Portfolio Preferences of Foreign Institutional Investors

Reena Aggarwal
McDonough School of Business, Georgetown University
Washington D.C. 20057
aggarwal@georgetown.edu

Leora Klapper
The World Bank
1818 H Street, NW, Washington D.C. 20433
lklapper@worldbank.org

Peter D. Wysocki
Sloan School of Management, Massachusetts Institute of Technology
50 Memorial Drive, Cambridge, MA 02139
wysockip@mit.edu

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Abstract:
This paper examines the investment allocation choices of actively-managed U.S. mutual funds in emerging markets after the Asian financial crisis. We analyze both country- and firm-level governance and disclosure policies that influence these investment allocation decisions. At the country-level, we find that U.S. funds invest more in open emerging markets with stronger shareholder rights, legal frameworks and accounting standards. After controlling for country characteristics, U.S. funds are found to invest more in firms that adopt policies resulting in greater transparency and accounting disclosures in addition to characteristics such as size, visibility, and high analyst following. The impact of stronger disclosure and transparency is most pronounced in countries with weaker investor protection. Our results suggest that steps can be taken both at the country and the firm level to create an environment conducive to foreign institutional investment.

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Abstract

This paper examines the investment allocation choices of actively-managed U.S. mutual funds in emerging markets after the Asian financial crisis. We analyze both country- and firm-level governance and disclosure policies that influence these investment allocation decisions. At the country-level, we find that U.S. funds invest more in open emerging markets with stronger shareholder rights, legal frameworks and accounting standards. After controlling for country characteristics, U.S. funds are found to invest more in firms that adopt policies resulting in greater transparency and accounting disclosures in addition to characteristics such as size, visibility, and high analyst following. The impact of stronger disclosure and transparency is most pronounced in countries with weaker investor protection. Our results suggest that steps can be taken both at the country and the firm level to create an environment conducive to foreign institutional investment.

1. Introduction

This paper examines the active investment allocations of U.S. mutual funds in emerging market equities after the market crises of the late 1990's. The Asian financial crisis sent a signal to outside investors about the role of investor protection laws and firm disclosures in helping to monitor and protect their claims. This study builds on the work of La Porta et al. (1997, 1998, 2000) who find that strong investor protection laws, high enforcement and high quality accounting disclosures have a positive impact on market development and the emerging-market evidence of Johnson et al (2000), Mitton (2002), and Joh (2003) who show that disclosure and governance were linked to performance before and during the East Asian financial crisis. We complement these studies by directly examining how country- and firm-level policies affect the post-crisis investment allocation decisions of U.S. mutual funds, an important source of capital for emerging market development. Our empirical evidence shows wide variation in policies during this period that potentially affect foreign investment flows to emerging markets. In particular, we find that (a) country-level policies such as floating exchange rates and strong shareholder rights, and accounting standards, and (b) firm-level policies that result in better transparency and accounting disclosures in addition to characteristics such as size, visibility and analyst following, are associated with greater U.S. mutual fund investment. In addition, the impact of disclosures is most pronounced in countries with weak shareholder rights.

Our finding that country and firm-level discretionary policies affect institutional investment in emerging markets is relevant to the on-going debate on governance reforms in global markets in the post crises period. U.S. institutions, including mutual funds, constitute the largest source of equity capital in the world. Both emerging market firms and countries are interested in attracting U.S. institutional investment to improve individual stock and overall

market liquidity. This additional demand lowers firms' cost of capital and allows them to compete more effectively in the global marketplace, hence benefiting a country's economy. [1] In addition, previous research finds a strong link between capital market development and economic growth.[2]

The focus of our analysis is on the investment allocation strategies of U.S. fund managers in 2001.[3] We use a unique combination of databases to examine these investment allocation decisions, including fund-level investment allocations from Morningstar[4]; firm-level financial and accounting information from Worldscope; firm-level and country-level market performance data from Datastream; and country-level data from the IMF's International Finance Statistics (IFS) and other published sources. This data allows us to test the impact of country and firm-level policies and their interactive effect on U.S. mutual fund managers' investment allocations. Our interest is in examining the allocation decisions of fund managers and not investors.

