences in coeff
	Constant world factors	***different world factors***	on global factors
	R2 local+global	**R2 local+global**	**F**	**Prob**
Argentina	0.124	0.203	1.516	0.158
Brazil	0.159	0.209	0.960	0.471
Chile	0.136	0.217	1.550	0.147
Mexico	0.116	0.149	0.586	0.788
Greece	0.276	0.337	1.387	0.209
Jordan	**0.157**	**0.259**	**2.079**	**0.043**
Korea	**0.159**	**0.305**	**3.172**	**0.003**
Malaysia	**0.158**	**0.305**	**3.174**	**0.003**
Phillipines	**0.147**	**0.297**	**3.202**	**0.003**
Thailand	**0.171**	**0.343**	**3.941**	**0.000**

Countries with sufficient data around liberalization dates			test for differences in coeff	
	Liberalization date used	**R2 local+global**	on global factors	
		(chaging global factors)	**F**	**Prob**
Argentina	**Nov-89**	**0.24**	**2.33**	**0.02**
Brazil	**May-91**	**0.25**	**1.87**	**0.07**
Chile	Jan-92	0.15	0.31	0.95
Korea	**Jan-92**	**0.28**	**2.49**	**0.02**

Local factors :(all lagged) : excess market return,market capitalisation to gdp,trade to gdp inflation, change in industrial production,and where available short term interest rate and bond index spread over US treasuries

Global factors :(all lagged) : excess world index return,MSCI world index dividend yield, world inflation, change in world industrial production,difference between 10 year bond yield and 3 month US T bill,change in priceof oil, US bond spread (BBB 7-10 year corporate bonds over US treasury)

Table 5 -Surprise in local shock explained by world shock

Average Conditional World Market Correlation and Proportion of Variance due to world factors

1988-1999	Correlation	% Variance	**1988-1993**	Correlation	% Variance	**1994-1999**	Correlation	% Variance
Argentina	27.22%	17.46%		-2.15%	1.76%		55.41%	32.46%
Brazil	30.51%	11.49%		19.03%	4.33%		41.83%	18.55%
Chile	29.31%	11.53%		18.06%	6.08%		40.41%	16.90%
Mexico	38.47%	18.00%		23.84%	6.64%		52.91%	29.20%
Greece	19.84%	4.44%		17.84%	3.67%		21.81%	5.20%
Jordan	12.29%	3.66%		11.78%	4.38%		12.80%	2.94%
Korea	35.20%	12.79%		33.44%	11.42%		36.93%	14.15%
Malaysia	53.08%	29.57%		51.48%	27.93%		54.65%	31.19%
Phillipines	38.52%	17.73%		27.58%	7.94%		49.30%	27.39%
Thailand	41.67%	20.62%		33.39%	15.08%		49.84%	26.09%

Countries with insufficient data for split estimation

India	32.33%	11.62%
Poland	40.01%	21.73%
South Africa	54.05%	29.97%
Taiwan	55.85%	34.02%
Latin	36.94%	21.71%
Asia	60.43%	37.35%

TABLE 6

(Millions of US $)

Year	EM exports to OECD (I)	EM imports from OECD (II)	(I)+(II)	EM GDP (III)	(I)/(III)	((I)+(II))/(III)
1985	289,012.12	223,420.11	512,432.23	3,197,660.00	0.09	0.16
1986	287,770.19	244,095.29	531,865.48	3,351,160.00	0.09	0.16
1987	344,445.45	283,767.31	628,212.76	3,517,600.00	0.10	0.18
1988	397,967.73	344,618.98	742,586.71	3,693,070.00	0.11	0.20
1989	437,968.28	370,654.67	808,622.95	3,825,490.00	0.11	0.21
1990	481,963.53	413,356.48	895,320.01	3,977,230.00	0.12	0.23
1991	512,332.90	464,102.70	976,435.60	4,161,720.00	0.12	0.23
1992	546,902.00	524,419.00	1,071,321.00	4,379,460.00	0.12	0.24
1993	557,384.00	569,819.00	1,127,203.00	4,641,980.00	0.12	0.24
1994	651,530.00	653,829.00	1,305,359.00	4,965,610.00	0.13	0.26
1995	775,963.00	792,179.00	1,568,142.00	5,219,400.00	0.15	0.30
1996	842,482.00	814,116.00	1,656,598.00	5,537,840.00	0.15	0.30
1997	899,526.00	846,824.00	1,746,350.00	6,096,470.00	0.15	0.29
1998	905,257.40	752,278.80	1,657,536.20			

