

U.S. Investors' Emerging Market Equity Portfolios:
A Security-Level Analysis

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Abstract: At a point in time, U.S. investors' equity portfolios in emerging markets are tilted towards large firms that are cross-listed. The effect of a cross-listing is quite large. In our sample, U.S. investors held 27 percent of the market capitalization of firms that cross-listed on a U.S. exchange and, in contrast, only 7 percent of those that did not; this difference holds up to the inclusion of many other factors that affects investment patterns. The effect of liquidity seems to vary across regions; in Latin America, firms with high turnover rates have more U.S. investment, but the opposite is true in emerging Asia. Over time portfolios weights increase for firms that improve their financial health by reducing leverage. There is, however, also an aspect of overshooting in these portfolios. The greater is the weight on a firm at the beginning of our sample, the larger is the subsequent disinvestment.

JEL Classification: F3, G15

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1. Introduction

In this paper we analyze a comprehensive, security-level database of U.S. investors' equity portfolios in nine emerging markets to determine firm characteristics that attract U.S. investment, how investment patterns differ across Latin America and emerging Asia, and how emerging market portfolios have changed over time. The analysis has important implications for our understanding of international financial integration and prospects for emerging market equity flows.

The database we use to answer these questions is remarkable in that it is the most comprehensive available. It includes not only U.S. institutions' holdings of non-U.S. stocks that trade in the United States—as is available through SEC 13-f filings—but holdings of *all* U.S. investors in *all* non-U.S. stocks, regardless of where the stocks trade. The data were collected in conjunction with benchmark surveys conducted as of March 1994 and December 1997 by the U.S. Treasury Department and the Federal Reserve Board. U.S. institutions are, to be sure, important in this data set, but the data come primarily from the firms that are entrusted to keep the securities, the major custodians such as large banks and broker-dealers, and include U.S. holdings of the underlying foreign securities.

We focus in this paper on firms from nine large emerging markets, four in Latin America (Argentina, Brazil, Chile, and Mexico) and five in emerging Asian (Indonesia, Korea, Malaysia, Philippines, and Thailand). We find that at a point in time U.S. investors' emerging market equity portfolios are weighted towards large stocks and even more so toward those that are listed on U.S. exchanges. This is consistent with U.S. investors putting a premium on stocks that are visible and opt into U.S. investor protection regulations, thereby reducing information

asymmetries, consistent with the model of Merton (1987). Within regions, some differences appear. For example, the effect of turnover rates, a measure of liquidity, differs across regions: Latin American stocks with high turnover rates attract U.S. investment, but in emerging Asia, where turnover rates are much higher, U.S. investors avoid stocks that trade most actively. We also find some evidence that U.S. portfolios are tilted towards high beta stocks, especially in Latin America. The most important determinant is, however, the cross-listing. U.S. investors hold on average about 27 percent of the market capitalization of stocks in our sample that are cross-listed. In contrast, for those that are not cross-listed, the importance of U.S. investors falls to only 7 percent. This relationship holds even after controlling for many characteristics associated with both holdings and cross-listings.¹

In early 1994, emerging equity markets were experiencing a surge of foreign investment, but by 1997 foreign investment dried up and remains small today. An understanding of changes in the composition of U.S. investors' emerging market equity portfolios from 1994 to 1997 might provide insight into the current state of emerging market equity investment. With this in mind, we analyze portfolio reallocations between 1994 and 1997 and find a distinct move to firms that improved their financial health in the mid-1990s. We also see a move away from firms favored earlier. That is, firms for which U.S. investment was greatest in 1994 saw the greatest U.S. disinvestment by 1997.

We also study the performance of U.S. portfolios, but here our evidence is mixed. While the end-1997 portfolio provided higher 1998 returns than many of these markets, we cannot

¹ Recent work on the information content of a cross-listing include Coffee (1999), Doidge, Karolyi, and Stulz (2001), Lang, Lins and Miller (forthcoming), and Stulz (1999). Lins, Strickland, and Zenner (2002), Pagano, Roell, and Zechner (2002), and Saudagaran (1988) address reasons firms cross-list.

conclude that U.S. portfolios were significantly tilted towards future winners.

The importance of our results for the literature on international portfolio allocation and corporate finance is clear. To date, comprehensive security-level analysis of international portfolios has been conducted only for industrial countries such as Japan (Kang and Stulz, 1997) and Sweden (Dahlquist and Robertsson, 2001).² Our analysis shows to what extent these industrial country results also apply to emerging markets. We, too, highlight the role of a deep, well-functioning trading environment for a particular stock, but show how the importance of firm characteristics differs across regions. Our work also emphasizes the important role of barriers to international investment, particularly information asymmetries.

It is perhaps worthwhile to set the scene by briefly describing the environment at the times of the benchmark surveys. Between the surveys, stock market development, as measured by the number of listed firms (Table 1), increased dramatically in emerging Asia, especially Indonesia, Korea, and Malaysia, but was roughly unchanged in Latin America. Market capitalizations paint a different picture; some Latin American markets, such as Brazil and Chile, grew sharply between the surveys, but by end-1997 the Korean, Malaysian, and Thai equity markets were (in dollar terms) just 20 to 50 percent of their March 1994 sizes, primarily because of the crisis-related and currency depreciations and drop in equity prices (Figure 1). All of the markets in our sample were open to foreign investment by March 1994 (Figure 2).³ At that time, Argentina, Mexico, and Malaysia had the fewest legal restrictions, but, by the end of 1997, the

² A precursor to the current paper, Holland and Warnock (forthcoming), analyzes U.S. position in Chilean equities.

³ Financial liberalization in these countries has been studied by Bekaert and Harvey (2000), Chari and Henry (2001, 2002a,b), Edison and Warnock (forthcoming), Henry (2000a,b), and Kim and Singal (2000).

other countries had also dismantled the bulk of foreign ownership restrictions.⁴ By 1997 firms from most of these countries—Thailand and Malaysia are the exceptions—had cross-listed on U.S. exchanges. Figure 3 shows the basic message from Ahearne, Grier, and Warnock (forthcoming): Countries whose firms tended to cross-list on U.S. exchanges had greater weights in U.S. portfolios. With the firm-level analysis of this paper, we will be able to discern whether this effect was limited to only the firms that cross-listed, or also extended to other firms in these countries.

The paper proceeds as follows. In the next section, we describe the data on U.S. holdings and firm characteristics. In Section 3, we provide summary statistics. In Section 4, we more formally analyze the determinants of firms' weights in U.S. portfolios by presenting results from multivariate regressions. Section 5 presents a cursory analysis of the performance of U.S. portfolios. Section 6 concludes.

2. Data Description

2.1 The Security-level Holdings Data

We use confidential security-level data on U.S. holdings of emerging market stocks from comprehensive benchmark surveys conducted by the U.S. Treasury Department and the Federal Reserve Board as of March 1994 and December 1997.⁵ Data are collected from two types of

⁴ We should note that a reduction in foreign ownership restrictions need not be considered credible by investors. The reimposition of controls in Malaysia in 1998 provided an emphatic illustration of this point.

⁵ Publicly available country-level data from the benchmark surveys are presented in Treasury Department and Federal Reserve Board (2000), on which the description in this section

reporters: U.S. custodians and U.S. institutional investors.⁶ Reporting on the survey was mandatory, and penalties could have been imposed for noncompliance. Custodians—primarily banks but also some broker-dealers—are the main source of information, reporting 97 percent of the market value of U.S. holdings of foreign long-term securities measured on the 1997 survey. Institutional investors, such as mutual funds, pension funds, insurance companies, endowments, and foundations, report in detail on their ownership of foreign securities only if they do not entrust the safekeeping of these securities to U.S.-resident custodians. If they do use U.S.-resident custodians, institutional investors report only the name(s) of the custodian(s) and the amount(s) entrusted.⁷

The requirement that institutional investors identify their U.S.-resident custodian(s) has the beneficial side effect of ensuring that all sizable U.S.-resident custodians holding foreign securities are included in the survey, because any custodian identified by an institutional investor is instructed to report. The requirement also makes it possible to check on survey accuracy, as the amount of foreign holdings each custodian should report can be estimated by summing the amounts that institutional investors as a group have entrusted to each custodian.

Data from the asset surveys are considered accurate but difficulties and complexities mean that they are not likely perfect. Accurately pricing and categorizing the universe of foreign securities—370,000 records on equity holdings were collected in the 1997 survey—is very

is based, and analyzed in Ahearne, Grier, and Warnock (forthcoming) and Pinkowitz, Stulz, and Williamson (2001).