Our sample and methodology provide unique insights into the major factors that influence institutional investment allocations. First, we focus on the linkage between the outside demand for information and firms' and countries' policies. Unlike other classes of institutional investors, mutual funds generally do not engage in active firm-level corporate governance activities. Therefore, our mutual fund sample allows us to isolate the role of countries' and firms' "arms-length" governance policies on foreign investment decisions. Second, in contrast to prior related research, we analyze funds' investment allocations that deviate from passive investment

[1] Allayannis, Brown and Klapper (2003) and Esty (2003) show the importance of foreign debt for emerging market firms.
[2] For example, see Levine (1997), King and Levine (1993a, 1993b) and Rajan and Zingales (1998).
[3] Previous literature has studied the portfolio allocation choices of mutual funds across asset classes (Elton and Gruber, 2003).
[4] Prior mutual fund studies typically use the CDA/Spectrum database to obtain portfolio holdings in U.S. firms. However, portfolio holdings in non-U.S. firms are only available from the Morningstar database.

strategies that mirror major market indices.[5] We examine actively-managed emerging market mutual funds that do not simply track a benchmark index. However, the benchmark index is important because fund managers' performance-based compensation is generally tied to a benchmark index. The analysis relative to a benchmark also allows us to examine the allocation issue relative to the risk and return of a benchmark portfolio. We use the Morgan Stanley Capital International (MSCI) Emerging Markets Free Index as the benchmark for investment allocations in emerging markets. The MSCI Index is a widely-used measure of emerging market performance and is often used as a benchmark for fund managers' performance-based compensation. Perfect tracking of the index is typically neither feasible nor desirable by actively managed funds. In addition to explicit decisions to deviate from the index, managers may use stratified and optimization sampling and synthetic replication to duplicate the index. We perform all empirical analyses in both absolute terms and relative to the MSCI index.

Our descriptive evidence shows that while there is considerable overlap between the U.S. fund holdings and the MSCI Emerging Markets Index, the funds do not limit their investments to stocks in the Index. The Index includes 648 firms in 2001, but our sample of actively-managed U.S. mutual funds invested in 1,280 emerging market firms in 2001. In addition, some of the firms included in the Index are not part of the funds' holdings.

We first examine the relationship between U.S. mutual fund investments and country-level characteristics. We are particularly interested in discretionary policies that can lead to greater foreign investment.[6] La Porta el al. (1997, 1998, 2000) find that strong investor

[5] In particular, firm and market attributes such as size and liquidity are systematically related to index membership. Therefore, a finding that U.S. funds "actively" invest in larger and more liquid stocks and markets may simply reflect the funds' passive indexing strategy.

[6] For example, Gelos and Wei (2002) and Borensztein and Gelos (2001) study the behavior of international portfolio flows over time. Kaminsky, Lyons, and Schmukler (2001) examine the relationship between portfolio flows and stock returns. Griffin, Nardari, and Stulz (2003) find that global stock performance matters for equity flows to emerging markets. In addition, see Froot, O'Connell, and Seasholes (2001), and Brennan and Cao (1997).

protection laws, high enforcement and high quality accounting disclosures lead to greater financial and capital market development. Moreover, Johnson et al (2000) show that the strength of investor protection laws were directly associated with exchange rate depreciation and stock market decline during the Asian financial crisis. Based on the lessons investors may have gleaned from the Asian crisis, we test the importance of these country-level factors as possible determinants of U.S. mutual fund investment allocations in the post-crisis period. Given that countries' institutional arrangements predate the financial crises and are often slow to evolve, we treat them as exogenous determinants of U.S. investors' post-crisis investment decisions.