Data Sources:

(1) IMF -- Direction of Trade Statistics

(2) International Financial Statistics Yearbook, 1999. IMF.

(3) Human Development Report, Oxford University Press.

TABLE 7

Value of Completed International Merger and Corporate Transactions
OECD* with Emerging Markets
1985-1999
(Number of deals and millions of US dollars)

Emerging Market	OECD Buyer		OECD Seller		Total Activity Btn OECD and EM	
	#	$M	#	$M	#	$M
Latin America	1,057 (1,283) **	160,533.0	100 (91)	11,855.8	1,157 (1,374)	172,388.8
Africa	424 (437)	28,003.9	305 (185)	36,450.8	729 (622)	64,454.7
Asia (excl. Japan)	2,472 (2,728)	255,086.9	1,227 (696)	93,919.4	3,699 (3,424)	349,006.3
Totals	3,953 (4,448)	443,624	1,632 (972)	142,226	5,585 (5,420)	585,850

TABLE 8

Value of Completed International Merger and Corporate Transactions

OECD* with Emerging Markets

1985-1999

(Number of deals and millions of US dollars)

	Latin America				Africa				Asia (excl. Japan)				Total OECD with EM					
	OECD Buyer		OECD Seller		OECD Buyer		OECD Seller		OECD Buyer		OECD Seller		OECD Buyer		OECD Seller		Total	
Year	#	$M	#	$M	#	$M	#	$M	#	$M	#	$M	#	$m	#	$m	#	$m
1985	3	1,174	1	41	1	37	1	9	10	1,235	7	62	14	2,445	9	112	23	2,557
	(4) **		(2)		0		(3)		(9)		(7)		(13)		(12)		(25)	
1986	1	23	1	290	4	561	1	36	14	977	18	1,523	19	1,561	20	1,848	39	3,409
	(6)		0		(1)		(2)		(16)		(5)		(23)		(7)		(30)	
1987	4	216	0	0	2	13	6	632	9	320	23	2,850	15	549	29	3,482	44	4,031
	(10)		(3)		(2)		(2)		(26)		(12)		(38)		(17)		(55)	
1988	15	1,421	2	10	4	145	2	292	32	3,009	30	2,430	51	4,575	34	2,731	85	7,306
	(22)		0		(4)		(2)		(48)		(10)		(74)		(12)		(86)	
1989	18	917	7	1,071	11	4,510	8	265	50	6,622	56	3,865	79	12,048	71	5,201	150	17,249
	(26)		(6)		(4)		(5)		(54)		(37)		(84)		(48)		(132)	
1990	31	9,738	2	335	4	471	13	2,378	83	16,438	66	5,023	118	26,648	81	7,736	199	34,384
	(25)		(5)		(9)		(6)		(70)		(28)		(104)		(39)		(143)	
1991	31	3,093	9	486	12	174	13	1,236	90	4,814	69	3,432	133	8,081	91	5,153	224	13,234
	(48)		(4)		(33)		(12)		(135)		(49)		(216)		(65)		(281)	
1992	40	3,527	8	913	16	531	23	2,334	96	6,406	79	4,414	152	10,464	110	7,661	262	18,125
	(57)		(9)		(22)		(9)		(114)		(43)		(193)		(61)		(254)	
1993	55	4,195	12	1,239	22	1,697	18	2,413	132	8,129	110	12,223	209	14,020	140	15,875	349	29,895
	(89)		(4)		(22)		(22)		(164)		(68)		(275)		(94)		(369)	
1994	80	6,681	11	655	35	627	25	3,022	207	9,195	158	6,051	322	16,504	194	9,728	516	26,232
	(104)		(12)		(36)		(14)		(217)		(74)		(357)		(100)		(457)	
1995	107	6,754	7	2,071	56	1,577	22	2,908	251	12,163	131	8,787	414	20,493	160	13,766	574	34,259
	(143)		(5)		(59)		(13)		(319)		(64)		(521)		(82)		(603)	
1996	141	13,655	10	893	71	2,056	27	2,202	323	22,015	136	8,271	535	37,726	173	11,366	708	49,092
	(145)		(6)		(81)		(16)		(366)		(87)		(592)		(109)		(701)	
1997	185	26,406	9	1,700	60	5,729	39	4,350	363	41,981	135	10,231	608	74,116	183	16,281	791	90,397
	(165)		(7)		(40)		(27)		(321)		(70)		(526)		(104)		(630)	
1998	195	46,308	13	381	55	4,462	57	7,618	418	65,142	115	13,901	668	115,911	185	21,900	853	137,811
	(231)		(15)		(54)		(17)		(424)		(62)		(709)		(94)		(803)	
1999	152	36,429	8	1,772	71	5,415	52	6,856	397	56,654	96	10,956	620	98,497	156	19,584	776	118,081
	(207)		(13)		(70)		(35)		(445)		(80)		(722)		(128)		(850)	
Totals	1,058	160,535	100	11,856	424	28,004	307	36,550	2,475	255,099	1,229	94,018	3,957	443,638	1,636	142,424	5,593	586,062
	(1,282)		(91)		(437)		(185)		(2,728)		(696)		(4,447)		(972)		(5,419)	