⁶ Holdings of private individuals are captured as long as they are through U.S. institutional investors or are entrusted to U.S.-resident custodians.

⁷ Of the 1209 firms that reported data in the survey, 863 reported the names and amounts they had entrusted to U.S. custodians.

challenging, as commercial data used to cross-check data on foreign securities are generally less complete than for U.S. securities; custodian data in asset surveys tend to have some errors and omissions; and unexpected local market quirks can lead to misinterpretations of reported data. Because of the great number of records and the various complexities, the data were edited and cleansed by Federal Reserve and Treasury staff for eighteen months.

The dollar amount of U.S. holdings at the time of the two benchmark surveys are in parentheses in the left columns of Table 1. In dollar terms, U.S. positions in Latin America increased from \$53 billion in 1994 to \$84 billion in 1997. As a percent of the market capitalization in these countries, U.S. holdings amounted to 13 percent in 1994 and 15 percent in 1997. In emerging Asia, between 1994 and 1997 U.S. holdings fell from \$21 billion to \$17 billion; because market capitalizations fell much more sharply, U.S. positions increased from 4 to 8 percent in the inter-survey period. Thus, the importance of U.S. investors increased in both regions between 1994 and 1997.

Another piece of evidence speaks to the comprehensiveness of the holdings database. Of the 727 EMDB firms in 1997, only 7 had zero U.S. holdings. The proportion of EMDB firms with zero U.S. holdings was higher in 1994 (40 of 345), but half of the firms with zero holdings were Korean firms with very strict foreign ownership limits. By 1997, the restrictions were relaxed and U.S. investment increased.

2.2 Firm Characteristics

For data on firm characteristics we use balance sheet variables from Worldscope and returns data from the S&P/IFC Emerging Markets Database (EMDB); complete details are

provided in the Data Appendix. The EMDB consists of all firms in the S&P/IFC Global index. All actively traded stocks of domestic companies are candidates for inclusion in a country's Global index; there are no liquidity or size screens. But the index and, hence, the database, is not comprehensive: It is constructed to represent a target 60 to 75 percent of the country's total market capitalization and an industrial composition similar to that of the overall market.⁸ For the nine emerging markets in our sample, EMDB firms comprise 68 percent of the \$767 billion in end-1997 market capitalization, but 88 percent of the \$100 billion in U.S. positions.⁹

Although other classifications are possible, we group our main explanatory variables in five categories. Our priors on these variables are formed from analyses of foreigners' investments in a particular country's equities—Kang and Stulz (1997), henceforth KS, for Japanese equities and Dahlquist and Robertsson (2001), henceforth DR, for Swedish equities—and the Falkenstein (1996) and Gompers and Metrick (2001), henceforth GM, findings on the composition of domestic institutions' investments in U.S. equities.

2.2.1 Liquidity and transaction costs. The typical U.S. international investor is likely an institution for which liquidity and low transaction costs are important. Large stocks with high turnover are more liquid, so we include *size* (log market capitalization) and *turnover* (value of trading over the previous twelve months as a percentage of market capitalization). These two variables also serve as proxies for firm-level transaction costs, for which we have no direct

⁸ See Standard & Poor's (2000) for a complete description of the IFC Global index and the EMDB.

⁹ Worldscope ostensibly includes a very broad range of firms, but the coverage differs greatly by variable and, after omitting firms that have poor coverage, it is Worldscope, not the EMDB, that constrains our data set.

measure.¹⁰

2.2.2 Prudence variables. *Dividend yield* (dividends per share over the year-end market price) has been used by Del Guercio (1996) and GM as a “prudence” proxy—stocks paying higher yields might be considered safer and some institutions cannot hold stocks that do not pay dividends. Yield also has predictive power for returns (Fama and French (1988), Campbell and Shiller (1988), Harvey (1995)). Another prudence proxy is the volatility of past returns, which we measure as the *residual variance* of a market model estimated over a 3-year period. We do not have a strong prior on this variable. From a prudence standpoint, U.S. ownership should be greater in firms with lower volatility. But investors may seek high risk high reward stocks; GM and Falkenstein (1996) find a positive impact of volatility on U.S. institutions’ domestic holdings.

2.2.3 Historical returns. Besides residual variance, we use four other variables that are based on historical returns: book-to-market, beta, Sharpe ratio, and momentum. *Book-to-market*, calculated as the book value per share over the year-end market price, can be viewed as a style variable; a tendency to hold low (high) book-to-market values indicates a preference for “growth” (“value”) stocks. We do not have a strong prior on book-to-market: U.S. institutions appear to favor domestic value stocks, but foreigners in Japan and Sweden reveal a preference for growth stocks. *Beta*, calculated from the same market model as residual variance, measures the systematic risk of a stock. We might expect a preference for high beta stocks; KS note that

¹⁰ Because lower priced stocks have, on a percentage basis, higher bid-ask spreads and therefore higher transaction costs, price has also been used as a proxy for transaction costs. We do not include price because many foreign stocks as held as ADRs (American Depositary Receipts), which often bundle underlying shares to produce a higher price. See Miller (1999) for a discussion of ADR programs.

in the presence of proportional barriers to investment foreigners should hold high beta stocks. Past performance in a reward-to-risk sense is captured by a *Sharpe ratio* calculated over a 3-year period; whether U.S. investors move into stocks with high reward-to-risk tradeoffs is an empirical question. We also include a *momentum* variable (mean monthly return over the preceding one-year period) that will provide an indication of whether U.S. investors can be characterized as momentum traders in emerging markets. Past evidence of momentum trading by foreigners seems to be sample-specific. Whereas KS, Falkenstein (1996), and Grinblatt and Keloharju (2000) find evidence of momentum investing, GM show strong evidence that institutions do not chase past returns.

2.2.4 Financial health. We use three measures of financial health. *Return on assets* (ROA) is an accounting performance measure calculated as net income over total assets. If there is persistence in accounting performance, U.S. investors might favor emerging market stocks with high ROA. Firms with higher *leverage*, calculated as the ratio of total debt to total assets, are more financially vulnerable and, thus, might attract less foreign investment. *Current ratio*, calculated as current assets over current liabilities, indicates the firm's ability to meet short-term obligations. Firms with a high current ratio are in better financial health (at least in the short-term) and, thus, might be more attractive to foreign investors.

2.2.5 Barriers to international investment. Barriers to international investment can be direct or indirect. Direct barriers, such as capital controls, are captured by a firm-level measure of the legal availability of a stock to foreigners, the *investable weight*. The investable weight, which is the basis of the Edison and Warnock (forthcoming) capital controls measure, is an openness measure that represents the portion of a firm's equity that is legally available to a

foreign investor. A barrier that is both direct and indirect is the extent to which a stock is held by insiders—stocks with a high concentration of insiders are less available to foreign investors for algebraic reasons but also because insiders’ objectives might not align with those of atomistic investors. *Closely held*, as in Pinkowitz, Stulz, and Williamson (2001), is calculated as the percent of outstanding common shares that are held by insiders. Based on the findings of Holland and Warnock (forthcoming), we adjust the closely held variable by subtracting the percentage closely held that Worldscope incorrectly attributes to depository banks. We also include two cross-listing dummy variables. *US Listed* takes the value of one if the firm is listed on a U.S. exchange. Such a cross-listing alleviates two type of barriers to international investment: direct (through lower transaction costs and better settlement) and indirect (through an improved information environment due to stricter investor protection regulations). Some foreign firms trade in U.S. OTC markets as Level I ADRs or private placements (Rule 144a). For these firms, captured by a *Level I ADR* dummy, direct costs might be lower, but we expect no improvement in the information environment.

3. U.S. Positions in Emerging Equity Markets – Descriptive Statistics

In this section we take two basic cuts of the holdings data, first by industry and then by firm characteristic.

3.1 Holdings by Industry

Our first cut of the holdings data is by industry. KS and DR found that foreign investors

tended to overweight industries that produce internationally traded goods—manufacturing in Japan and engineering in Sweden—and underweight “local” or non-tradeable sectors. Table 2 shows that foreign holdings in emerging markets may have different characteristics. The table presents the relative weights of eight industries in U.S. investors’ emerging market equity portfolio as of end-1997. A value of one indicates that the share of an industry in U.S. investors’ emerging market equity portfolio is identical to the share of that industry in these markets. Any value less than one indicates an underweighting of that industry; any value over one implies overweighting. Contrary to the industrial country results of KS and DR, U.S. investors overweight a “local” sector—transportation and communication—and underweight manufacturing.¹¹ In line with the previous results, however, they also overweight agriculture and mining firms, which, in these economies, produce internationally traded goods. Thus, we conclude that compared to holdings of foreigners in Japan and Sweden, the sectoral composition of U.S. holdings in these emerging markets are similar (a tradeable sector is overweighted) but different (the most overweighted sector produces nontradeable goods). Sectoral weights for 1994 (not shown) follow a similar pattern.