Next, we examine the relationship between mutual fund investment and firm-level characteristics and discretionary policies. In addition to firm size, visibility, and financial characteristics, we focus on firms' discretionary policy choices that potentially attract foreign investment in spite of the institutional shortcomings in their home country. We focus on both ADR listings and voluntary accounting disclosures as two important policy choices that may allow firms to overcome deficiencies in their home country's protection of outside investors. A 2002 McKinsey survey found that 71% of emerging market investors identified "Accounting Disclosure" as "Very Important" for their investment decision.[7] These disclosures have also been shown in previous literature to be a primary source of information for foreign investors (see, for example, Bradshaw, Bushee and Miller, 2002).

We create an accounting quality index based on a firm's use of (a) internationally-recognized accounting standards, (b) quality of the auditor, (c) use of consolidated financial reports, and (d) audit opinion. In addition, we examine both listed and unlisted ADRs issued by

[7] See McKinsey Global Investor Opinion Survey on Corporate Governance 2002. Following "Accounting Disclosure" in importance to investors is "Shareholder Equality" and "Property Rights" which are identified as "Very Important" by 47% and 46% of investors, respectively.

emerging market firms. Our results show that, over and above other firm-level factors, ADR issuance and higher quality accounting disclosures lead to greater U.S. mutual fund investment. More importantly, we find that the impact of high quality accounting policies is more pronounced in countries with weak shareholder protection.

Our findings on allocations by U.S. mutual funds in emerging markets extend the growing literature on the determinants of global investment flows and allocations. Recent research has examined macroeconomic, political and legal determinants of portfolio investment inflows at the country-level, but very little research has examined firm-level determinants. A few studies have examined firm-level allocations, but they generally focus on single high-income countries with uniformly high investor protection laws and accounting standards. For example, Falkenstein (1996) investigates the allocations of U.S. open-end mutual funds in U.S. stocks; Kang and Stulz (1994) examine foreign investment in Japan; and Dahlquist and Robertsson (2001) investigate foreign investment in the Swedish market.

Our analysis also adds to the growing literature on foreign investment decisions. The theoretical model of Brennan and Cao (1997) uses information asymmetries to motivate differences between domestic and foreign investors. Dahlquist et al. (2002) discuss the difficulties and cost of gathering information on foreign firms that creates a "home bias" and empirically show that a significant proportion of shares are closely held in several countries, hence reducing the float. Edison and Warnock (2003) examine U.S. equity holdings in nine emerging markets during the pre-crises period and find that holdings are weighted more towards large stocks, particularly those listed in the U.S. Our analysis complements these studies and shows an important role for both country- and firm-level governance policies in overcoming information asymmetries and attracting foreign capital.

The rest of the paper is organized as follows. Section 2 discusses the data used in the empirical analysis. The empirical results on the relationship between fund holdings and country characteristics are reported in Section 3. Section 4 reports results on fund holdings and firm characteristics after controlling for country attributes. A summary and conclusions are provided in Section 5.

2. Data and Methodology

2.1 Mutual Funds Sample

We obtain portfolio holdings from the February 2002 release of the Morningstar database for each U.S. mutual fund with a stated objective of investing primarily in emerging market equities. This data reflects the portfolio holdings of U.S. funds in the post-crises period for emerging markets.[8] Our analysis focuses on active portfolio allocation decisions of U.S. mutual funds and, therefore, we exclude exchange-traded funds and funds that explicitly follow passive indexing strategies. Consistent with the MSCI Emerging Markets Free Index, we define the following 30 countries as emerging markets: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Ghana, Greece, Hungary, India, Israel, Jordan, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, Slovakia, South Africa, South Korea, Sri Lanka, Taiwan, Thailand, Turkey, Venezuela and Zimbabwe.

The U.S. mutual funds examined are classified as: Diversified Emerging Markets, Pacific/Asia excluding Japan and Latin America. We exclude Diversified Pacific/Asia mutual funds because the majority of their investments are in countries that are not considered emerging

[8] Because different funds report their portfolio holdings at different times, the February 2002 version of the Morningstar database contains funds' portfolio holdings for October 2001, December 2001, or January 2002.

markets, such as, Japan, Hong Kong and Singapore. Similarly, we exclude European funds because of their emphasis on developed Western European markets. In the Pacific/Asia excluding Japan sample of funds, we exclude 11 funds that invest 90 percent or more of their assets in three or less countries. Finally, we also exclude multiple classes of the same emerging market mutual fund. Certain funds have multiple classes that have identical portfolio holdings but different fee structures. For example, one fund may have an exit fee but the other does not.