Source: Securities Data Company.

* Excluding Czech Republic, Hungary, Korea, Mexico, and Poland

' Numbers in brackets denote additional deals for which no values were available.

TABLE 9

Foreign Direct Investment Flows from Developed to Developing Countries 1985-1998 ($ million)[1]

Year	FDI	Bank Lending
1985	6,351.27	
1986	10,754.66	
1987	19,565.56	
1988	21,869.96	
1989	26,708.21	
1990	26,859.12	
1991	23,169.08	
1992	27,809.09	
1993	38,436.36	
1994	48,500.54	
1995	52,462.55	30,605.71
1996	59,646.01	40,761.11
1997	80,613.28	34,402.08
1998	82,601.98	10,511.82

[1]Source: OECD development Assistance Committee, 1999. Developed countries are defined as members of the OECD Development Assistance committee. Developing countries defined per DAC criteria, not including the transition economies.

TABLE 10

Value of ADRs
Issuers from Emerging Markets
1985-1999
(Number of deals and millions of US dollars)

Emerging Market	#	$M
Latin America	149	13,000.5
Africa	9	520.0
Asia (excl. Japan)	209	18,564.0
Totals	367	32,085

Source: Thomson Financial Securities Data

TABLE 11

Value of ADRs
Issuers from Emerging Markets
1985-1999
(Number of deals and millions of US dollars)

	Latin America		Africa		Asia (excl. Japan)		Total EM	
Year	#	$M	#	$M	#	$M	#	$m
1985	1	16	0	0	1	16	2	32
1986	0	0	0	0	0	0	0	0
1987	0	0	1	30	1	30	2	59
1988	0	0	0	0	1	105	1	105
1989	0	0	0	0	0	0	0	0
1990	2	89	0	0	3	143	5	232
1991	24	3,161	2	54	27	3,249	53	6,464
1992	26	3,220	0	0	30	3,466	56	6,686
1993	36	3,351	2	166	41	3,713	79	7,230
1994	55	3,001	2	78	81	5,766	138	8,845
1995	2	66	2	192	16	1,308	20	1,566
1996	0	0	0	0	1	20	1	20
1997	2	13	0	0	2	13	4	27
1998	1	84	0	0	4	434	5	518
1999	0	0	0	0	1	300	1	300
Totals	149	13,001	9	520	209	18,564	367	32,085

Source: Securities Data Company.