3.2 Holdings by Firm Characteristic¹²

Before discussing the relationship between firm characteristics and U.S. holdings, we

¹¹ Cai and Warnock (2003) find that in foreign investors’ U.S. equity portfolios, the overweighting is greatest on some “local” sectors (such as services and agriculture).

¹² Some data used in previous studies are not available. Most importantly, adequate foreign sales data do not exist for these emerging market firms. DR find a significant relationship between foreign sales and foreign ownership, but in our sample U.S. investors tend to overweight some firms for which international trade is not important, such as transportation and communications firms.

first describe some of the features of the data. Summary statistics are provided for our full sample (Table 3a) and separately for each region (Tables 3b and 3c). For now we focus on the columns labeled Average, which provides sample averages for each characteristic, and N, the number of firms. In Table 3a we see that we have in our sample at most 724 firms and that coverage is greatest for EMDB variables such as returns-based variables, market capitalization, and investability. Also, from Table 3a the average firm in our sample has market capitalization of \$963 million, of which 43 percent is held by insiders (the average of *Closely Held*), 62 percent can be held by foreigners (*Investability weight*), and 9 percent is held by U.S. investors. The typical firm has a turnover rate of just over one; a dividend rate of 2.2 percent; a Sharpe ratio over the 1994-1997 period of -0.48; negative returns (-7.5%) in 1997; a beta greater than one; and a book-to-market ratio greater than one. In 1997, the typical firm had total debt of about 39 percent of total assets; current assets that were 1.46 times current debt; and a return on assets of positive 3 percent. Eight percent of the firms are listed on U.S. exchanges and another 7 percent trade as Level I ADRs.

Comparing Tables 3b and 3c, we see that the sample is comprised mainly of Asian firms (524 of the 724). Compared to the typical Latin American firm in our sample, the typical Asian firm is about three times smaller; has a three times higher turnover rate; pays lower dividends; is slightly more volatile; has a worse reward-to-risk tradeoff, lower 1997 returns, and lower beta; has a much higher book-to-market ratio; is in worse financial health with higher leverage, lower current ratio, and lower return on assets; is less closely held by insiders but less available to foreigners; and is less likely to be listed on a U.S. exchange or trade as a Level I ADR. Perhaps not surprising, U.S. investors hold less of the typical Asian firm (6 percent) than the typical firm

in Latin America (16 percent).

Tables 3a - 3c also present two indicators of simple bivariate relationships between holdings and firm characteristics: quintile analysis and t-statistics from regressions of y_i on a characteristic. In the quintile analysis, firms are ranked and sorted into quintiles based on the characteristics discussed in Section 2. For each quintile, we report the average of the characteristic and the percentage of the market capitalization held by U.S. investors. By design, the quintiles are increasing in the firm characteristic. If they are also increasing in U.S. ownership, a positive bilateral relationship is revealed.

The two liquidity variables show conflicting results in Table 3a. U.S. ownership is, as expected, increasing with firm size: U.S. investors hold only 5.3 percent of the smallest firms, but 13.4 percent of the largest firms, and this relationship is also evident from the positive and highly significant t-statistic (7.34) on a regression of U.S. ownership on firm size. However, there is also evidence that firms with higher turnover rates have lower U.S. ownership. The t-statistic on the turnover regression is negative, and the quintile analysis shows that U.S. investors avoid the highest turnover stocks in this sample. Tables 3b and 3c provide further information on this counterintuitive result. In Latin America (Table 3b), U.S. positions are indeed increasing in turnover rates and the relationship is dramatic: U.S. ownership is only 7.4 percent in Latin American stocks that trade the least but increases to 24.7 percent in those that trade the most. The counterintuitive results owes to turnover rates in emerging Asia (Table 3c). Turnover rates can be very high in emerging Asia—in 1997 the 105 firms in the highest quintile had annual trading that was on average over four times market capitalization—but U.S. ownership is quite low (3.9 percent) in Asian firms with the highest turnover rates. This example underscores

differences across regions. In the multivariate regressions of the next section, we will include country dummies and also report results by region.

There is weak evidence of a role for prudence factors. In the whole sample, dividend yields are positively related to U.S. ownership (t-stat=4.46), but the quintiles show that this is, in fact, a distaste for stocks that pay no dividends. If we omit stocks that do not pay dividends, the relationship is negative: U.S. ownership in quintiles 2 through 5 is decreasing in dividend yields. At the regional level, we see that this avoidance of zero dividend stocks is actually an emerging Asian phenomenon. U.S. ownership in Latin American stocks that pay no dividends is 17 percent, in line with U.S. ownership in all Latin American firms, but is much lower in the many Asian firms that pay no dividends. For volatility (residual variance), there is little evidence of a significant relationship with U.S. ownership, although ownership is greater in the most volatile emerging Asian firms.

Historical returns appear to be very important. Table 3a shows that at the end of 1997 U.S. investors had larger relative weights on stocks that had strong performance in a reward-to-risk sense over the past three years (high Sharpe ratio), strong returns over the past year (momentum), and a high beta. Momentum and beta are also important in both regions. The Sharpe ratio, however, is not significantly related to U.S. ownership in either region, suggesting the positive relationship apparent in Table 3a may be spurious: U.S. positions are greater in Latin America than in emerging Asia and Latin American stocks had higher Sharpe ratios from 1994 to 1997, but there is little evidence that within regions firms with higher Sharpe ratios had higher U.S. ownership. Finally, for book-to-market, there is little evidence in the whole sample of a significant relationship, although U.S. investors do seem to prefer low book-to-market (growth)

firms in Latin America and higher book-to-market (value) firms in Asia.

We see only weak evidence in the bivariate relationships that the financial health of the firm affects U.S. portfolio weights. Firms with higher return on assets, better current ratios, and less leverage have somewhat higher weights in U.S. portfolios (Table 3a), although the significance of the relationships is slightly weaker than for other variables. Indeed, within regions, these relationships are not significant, suggesting that Table 3a might be picking up a preference for Latin American firms, which were in better financial health in 1997.

Finally, the evidence on variables that proxy for barriers to international investment is mixed in the whole sample. While U.S. ownership is greater in firms that are more open, listed on U.S. exchanges, and, to a lesser extent, trade as Level I ADRs, it is also greater in firms that are more closely held, even after using the Holland and Warnock (forthcoming) adjustment to correct for Worldscope misreporting. The regional breakdowns provide more information. In Latin America, U.S. ownership is indeed lower for firms that are more closely held; the counterintuitive result comes from Asia, where U.S. ownership is greatest in firms that are the most closely held. For the other variables, *US Listed* is very important in both regions, *Level I ADR* matters in neither, and the variation in firm-level openness is important in Latin America but not in Asia.

To sum up, simple bivariate statistics show that while there are important differences across regions, a few variables seem to transcend regional differences. U.S. investors prefer emerging market firms with the following characteristics: large, high returns over the past year, high beta, and cross-listed on a U.S. exchange. Other relationships are apparent—for example, a preference for firms that are financially healthy—but these may be capturing a preference for

Latin American stocks. There is also evidence of two counterintuitive relationships in U.S. positions in emerging Asian stocks, where U.S. investors seem to reveal a preference for stocks that are illiquid and more closely held by insiders. In attempt to disentangle the various relationships, we turn next to multivariate regressions.

4. U.S. Positions in Emerging Equity Markets – Regression Results

To analyze U.S. positions at a point in time, we define ownership by U.S. investors as the ratio of security i 's weight in U.S. equity portfolios to its weight in the world market portfolio, minus one:

$$y_i = \frac{\omega_i^{US}}{\omega_i^m} - 1 = \frac{\frac{H_i^{US}}{H^{US}}}{\frac{MCap^i}{MCap^m}} - 1 \quad (1)$$

where H_i^{US} is U.S. holdings of security i , H^{US} is the size of the U.S. equity portfolio, $MCAP^i$ is the market capitalization of security i , and $MCAP^m$ is the size of the (world) market portfolio. We refer to the term, ω_i^{US}/ω_i^m , as the relative portfolio weight. Foreign ownership is increasing in y , with a y -value of negative one (or relative portfolio weight of zero) indicating no foreign ownership, $y = 0$ (relative weight of one) indicating that the security's weight in U.S. portfolios is identical to its weight in the world market portfolio, and a positive y -value indicating that U.S. investors overweight the equity. This measure is identical to that used in DR and, in cross-

sectional analysis, observationally equivalent to the Falkenstein (1996) and GM measures of the importance of a type of investors in a particular market (in their cases, institutional investors in U.S. equities). In particular, the share of equity i that is held by U.S. investors is

$$\frac{H_i^{US}}{MCap^i} = (\gamma_i + 1) \frac{H^{US}}{MCap^m} \quad (2)$$

where $H^{US} / MCap^m$ is the share of the U.S. in the world portfolio, a constant (in the cross-section) that equaled about 0.48 in 1997.