All of the sample funds are primarily equity funds with more than 90 percent of their investment in equities. The final sample consists of 74 Diversified Emerging funds, 25 Pacific/Asia excluding Japan funds and 15 Latin America funds. At the fund level, we collect detailed information on each fund's portfolio holdings, i.e., the proportion of the fund's assets invested in individual firms, the percentage invested in stocks, bonds and cash, investments by region, and investments by industry sectors.

2.2 Sample Descriptive Statistics

Table 1 shows summary statistics of mutual fund characteristics, by fund type. The first category is Diversified Emerging market funds that invest primarily in emerging markets around the world and generally do not concentrate their investments in any one region. The second is Latin American funds that have at least 75% of assets are invested in the region. The third category is Pacific/Asia excluding Japan funds that invest at least 75% of their assets in Pacific countries, with less than 10% of stocks invested in Japan. We refer to the last category as Asian funds.

As shown in Table 1, the Diversified Emerging Market funds are on average much larger in size than any of the other fund categories, with mean net assets of $139.42 million under management. Latin America funds are the smallest with mean assets of $33.81 million under

management. On average, a fund holds positions in 80 firms. The Diversified Emerging category is the most diversified and also the largest in terms of assets under management and these funds have 108 holdings on average. Latin American funds on average hold 38 positions, and Asian funds (Pacific/Asia excluding Japan) hold 31. The actual number of positions taken by funds is larger than those reported here because a fund may hold several different classes of the same firm's equity.

Mean asset turnover is close to 100 percent on average and Diversified Emerging has the highest turnover at 104 percent. The sensitivity of the fund portfolios relative to the U.S. market is captured by beta. The three fund categories have much higher volatility than the Standard and Poor's 500 Index as measured by betas of 1.21-1.39. The Latin America category has the highest beta at 1.39. These are all equity funds therefore on average 94-95 percent of their assets are invested in equities and only small amounts are invested in bonds or held as cash. The portfolio holdings of the funds are concentrated as captured by the proportion of a fund's portfolio invested in top-ten holdings. The concentration is lowest for Diversified funds with 28 percent invested in top-ten holdings and is highest for Latin American funds that have 54 percent of their assets invested in top-ten holdings.[9]

2.3 MSCI Index Benchmark

We use the MSCI Emerging Markets Free Index as the market benchmark in a number of our empirical tests. This is a free float-adjusted market capitalization weighted index designed to measure equity market performance in global emerging markets. The index reflects investable

[9] U.S. law prevents mutual funds from owning more than 5% of any company's total stock. In addition, some countries may restrict ownership of financial institutions and media companies. However, all countries in our sample allow some foreign ownership in all firms. In addition, in our sample the allocation of any fund into any particular stock is strictly below 5% of the firm's total equity.

opportunities for global investors by taking into account restrictions on foreign ownership. The market capitalization of a firm is first adjusted for free-float and is further modified by foreign ownership limits that might have been placed by the firm. The more restrictive of the two limitations is applied. [10] Bailey, Chung, and Kang (1999) and Bailey and Jagtiani (1994) discuss the impact of ownership restrictions on stock prices.

Our objective is to examine the fund managers' allocation decisions. Our sample is focused on fund managers who are restricted to investing exclusively in emerging market equities.[11] These managers oversee actively-managed funds and therefore their portfolio holdings are expected to differ from a benchmark index. However, fund managers are compensated based on their performance relative to a benchmark and therefore it is important to also do the analysis relative to the MSCI index. According to a survey conducted by Pensions & Investments, over 90% of international institutional equity assets in the U.S. are benchmarked to MSCI Indices.[12]