* Excluding Czech Republic, Hungary, Korea, Mexico, and Poland

' Numbers in brackets denote additional deals for which no values were available.

Table 12: Net long-term flows to developing countries
($US billion)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Direct Investment	24.1	35.3	47.5	66.0	88.8	105.0	130.8	170.3	170.9	192.0
Portfolio investment	4.0	18.5	25.2	87.6	73.4	66.9	111.6	79.1	53.5	52.6
Equity	2.8	7.6	14.1	51.0	35.2	36.1	49.2	30.2	15.6	27.6
Bonds	1.2	10.9	11.1	36.6	38.2	30.8	62.4	48.9	37.9	25.0
of which public borrowing:		7.9	2.5	17.5	15.6	12.8	27.9	19.2	27.7	
Bank lending and other debt	14.5	7.8	27.1	12.2	12.3	31.4	39.7	54.6	41.5	-5.9
of which public borrowing:		0.6	13.7	8.7	7.5	9.8	11.6	14.7	21.9	
Official Flows	55.9	62.3	54.0	53.4	45.9	53.9	31.0	39.9	50.6	52.0
of which public borrowing:		27.2	23.5	25.0	13.1	21.1	3.3	13.3	24.9	
Total	**98.5**	**123.9**	**153.8**	**219.2**	**220.4**	**257.2**	**313.1**	**343.9**	**316.5**	**290.7**

Source: Leslie Hull and Linda L. Tesar, "The Structure of International Capital Flow,"
Paper presented at a conference on T*he World's New Financial Landscape* , Kiel Institute of World Economics, June 19-20, 2000

Table 13: Developing Countries: Shares of total net inflows

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average: 90-93	94-99
Direct investment	24.5	28.5	30.9	30.1	40.3	40.8	41.8	49.5	54.0	66.0	28.5	48.7
Portfolio investment	4.1	14.9	16.4	40.0	33.3	26.0	35.6	23.0	16.9	18.1	18.8	25.5
Equity	2.8	6.1	9.2	23.2	16.0	14.0	15.7	8.8	4.9	9.5	10.4	11.5
Bonds	1.2	8.8	7.2	16.7	17.3	12.0	19.9	14.2	12.0	8.6	8.5	14.0
Bank lending and other debt	14.7	6.3	17.6	5.6	5.6	12.2	12.7	15.9	13.1	-2.0	11.1	9.6
Official Flows	56.8	50.3	35.1	24.4	20.8	21.0	9.9	11.6	16.0	17.9	41.6	16.2

Shares of private inflows	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	90-92	93-98
Direct investment	56.6	57.3	47.6	39.8	50.9	51.6	46.4	56.0	64.3	80.4	53.8	51.5
Portfolio investment	9.4	30.0	25.3	52.8	42.1	32.9	39.6	26.0	20.1	22.0	21.6	35.6
Equity	6.6	12.3	14.1	30.8	20.2	17.8	17.4	9.9	5.9	11.6	11.0	17.0
Bonds	2.8	17.7	11.1	22.1	21.9	15.2	22.1	16.1	14.3	10.5	10.5	18.6
Bank lending and other debt	34.0	12.7	27.2	7.4	7.0	15.4	14.1	18.0	15.6	-2.5	24.6	12.9

Source: Leslie Hull and Linda L. Tesar, "The Structure of International Capital Flow,"
Paper presented at a conference on *The World's New Financial Landscape* , Kiel Institute of World Economics, June 19-20, 2000