We include country dummies in all of the regressions. Preferable would be to include country-level variables that might affect U.S. investors' portfolio allocations, such as rule of law, shareholder protection, or country credit ratings. However, our sample only has nine country-level data points, so we use country dummies to capture the effects all such variables.

4.1 What types of firms attract U.S. investors?

Results for U.S. positions in the full sample of nine countries as of 1997 are presented in Table 4a, which reports regressions starting with variables with the greatest coverage, Column (1), and then adding Worldscope variables with less coverage in Columns (2) - (4). The results correspond to a scenario in which investors first choose to invest in emerging markets (the sample) and then, given desired country allocations (captured by the country dummies), select stocks based on firms' characteristics. The country dummies are important; the bottom rows of the table show that R^2 statistics are substantially smaller when the country dummies are

omitted.¹³

The table suggests that U.S. investors prefer large stocks that are cross-listed. Also apparent is some preference for high beta stocks and stocks that performed well in 1997. By far the most significant variable in Table 4a, though, is the cross-listing dummy. The size of the coefficient on *US Listed* suggests that emerging market firms that cross-listed on U.S. exchanges attracted much more U.S. investment—an increase of about 15 percentage points as a share of total market capitalization—even controlling for various firm characteristics. The coefficient on *Level I ADR*, on the other hand, is never significant.

4.2 Are U.S. investors attracted to different types of firms across regions?

We highlighted some differences across regions in the bivariate relationships of Tables 3b and 3c. Now, in Tables 4b and 4c, we show the 1997 multivariate results for Latin America and emerging Asia. For Latin America (Table 4b), the most important characteristics appear to be liquidity (turnover) and a cross-listing. For emerging Asia (Table 4c), *US Listed* is again highly significant, and size and openness are significant in all specifications. The most apparent differences between the regions are the opposite effects of turnover (positive in Latin America, negative in Asia), the greater importance of size and openness in Asia, and the evidence (although weak) of a preference for high beta stocks and past winners in Latin America.

¹³ Industry dummies, when included, provide no additional information, suggesting that in emerging markets U.S. investors consider firm and country characteristics much more than than the firm's industry.

4.3 Have U.S. investors' portfolios changed over time?

December 1997, when emerging Asia was in the midst of a severe financial crisis, can be considered a non-standard time for emerging markets. To see if the factors that were important in 1997 were also important in 1994, we estimated similar regressions for 1994 (Table 5), but with a more limited set of explanatory variables.¹⁴ In 1994, as in 1997, U.S. investors preferred cross-listed stocks. Size is also important in most regressions, but not in Latin America. The two most noticeable differences between the two years were that in 1994 firm-level investability was not significant—since country-level capital controls are captured by the country dummies, this could be due to the limited variation in investability among firms within a country—and there was a preference for growth stocks, especially in Latin America.

While Table 5 showed that the determinants of firm-level weights in U.S. portfolios in 1994 and 1997 were roughly similar, Table 6 examines the factors that explain reallocations in U.S. portfolios. In particular, the dependent variable in Table 6 is the change from 1994 to 1997 of the percent of a firm that is held by U.S. investors. One noteworthy result is a re-weighting of U.S. investors' portfolios towards firms that improved their financial health, either by reducing leverage or improving the current ratio. There is also evidence of a sharp increase in U.S. participation for firms that cross-listed between 1994 and 1997, particularly Asian ones. But the most striking result is that firms that had high U.S. participation in 1994 saw the greatest decrease in U.S. investment by 1997. For example, in Column (1) the point estimate of -0.326

¹⁴ We do not include returns-based variables, such as beta, because they would severely limit the sample—returns series for most of our firms do not start much before 1994. Nor do we have 1993 data on turnover or closely held. For emerging Asia, only one firm was cross-listed on a U.S. exchange as of March 1994, so to maintain legal confidentiality requirements, we cannot include a 1994 cross-listing variable.

for the variable *%US Held 1994* means that for every percentage point more U.S. investment a firm had in 1994, all else equal it lost about one-third percentage point by 1997, with the loss in U.S. investment somewhat greater for Asian firms. The average firm in our sample had 6 percent U.S. investment in 1994; a firm with three percentage points more U.S. investment (9 percent) saw, all else equal, a one percentage point drop to 8 percent by 1997.

5. The Performance of U.S. Investors

As we have noted, at the end of 1997 U.S. investors' emerging market equity portfolios were tilted towards Latin America. Figure 1 showed that in 1998 emerging Asian markets outperformed Latin American ones. Thus, U.S. investors had greater weights on the emerging markets that subsequently performed poorly in 1998. While the market that performed best in 1998, Korea, had the greatest weight in U.S. investors' emerging Asian equity portfolio, U.S. portfolios were generally tilted towards Latin American stocks, where prices (in dollar terms) fell 26 to 39 percent in 1998.

Given that U.S. investors bet on the wrong region at the end of 1997, did they at least choose firms that subsequently outperformed? We answer this in two related ways. First, we compute 12-month returns on U.S. investors' portfolios assuming that a buy and hold strategy was implemented at the end of 1997. Table 7a shows that, for most of the countries in our sample, had U.S. investors maintained their end-1997 portfolio allocations throughout 1998 their returns would have been somewhat better than returns on country-level IFC Global indexes. This evidence is at least suggestive of U.S. investors having some ability in stock picking within

these countries.

Second, for each stock we regress end-1997 portfolio weights on its return for 1998 (*RET98*). This tells us if, without controlling for other characteristics, U.S. portfolios were tilted towards subsequent winners or losers. Then we re-estimate the 1997 holdings regressions from Tables 4a - 4c including *RET98*. These regressions indicate whether, controlling for all explanatory variables in the earlier tables, the portfolios were weighted towards winners or losers.

The coefficient estimates for *RET98* from basic regressions without control variables are presented in Table 7b. The first column shows results without country dummies and indicates that U.S. investors chose the wrong firms overall (-0.0024). This result, however, could just indicate that U.S. investors chose the wrong countries. In fact, it does not hold when country dummies are included in the regressions (Column 2). The basic results in Table 7b is that U.S. investors chose the wrong countries but within those countries, the positive (but insignificant) coefficient on *RET98* suggests that U.S. investors did not choose stocks poorly.

In Table 7c, not yet produced, we perform a similar test but this time control for all of the explanatory variables in earlier tables. That is, we present the coefficient on *RET98* from regressions of 1997 holdings on *RET98* and all of the characteristics in Tables 4a - 4c. Thus, these results indicate whether, controlling for U.S. investors' preferences, did the firms that performed well in 1998 have greater weights in U.S. portfolios. The results, not yet shown, confirm the basic message in Table 7b.

6. Conclusions and Implications

This study uses a unique data set to analyze U.S. investors' equity positions in emerging markets. The preliminary results indicate that on the whole U.S. investors tend to have a strong preference for large, cross-listed stocks. This should not be surprising; similar results are found in Kang and Stulz (1997) and Dahlquist and Robertsson (2001). In addition, we find that the effect of liquidity varies across regions—high turnover stocks are preferred in Latin America, but lower turnover stocks are favored in Asia. In analyzing changes in portfolio allocations between the survey dates of 1994 and 1997, it appears that by 1997 U.S. investors tended to reduce the weights of stocks they had favored in 1994. Consistent with the analysis of equity flows in Edison and Warnock (2002), this could be interpreted as additional evidence that the cross-listing effect might be short-lived.

Our results have important implications for the prospects for equity flows to emerging markets and, more broadly, for financial integration, financial development, and economic growth. The primacy of the cross-listing variable in this study suggests that flows into emerging equity markets are in no way broad, reaching all firms, but tend to be very concentrated in the few firms that cross-list on U.S. exchanges. That U.S. investors retrenched from stocks they earlier held in greater proportion suggests at the very least that U.S. investment is not persistent. Rather, the picture that appears is one in which some large firms attract at a certain time—perhaps at the time of the cross-listing—some U.S. investment, a part of which is later retracted. This, needless to say, does not bode well for equity flows to these emerging markets, for which many of the largest firms are already cross-listed. It also suggests that equity flows may move

from the traditional emerging markets to new ones, such as China, who still have firms to privatize and, perhaps, cross-list. However, if the government helps determine which firms may cross-list, as might be the case in some countries in our sample, the foreign investment that flows to these firms might not go to the most efficient companies or those with the best growth prospects. In that case, the effect on economic growth is unclear.