The weight of each security in the global MSCI index is obtained from Morgan Stanley Capital International. These global weights also allow us to build separate indices at the regional and country-levels. For example, in order to construct the Latin American Index we include only Latin American firms that are included in the broad MSCI Emerging Markets Free Index and to construct the Asian index we include only the Asian firms. There were 648 firms in the MSCI Emerging Markets Free Index after excluding multiple classes of securities for which data is available in Worldscope. Multiple classes of securities of the same firm are combined to derive

[10] MSCI changed the way they calculate index weighting after the East Asian financial crisis. The weighting now factors in the free-float of a company's shares. Therefore, comparison to pre-crisis data is problematic because it will not capture the effect of the increased importance of governance (as proxied for by free float) because our investment allocation analysis is relative to the index benchmark.

[11] Given that the fund managers' "investable universe" is all emerging market stocks, one can view the MSCI value-weighted index as equivalent to the market portfolio for a CAPM-style investor who is restricted to emerging market equities. We therefore can abstract from cross-correlation issues with other non-emerging markets.

[12] This information is from MSCI's website www.msci.com.

one weight for each firm. We examine the characteristics of (a) firms that are included in the MSCI Index and are also included in the mutual funds' portfolio holdings, (b) firms that are included in the MSCI Index, but are not included in mutual fund portfolio holdings, and (c) firms that are not included in the MSCI index, but are included in the mutual fund portfolio holdings.

Table 2 reports the average proportion of fund's assets invested in each country, by fund type, and the weights of the countries in the MSCI Index. The countries with the largest weights in the portfolio of Asian funds are Korea (40.78%) and Taiwan (27.77%). These two countries also have the largest weights in the MSCI Asia Index with Korea at 31.73% and Taiwan at 28.04%. Next, we analyze the proportion of a fund's assets invested in a country relative to the country's weight in the MSCI Index. For example, relative to the Asian Index the funds over-invest in Korea by 9.05% and under-invest in Taiwan by 0.27%. Fund portfolios under-weight firms in China, Indonesia, India, Malaysia, Philippines and Taiwan relative to the MSCI weights.

Latin American funds, on average, invest 47.78% and 40.98% of their assets in Mexico and Brazil, respectively. Mexican firms constitute 40.14% of the MSCI Latin America Index and Brazilian firms constitute 40.44%. Therefore, Mexico is over-weighted by 7.64% in fund portfolios and Brazil is over-weighted by 0.54%. Fund portfolios under-weight firms in Argentina, Chile, Colombia, Peru and Venezuela relative to the Index.

Diversified Emerging funds invest in a total of 30 countries and, on average, invest a smaller proportion of their assets in firms from a single country as compared to the regional Asian and Latin American funds. On average, Korean firms receive the largest proportion of the funds' assets (18.86%), followed by Mexico (13.50%), Taiwan (11.17%) and Brazil (10.17%). These same countries also have the largest weights in the MSCI Index. However, there is considerable variation in the funds' over/under-investment investments relative to the Index.

3. Fund Allocations and Country-Level Attributes

3.1 Country-level Determinants of Mutual Fund Investment Allocations

Our first objective is to determine the impact of country-level characteristics and policies on U.S. mutual fund investment allocations. Fund portfolio holdings are measured in two ways: 1) the percentage of funds' absolute allocation to each country; and 2) the "% Relative Spread" that measures the over and under-investment of funds by calculating the difference between the firms' allocated weight and the MSCI Index weight for each country. These two variables are used as our dependant variables.

The first set of characteristics examined is exogenous macroeconomic factors that affect country-level investment allocations by U.S. mutual funds. We include controls for the following macroeconomic variables: natural log GDP per capita, (*ln(GDP per capita)*), growth in GDP per capita (*Growth in GDP/capita*) and the size of the stock market measured as market capitalization/GDP (*Market Cap/GDP)*. Data for the year 2000 on the macroeconomic variables is obtained from the IMF's IFS database. Also included are country-level five-year stock market returns (*5 Year Market Return*) and market turnover (*Market Turnover*) from Datastream. Market return is expected to capture performance and turnover is a measure of liquidity in the country's stock market.

We next turn to country-level policy choices that are arguably under the control of governments or regulatory agencies. Given that these country-level policies predate the financial crises and are often slow to evolve, we treat them as exogenous determinants of U.S. investors' post-crisis investment decisions. Two major monetary and tax policies we examine are the exchange rate regime and the withholding rate on investment returns. We use the exchange rate

classification developed by Reinhart and Rogoff (2003) as an indicator (1-5) of whether the exchange rate regime is a float, managed float, or pegged (*Floating Exch Rate*).[13] We also include the withholding tax rate on dividends (*WTAX*) from the S&P Emerging Markets Factbook.).[14]

Next, we focus on country-level policies that protect the claims of outside investors. Denis and McConnell (2002) define corporate governance as the set of mechanisms designed to induce managers to make decisions that maximize shareholders' wealth. For example, good corporate governance deters managers from expropriating shareholder wealth and therefore shareholders have more confidence investing in a company. La Porta et al. (1997, 1998, 2000) discuss the role of strong investor protection laws and enforcement in fostering corporate governance that protects and attracts outside investors. Their empirical results show that better investor protection laws, law enforcement institutions, and average accounting quality are associated with more developed capital markets. The quality of information provided to outside investors is also higher in countries with strong investor protection (see, for example, Leuz, Nanda, and Wysocki, 2003). We directly test the impact of these country-level policies on U.S. mutual fund investment allocations. If good country-level policies protect the claims of outside investors, then we should find that foreign institutions invest more in countries with policies that are favorable to them.

To investigate the impact of country-level investor protection policies on foreign investment, we use three measures of corporate governance: Shareholder rights (*Shareholder Rights*), legality (*Legality*) and average firm-level accounting disclosures (*Accting Quality*) as

[13] For robustness, we also do the analysis using a dummy (0/1) indicating whether or not the exchange rate is floating.

[14] The witholding tax rate on dividends, *WTAX*, is missing for many countries in our sample and therefore is only included for robustness and is not reported in the results.

indicators of shareholder protection, efficiency of the legal framework, and the average quality of financial reporting to outside investors, respectively. The *Shareholder Rights* measure is the "anti-director rights" index developed by La Porta et al. (1998) and updated to include transition emerging markets by Pistor (2000). The index is constructed to capture the rights of minority shareholders and is the sum of dummies identifying one-share/one vote, proxy by mail, unblocked shares, cumulative vote/proportional representation, preemptive rights, oppressed minority, and % of shares needed to call a shareholders' meeting. *Legality* is an index of the strength of the legal system and institutional environment constructed as a weighted average of judicial efficiency, rule of law, corruption, risk of expropriation and risk of contract repudiation using principal component analysis (Berkowitz, Pistor, and Richard, 2002).

To investigate the impact of firms' accounting disclosure choices on U.S. mutual fund allocations, we use a country-level variable reported by La Porta et al., 1998. This variable (*Accting Quality*) captures the average quality of firms' accounting disclosures within each country. It measures the inclusion or omission of 90 items reported by firms in their annual financial reports. Therefore, it can be viewed as capturing both the average of individual firm's discretionary disclosure policy choices and the effect of country-level mandated accounting standards.

We first report correlations for attributes at the country-level in Table 3. Similar to prior research, we find that proxies for the development of a country's economy are correlated with the measures of accounting quality, shareholder rights, and legality. Therefore, we include the natural logarithm of GDP per capita and market capitalization/GDP in all regression models to control for the effects of market development on country-level policies.

3.2 Country-level regressions

Table 4 presents multiple regression tests of the country-level determinants of U.S. fund allocations in emerging markets. We first use the % Fund Allocation as the dependant variable. The models are estimated including all fund categories – Asian, Latin American and Diversified Emerging – and fund-type fixed effects for the Asian and Diversified funds. The number of observations is equal to the number of funds in each category times the number of countries, summed across fund types. There are 74 diversified funds investing in 30 countries but data is not available for Zimbabwe resulting in 29 countries with fund investments; the 25 Asian funds invest in 10 countries; and the 15 Latin American funds invest in 9 countries therefore the sample size is 2501 (74*29 + 25*10 + 15*9). The sample is uneven across regressions because the country-level governance variables are not available for some countries (e.g. China).