There is also some better news in our results. For example, firms that improved their financial health between 1994 and 1997 saw increased U.S. investment. But the best way forward appears to be for emerging equity markets to improve investor protection regulations to make irrelevant the distinction between those firms that are cross-listed and those that are not. As suggested by the work of Tribukait (2002), however, we are not currently in such a world.

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Data Appendix (in progress)

Data from the Benchmark Surveys

Security-level data on U.S. investors' holdings of equity as of March 31, 1994 and December 31, 1997. is aggregated to the firm level.

Variables from the S&P/IFC Emerging Markets Database

Market Capitalization: To scale holdings, we use market capitalization data from the same days as the benchmark surveys. As a measure of size we use the log of market capitalization; for 1997, when valuations were decreasing rapidly in some countries, we use the average of the June and December market capitalizations.

Beta and residual variance are calculated from a market model that uses monthly firm-level and MSCI World returns and is estimated from January 1994 through December 1997.

The Sharpe ratio is calculated as $(R_i - R_F) / \sigma(R_i)$ over the period from January 1994 through December 1997. One-month U.S. Treasury bill returns from CRSP are used as the risk-free return series.

Momentum is returns over a twelve-month period preceding a benchmark survey date.

Turnover is the value of trading over a 12-month period divided by beginning of period market capitalization.

Data from Worldscope¹⁵

Return on Assets (%):¹⁶

$(\text{Net Income before Preferred Dividends} + ((\text{Interest Expense on Debt-Interest Capitalized}) * (1 - \text{Tax Rate}))) / \text{Last Year's Total Assets} * 100$

Dividend Yield (%): $\text{Dividends Per Share} / \text{Market Price-Year End} * 100$

Closely Held Shares (%): $(\text{Number of Closely Held Shares} / \text{Common Shares Outstanding}) * 100$, adjusted as in Holland and Warnock (forthcoming)

Book-to-Market Ratio: $\text{Book Value Per Share} / \text{Market Price-Year End}$

Current Ratio: $\text{Current Assets-Total} / \text{Current Liabilities-Total}$

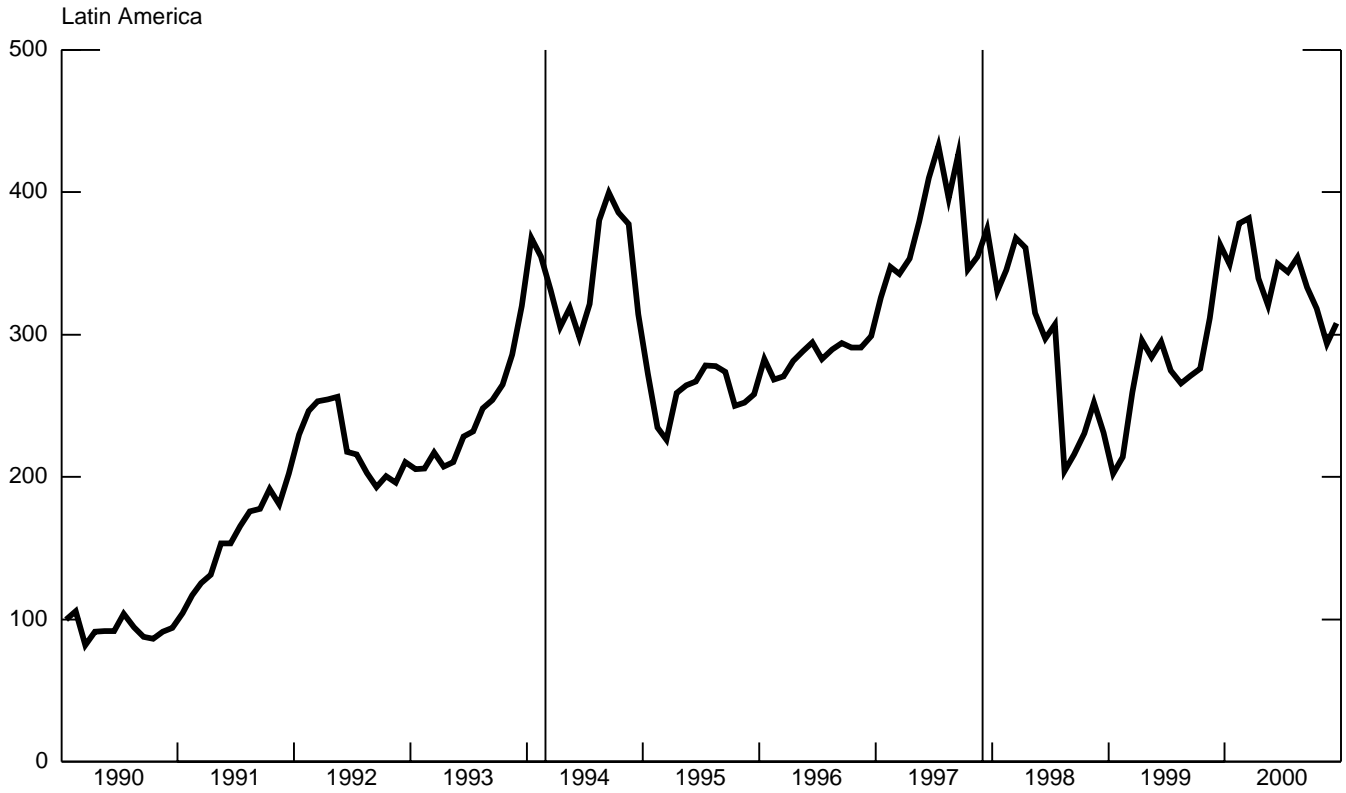
Debt-to-Assets Ratio (%):¹⁶

$(\text{Short Term Debt} + \text{Current Portion of Long Term Debt} + \text{Long Term Debt}) / \text{Total Assets} * 100$

¹⁵ We use the May 1999 Worldscope CD in an attempt to get complete coverage for 1997 while minimizing the loss of data due to "dead" companies.

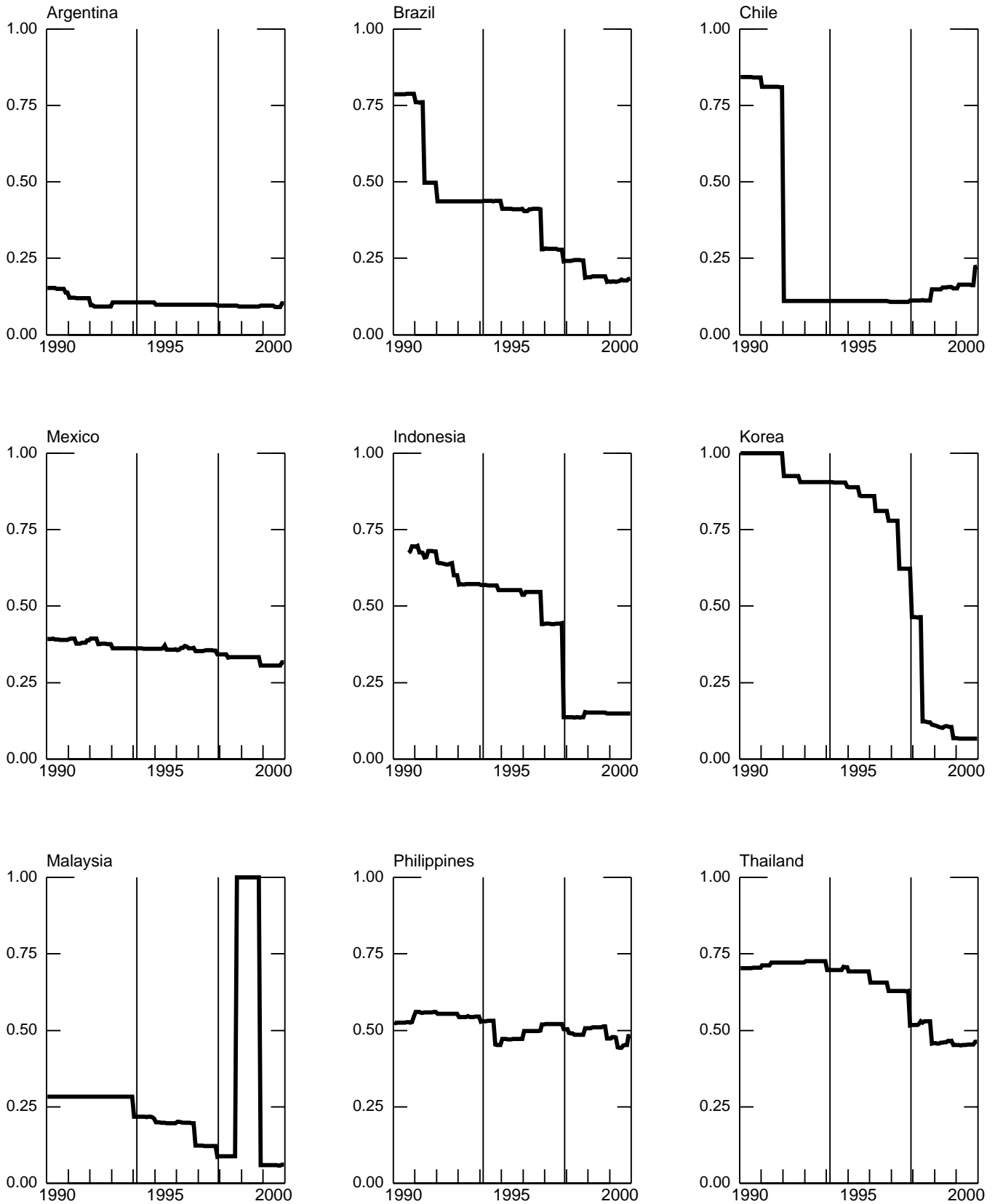
¹⁶ For insurance companies, policyholders' surplus is added to the numerator. For banks and other financial companies, customer liabilities on acceptance and custody securities, respectively, are subtracted from the denominator.