The first column in Table 4 shows only the macroeconomic variables and suggests that funds invest more in countries with more developed economies, as measured by the natural log of GDP per capita (*ln(GDP per capita))* and floating exchange rate regimes, as captured by *Floating Exch Rate*, and larger stock markets relative to the size of the economy, as measured by the ratio of market capitalization to GDP (*Market Cap/GDP*). We find all three variables to be positive and significant in the first specification as shown in Column 1 of Table 4. These results highlight the need for stable macroeconomic policies in order to develop financial markets. A variable measuring the withholding tax on dividends is also significant and negative in this restricted model (not shown), suggesting the importance of investor-friendly tax regimes. Column 2 of Table 4 controls for market characteristics and finds that greater liquidity increases foreign investment. Not surprisingly, investors prefer to invest in more active markets with lower expected transaction costs. However, market returns for the five-year period is not significant.

Columns 3 and 4 include the previous controls for macroeconomic and market development and also include our proxies for corporate governance, *Shareholder Rights* and *Legality*, and country-level average accounting quality, *Accting Quality*.[15] We find that *Shareholder Rights*, *Legality* and *Accting Quality* are positively and significantly related to foreign investment, after controlling for other county-level attributes. We interpret this as evidence of the importance of a strong shareholder rights, legal framework and accounting standards to attract foreign investment. In addition, the interactions of both sets of variables (*Shareholder Rights*Accting Quality* and *Legality*Accting Quality*) are negative and significant. We interpret the interaction term to suggest that high-quality accounting and disclosure practices (*Accting Quality*) matter more in countries with weak laws and judicial enforcement (as proxied by *Shareholder Rights* and *Legality*, respectively). In particular, greater transparency and disclosure is of greater importance in influencing mutual fund allocations in countries where minority shareholders have ex-ante weaker power and voice in firm decisions and investors believe the courts are slow and inefficient in the case of ex-post distress.[16]

Next, we examine in Table 5 the relationship between % Relative Spread and country characteristics. Our indicator of exchange rate regime, *Floating Exch Rate,* is robust in all four specifications, confirming the importance of exchange rate policy to foreign investors. Consistent with the findings in Table 4, we find that funds invest more of their assets relative to the MSCI Index weights in countries with less developed equity markets as measured by market capitalization to GDP, suggesting that firms overinvest in countries that are less represented in the MSCI index (rather than additional firms in countries with more developed markets that are

[15] DeFond and Hung (2003) find investor protection to be related to law enforcement but not to an extensive set of laws.

[16] It may also be the case that in countries with weak accounting standards, investors value more the ability to ex-ante write stronger contracts and ex-post enforce the contracts in a court of law.

already heavily represented). Columns 3 and 4 of Table 5 explore the impact of discretionary country-level policies on U.S. funds' decisions to deviate from the MSCI index benchmarks. Similar to our findings in Table 4, Column 3 of Table 5 shows that county-level shareholder rights (*Shareholder Rights*) and average accounting standards (*Accting Quality*) are both significantly important and that better accounting practices matter more in countries with weak investor protection. However, our results are not robust to the substitution of *Legality* as the measure of country-level governance. We interpret this finding with some caution. It might be the case that the foreign investors do not rely on local courts to protect their claims and execute their rights prior to distress (i.e. the right to vote by proxy, etc.). On the other hand, the *Legality* variable tends to capture general efficiency of a country's legal system and may not reflect its effectiveness in protecting the claims of foreign equity investors. Therefore, the *Legality* index may be a noisy proxy for the importance of an effective legal system in influencing the investment decisions of foreign equity investors. We explore further the importance of firm-level accounting standards in the next section.