Figure 1. Equity Prices in Latin America and Emerging Asia, 1990 - 2000.



Notes. Equity prices are from the S&P/IFC EMDB Global index (rescaled so that Jan. 1990=100). Vertical lines are at March 1994 and December 1997, the dates of the benchmark surveys.

Figure 2. Restrictions on Foreign Ownership of Equities, 1990 - 2000.



Notes. Foreign ownership restrictions, which range from 0 (no restrictions) to 1 (completely closed to foreign investment), are the smoothed measure from Edison and Warnock (forthcoming).

Figure 3. Cross-Border Listings and U.S. Positions, 1997.

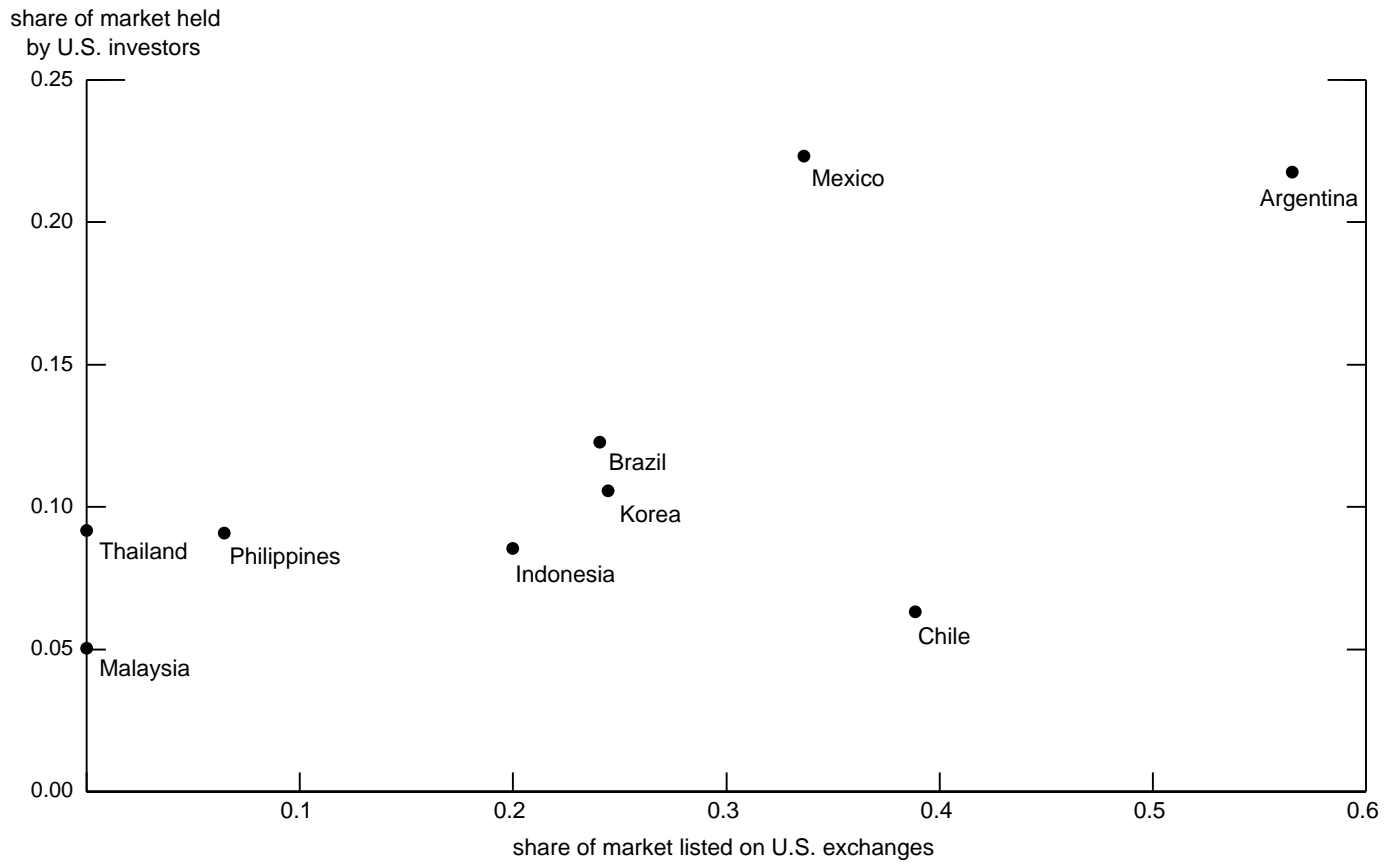


Table 1. Stock Market Development and U.S. Holdings

	Market Capitalization (U.S. Holdings)		Number of Listed Firms (# in EMDB)	
	March 1994	Dec 1997	March 1994	Dec 1997
Latin America	403.8 (53.2)	543.4 (83.8)	1164 (174)	1165 (201)
Argentina	41.6 (7.6)	59.3 (12.9)	162 (23)	136 (29)
Brazil	130.5 (8.4)	255.5 (31.3)	541 (63)	536 (70)
Chile	45.4 (2.5)	72.0 (4.6)	268 (36)	295 (46)
Mexico	186.3 (34.7)	156.6 (35.0)	193 (52)	198 (56)
Emerging Asia	492.3 (21.4)	219.5 (16.6)	1843 (375)	2777 (526)
Indonesia	31.5 (1.9)	29.1 (2.5)	183 (42)	282 (59)
Korea	143.9 (4.4)	41.9 (4.4)	698 (142)	1135 (184)
Malaysia	176.8 (9.1)	93.6 (4.7)	423 (104)	708 (155)
Philippines	35.0 (1.9)	31.4 (2.8)	185 (27)	221 (54)
Thailand	105.1 (4.1)	23.5 (2.2)	354 (60)	431 (74)

Sources: Market capitalizations (in billions of dollars) and number of listed firms are from Emerging Stock Markets Factbook (various issues). Holdings (in billions of dollars) are from U.S. benchmark surveys. Of the 727 firms in the EMDB in 1997, 7 had zero U.S. holdings. In 1994, the proportion was higher; of the 345 EMDB firms, 40 had zero U.S. holdings, and half of those were Korean.

Table 2. U.S. Positions by Industry, 1997

Industry	Relative Weight	N
Agriculture, Forestry, Fishery, & Mining	1.59	48
Construction	0.59	40
Manufacturing	0.85	297
Transportation & Communication	1.68	50
Utilities	0.67	31
Wholesale & Retail Trade	1.15	41
Financial, Insurance, & Real Estate	0.71	172
Services	0.43	15

Table 2 shows relative weights of U.S. positions by industry for firms that have complete data in Worldscope and the S&P Emerging Markets Data Base. Relative weight is the weight of firm i in U.S. investors' emerging market equity portfolio over the weight of firm i in the overall emerging market equity portfolio. In both the numerator and the denominator, the emerging market universe is limited to the nine countries in our sample. Within their emerging market equity portfolios, U.S. investors overweight industries with relative weights greater than one.

Table 3a. U.S. Positions in Emerging Markets by Firm Characteristics, 1997

	Quintiles					Average	t-stat	N
	Q1	Q2	Q3	Q4	Q5			
U.S. Ownership Market capitalization	5.3 55	5.7 149	9.7 302	10.9 632	13.4 3672	9.0 963	7.34***	724
U.S. Ownership Turnover rate	8.2 0.10	11.9 0.30	10.0 0.55	8.9 0.95	6.0 3.54	9.0 1.09	-2.57**	724
U.S. Ownership Dividend yield (%)	0.8 0.0	13.2 0.1	10.7 1.1	10.1 2.7	9.5 7.1	8.9 2.2	4.46***	586
U.S. Ownership Residual variance	12.7 92	8.0 152	11.5 200	8.3 272	10.7 762	10.3 296	0.66	545
U.S. Ownership Sharpe Ratio	7.3 -0.72	8.1 -0.58	8.4 -0.50	11.5 -0.38	16 -0.21	10.3 -0.48	5.03***	545
U.S. Ownership Momentum (%)	5.6 -16.1	5.5 -11.8	7.0 -8.7	10.8 -4.2	18.7 3.1	9.5 -7.5	10.24***	640
U.S. Ownership Beta	5.5 0.10	8.5 0.77	8.9 1.17	12.2 1.57	16.3 2.45	10.3 1.21	6.43***	545
U.S. Ownership Book-to-market	10.0 -1.0	11.9 0.6	8.8 1.1	9.4 1.9	6.0 5.0	9.2 1.5	-0.67	688
U.S. Ownership Debt-to-assets (%)	9.1 7.1	11.6 23.9	10.1 36.8	8.7 51.7	6.7 74.5	9.2 38.9	-2.13**	689
U.S. Ownership Current ratio	8.4 0.52	8.5 0.84	8.6 1.11	10.4 1.48	10.5 3.35	9.3 1.46	2.15**	529
U.S. Ownership Return on assets (%)	7.6 -15	9.2 0	6.2 4	11.2 7	12.7 16	9.4 3	2.67***	673
U.S. Ownership Closely held (%)	6.1 11	5.7 28	7.4 43	9.8 57	8.8 75	7.6 43	2.11**	502
U.S. Ownership Investable weight	6.7 0.24	6.2 0.36	9.1 0.55	8.1 0.92	14.9 1.00	9.0 0.62	4.49***	724
U.S. Ownership US Listed	7.4 0				26.9 1	9.0 0.08	12.23***	724
U.S. Ownership Level I ADR	8.8 0				12.3 1	9.0 0.07	2.15**	724

In Table 3a, firms are ranked and sorted into quintiles based on several characteristics. Complete details on the data are in the Data Appendix. U.S. ownership is the percent of a firm's market capitalization held by U.S. investors. For each characteristic we report the number of observations; t-statistics from a regression of foreign ownership on the characteristic (**, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively); and, for each quintile and overall, the average of the characteristic and foreign ownership.

Table 3b. U.S. Positions in Latin America by Firm Characteristics, 1997

	Quintiles					Average	t-stat	N
	Q1	Q2	Q3	Q4	Q5			
U.S. Ownership Market capitalization	9.8 87	15.2 280	18.7 496	18.3 1488	17.5 7193	15.9 1909	2.77***	200
U.S. Ownership Turnover rate	7.4 0.05	13.5 0.17	17.8 0.31	16.1 0.53	24.7 1.17	15.9 0.45	6.30***	200
U.S. Ownership Dividend yield (%)	17.1 0.0	20.7 1.0	17.4 2.5	13.3 4.3	14.2 10.9	16.5 3.8	1.20	177
U.S. Ownership Residual variance	15.8 70	14.5 130	22.1 180	11.8 245	15.6 616	16.0 248	-0.65	180
U.S. Ownership Sharpe Ratio	12.9 -0.57	15.8 -0.40	18.1 -0.33	13.7 -0.25	19.3 -0.11	16.0 -0.33	1.21	180
U.S. Ownership Momentum (%)	10.8 -5.5	12.1 -1.3	13.2 0.6	19.9 2.6	24.0 7.2	16.1 0.8	4.13***	188
U.S. Ownership Beta	8.2 0.23	10.4 0.84	12.9 1.21	20.1 1.61	28.2 2.50	16.0 1.28	5.74***	180
U.S. Ownership Book-to-market	20.5 -1.4	23.2 0.5	12.4 0.8	14.0 1.2	12.3 2.8	16.5 0.8	-0.80	189
U.S. Ownership Debt-to-assets (%)	14.1 5.8	12.1 18.5	16.6 27.3	22.2 36.6	17.5 55.8	16.5 28.8	1.20	190
U.S. Ownership Current ratio	16.8 0.53	18.8 1.02	15.8 1.33	11.0 1.72	15.8 4.06	15.6 1.75	0.47	166
U.S. Ownership Return on assets (%)	19.1 -4	12.3 5	17.9 8	16.0 11	17.9 18	16.6 8	0.73	185
U.S. Ownership Closely held (%)	22.4 27	21.8 48	12.7 58	17.2 69	8.4 79	16.5 56	-2.45**	80
U.S. Ownership Investable weight	8.9 0.31	18.4 0.69	16.8 0.99	17.7 1.0		15.9 0.80	2.88***	200
U.S. Ownership US Listed	11.5 0				27.1 1	15.9 0.28	6.03***	200
U.S. Ownership ADR Level I	16.0 0				15.1 1	15.9 0.15	-0.05	200

Table 3b is limited to Latin American firms. See Table 3a for details.

Table 3c. U.S. Positions in Emerging Asia by Firm Characteristics, 1997

	Quintiles					Average	t-stat	N
	Q1	Q2	Q3	Q4	Q5			
U.S. Ownership Market capitalization	4.7 49	3.8 125	5.4 241	8.9 504	9.0 2085	6.4 602	4.43***	524
U.S. Ownership Turnover rate	6.7 0.14	8.7 0.39	7.4 0.68	5.3 1.15	3.9 4.29	6.4 1.33	-2.65***	524
U.S. Ownership Dividend yield (%)		4.2 0.0	7.3 0.6	6.1 2.0	5.9 5.0	5.6 1.5	0.58	409
U.S. Ownership Residual variance	8.0 107	5.8 161	8.2 211	4.8 287	10.3 829	7.4 319	2.79***	365
U.S. Ownership Sharpe Ratio	7.4 -0.75	7.1 -0.62	7.5 -0.56	6.8 -0.49	8.4 -0.34	7.4 -0.55	0.65	365
U.S. Ownership Momentum (%)	5.5 -17.1	5.8 -13.1	5.5 -11.0	7.0 -8.8	10.1 -5.0	6.8 -11.0	3.34***	452
U.S. Ownership Beta	4.4 0.04	7.9 0.73	6.5 1.15	9.0 1.55	9.4 2.42	7.4 1.18	3.34***	365
U.S. Ownership Book-to-market	5.8 -0.8	6.0 0.7	6.9 1.3	7.9 2.2	5.8 5.7	6.5 1.8	1.83*	499
U.S. Ownership Debt-to-assets (%)	6.1 8.2	8.1 27.5	5.6 42.6	6.5 57.0	6.1 77.9	6.5 42.7	-0.73	499
U.S. Ownership Current ratio	5.5 0.51	3.7 0.81	7.9 1.02	7.2 1.34	7.5 2.97	6.4 1.33	1.32	363
U.S. Ownership Return on assets(%)	7.6 -18	7.0 -1	5.0 3	5.3 5	8.2 15	6.6 1	0.17	488
U.S. Ownership Closely held (%)	5.8 10	4.3 26	5.3 39	6.4 54	7.6 74	5.9 41	2.28**	422
U.S. Ownership Investable weight	7.6 0.23	4.1 0.35	8.3 0.42	7.9 0.73	4.0 1.00	6.4 0.55	-1.06	524
U.S. Ownership US Listed	6.2 0				24.1 1	6.4 0.01	4.59***	524
U.S. Ownership Level I ADR	6.3 0				7.6 1	6.4 0.03	0.60	524

Table 3c is limited to emerging Asian firms. See Table 3a for details.

Table 4a. Holdings 1997: Total All Firms with Country Dummies

	(1)	(2)	(3)	(4)
Size	0.021*** (3.15)	0.013 (1.52)	x	0.033*** (3.09)
Turnover	x	-0.003** (2.00)	x	x
Investability	x	x	x	0.107*** (2.66)
US Listed	0.303*** (6.86)	0.322*** (6.65)	0.322*** (6.40)	0.229*** (3.95)
Level I ADR	x	x	x	x
Momentum		0.010** (2.07)	0.009* (1.78)	x
Book-to-Market		0.007 (1.64)	0.005 (1.45)	x
Leverage		x	x	x
Return on Assets		x	x	x
Residual Variance			x	-0.0002* (1.80)
Beta			0.043** (2.57)	x
Closely held shares (adjusted)				x
Dividend Yield				x
Current Ratio				-0.007 (1.46)
No. of Observations	718	588	502	233
R ²	0.359	0.377	0.383	0.694
R ² w/out country dummies	0.218	0.270	0.302	0.477

Table 4a presents regression results where the dependent variable is the December 1997 value of $y_{it} = \omega_{it}^F / \omega_{it}^M - 1$, which is the ratio of the weight in the U.S. portfolio of security i to the market weight, minus one. Reported are the parameter estimates, with the absolute value of t-statistics computed from robust standard errors in parentheses. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. x indicates variable was included in the regression but coefficient had p-value >0.15. Country dummies are included but not reported. The bottom row of the table reports R² from the same regressions but excluding country dummies.

Table 4b. Holdings 1997: Latin America with Country Dummies

	(1)	(2)	(3)	(4)
Size	0.021* (1.73)	x	x	x
Turnover	0.165** (2.02)	0.174*** (2.73)	0.152** (2.58)	0.155*** (3.39)
Investability	x	x	x	x
US Listed	0.288*** (5.61)	0.331*** (5.46)	0.320*** (5.26)	0.173** (2.16)
Level I ADR	x	x	x	x
Momentum		0.018** (2.24)	0.011 (1.51)	x
Book-to-Market		x	x	x
Leverage		x	x	x
Return on Assets		-0.004** (2.24)	-0.003 (1.64)	x
Residual Variance			x	-0.0001** (2.40)
Beta			0.106*** (2.63)	x
Closely held shares (adjusted)				x
Dividend Yield				x
Current Ratio				-0.009* (1.83)
No. of Observations	196	170	163	61
R-squared	0.401	0.469	0.496	0.753
R ² w/out country dummies	0.314	0.402	0.447	0.577

Table 4b presents regression results where the dependent variable is the December 1997 value of $y_{it} = \omega_{it}^F / \omega_{it}^M - 1$, which is the ratio of the weight in the U.S. portfolio of security i to the market weight, minus one. Reported are the parameter estimates, with the absolute value of t-statistics computed from robust standard errors in parentheses. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. x indicates variable was included in the regression but coefficient had p-value >0.15. Country dummies are included but not reported. The bottom row of the table reports R² from the same regressions but excluding country dummies.

Table 4c. Holdings 1997: Emerging Asia with Country Dummies

	(1)	(2)	(3)	(4)
Size	0.022*** (2.70)	0.022** (2.40)	0.019* (1.73)	0.029*** (2.75)
Turnover	-0.002** (2.17)	-0.003** (2.29)	-0.005* (1.74)	x
Investability	0.097** (2.10)	0.120** (2.34)	0.120** (2.09)	0.096** (2.24)
US Listed	0.284*** (2.58)	0.259** (2.25)	0.263** (2.09)	0.291*** (2.85)
Level I ADR	x	x	x	x
Momentum		x	x	x
Book-to-Market		x	x	
Leverage		x	x	x
Return on Assets		x	x	x
Residual Variance			x	x
Beta			x	x
Closely held shares (adjusted)				x
Dividend Yield				0.006** (2.18)
Current Ratio				x
No. of Observations	522	418	339	172
R-squared	0.178	0.200	0.202	0.468
R ² w/out country dummies	0.068	0.097	0.132	0.360

Table 4c presents regression results where the dependent variable is the December 1997 value of $y_{it} = \omega_{it}^F / \omega_{it}^M - 1$, which is the ratio of the weight in the U.S. portfolio of security i to the market weight, minus one. Reported are the parameter estimates, with the absolute value of t-statistics computed from robust standard errors in parentheses. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. x indicates variable was included in the regression but coefficient had p-value >0.15. Country dummies are included but not reported. The bottom row of the table reports R² from the same regressions but excluding country dummies.

Table 5. Holdings 1994 with Country Dummies

	Total All Firms		Latin America		Emerging Asia	
	(1)	(2)	(3)	(4)	(5)	(6)
Size	0.014* (1.75)	0.017* (1.83)	x	x	0.015*** (2.88)	0.013** (2.29)
Investability	x	x	x	x	-0.040 (1.55)	x
Leverage	x	x	x	x	x	x
Book-to-Market	-0.019 (1.57)	-0.025 (2.24)	-0.034** (2.01)	-0.037** (2.47)	x	x
Current Ratio		x		x		x
Return on Assets		x		x		0.003* (1.91)
US Listed	0.353*** (4.18)	0.392*** (4.65)	0.384*** (4.35)	0.407*** (4.47)	n.a.	n.a.
No. of Observations	484	374	153	134	331	240
R-squared	0.440	0.476	0.356	0.420	0.346	0.367

Table 5 presents regression results where the dependent variable is the March 1994 value of $y_{it} = \omega_{it}^F / \omega_{it}^M - 1$, which is the ratio of the weight in the foreign portfolio of security i to the market weight, minus one. Reported are the parameter estimates, with the absolute value of t-statistics computed from robust standard errors in parentheses. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. x indicates variable was included in the regression but coefficient had p-value > 0.15 . For emerging Asia, US Listed is n.a. (not available); only one firm had cross-listed by March 1994 and including the US Listed variable would violate confidentiality requirements. Country dummies are included but not reported.

Table 6. Change in Holdings from 1994 to 1997 with Country Dummies

	Total All Firms		Latin America		Emerging Asia	
	(1)	(2)	(3)	(4)	(5)	(6)
%US Held 1994	-.326*** (3.31)	-.285*** (2.88)	-.291** (2.43)	-.233** (1.98)	-.440*** (4.41)	-.507*** (4.68)
Δ Size	x	x	x	x	x	x
Δ Investability	x	x	x	x	x	x
Δ Leverage	-0.068*** (2.86)	x	-0.214** (2.44)	-0.128 (1.46)	-0.048** (1.99)	x
Δ Book-to-Market	x	x	x	x	x	x
Sharpe Ratio	x	x	x	x	x	x
Beta	1.52** (1.99)	1.61* (1.81)	x	x	1.45* (1.82)	x
Δ Current Ratio		1.40*** (2.82)		1.23** (2.05)		1.55* (1.75)
Δ Return on Assets		x		x		x
Δ US Listed	8.15** (2.21)	8.048** (2.09)	x	x	19.2*** (3.54)	21.3*** (4.12)
No. of Observations	390	298	127	110	263	188
R-squared	0.204	0.271	0.235	0.224	0.232	0.376

Table 6 presents regression results where the dependent variable is the change from March 1994 to December 1997 in the percent of a firm held by U.S. investors. Reported are the parameter estimates, with the absolute value of t-statistics computed from robust standard errors in parentheses. ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. x indicates variable was included in the regression but coefficient had p-value > 0.15. Country dummies are included but not reported.

Table 7a. Returns on U.S. Portfolios, 1998

	AR	BR	CL	MX	ID	KR	MY	PH	TH
IFCG Index	-26	-39	-28	-37	-29	122	1	11	33
U.S. Portfolio	-22	-31	-28	-38	-22	145	-7	7	34

For each of the nine countries in our sample, Table 7a shows dollar returns for 1998 from the IFC Global index and U.S. investors' portfolios, assuming that U.S. investors' portfolio weights remained constant from December 1997 to December 1998.

Table 7b. Performance of U.S. Investors – No control variables

	No country dummies (1)	Country dummies (2)
Total	-.00024*** (2.80)	.00008 (0.91)
Latin America	-.00003 (0.04)	.00056 (0.75)
Asia	-.00001 (0.15)	.00007 (0.79)

Table 7b shows the coefficient of RET98, the mean monthly returns over the year 1998, from a regression of $y_{it} = \omega_{it}^F / \omega_{it}^M - 1$ (the ratio of the weight in the foreign portfolio of security i to the market weight, minus one) on a constant and RET98. Also shown, in parentheses, are the absolute values of t-statistics computed from robust standard errors. Country dummies are not included in the regressions in column (1), but are in column (2). ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.