4. Fund Allocations and Firm-Specific Attributes

4.1 Firm-level Determinants of Mutual Fund Investment Allocations

We next extend our analysis to the firm-level. Previous literature has shown a positive relationship between better firm-level governance and financial and equity performance in developed and emerging markets (for example, Gompers, Ishi and Metrick, 2001, and Klapper and Love, 2003 and Black, Jang and Kim, 2003, respectively). In addition, Mitton (2002) finds that higher firm-level disclosure quality had a strong impact on firm performance during the East Asian financial crisis. Related studies also find that firms with ADRs appear to better

information environments that are then associated with higher market valuations and significantly larger market reactions to earnings announcements (Foerster and Karolyi, 1999, Lang, Lins and Miller, 2002a, and Bailey, Karolyi, and Salva, 2002, respectively).[17]

We first examine firm characteristics that, while being arguably exogenous, are likely to affect mutual funds' investment allocations. These variables are obtained from the Worldscope and I/B/E/S databases and include firm size as measured by log of total assets in U.S. dollars (*ln(Total Assets)*), the number of analysts following the firm as reported by I/B/E/S (*# Analysts*), the total stock return for a 12-month period (*12 Month Stock Return*), dividend yield (*Div. Yield*), leverage, defined as total debt/ total capital (*Total Debt/Cap.*) and performance, measured alternatively as return on equity (*ROE*) and price to book ratio (*Price/Book*).[18] We also calculate float (*Float*) from the Worldscope data. However, a large number of observations are missing for this variable and therefore we exclude them from our reported results.

Lang, Lins and Miller (2002b) conclude that analyst following matters most when investors are protected least. Therefore, analysts appear to play an important role in information gathering and monitoring management's actions. While analyst following may indirectly capture the quality of a firm's discretionary governance choices, we view it as exogenous from the perspective of the firm.

Finally, we examine firm-level discretionary policies that can directly affect foreign investment allocations. Firms can decide to adopt U.S. governance and disclosure rules by issuing an ADR. The role of cross-listing in the U.S. to protect rights of minority shareholders is

[17] See Karolyi (2003) for an excellent review of the ADR literature.
[18] Total market capitalization is an alternate measure of firm size. However, the total market capitalization is likely to be endogenous to other factors including U.S. mutual fund investment. Therefore, our main analysis focuses on a balance sheet measure of firm size. However, the results are robust to the use of market capitalization or firm sales as alternate measures of firm size.

discussed by Reese and Weisbach (1999). Mitton (2002) finds that two proxies for disclosure quality (ADR listing and auditor quality) had a strong impact on firm performance during the East Asian crisis. We use ADR listings as reported by the Bank of New York website. The *ADR* dummy is equal to one if the firm has an ADR, and zero otherwise. In some specifications we distinguish between ADRs listed on NYSE, AMEX and NASDAQ (*Listed ADR*) versus unlisted ADRs trading on OTC or as 144As (*Unlisted ADR*). Listed ADRs have higher disclosure requirements and must reconcile with U.S. GAAP. Listed ADRs are required to disclose non-financial items such as ownership, executive compensation and are subject to rules on insider trading and tender offers.[19]

As an alternative to ADR issuance, emerging market firms can also voluntarily adopt higher quality disclosures. To capture these choices, we include four accounting and disclosure quality variables: auditor quality, consolidated reporting, auditor opinion and use of internationally-recognized accounting standards. First, *auditor quality* is a categorical variable that equals one if the firm uses an international Big-5 accounting firm, and zero otherwise. Although recent accounting scandals have raised doubts regarding the integrity of the large, international accounting firms, prior research has shown that audit quality tends to be higher for Big-5 auditors. Second, we create a *consolidation* variable which equals one if the firm presents consolidated financial statements, and zero otherwise. Consolidated financial reports are expected to present a more complete performance picture of all of a firm's investments and subsidiaries. Consolidated statements are particularly important in emerging markets where family groups and pyramid ownership schemes are prevalent. Third, we create a *clean audit opinion* variable which equals one if the firm receives a clean opinion from its auditor, and zero otherwise. Finally, *accounting standards* is a categorical variable that equals one for firms that

[19] See Benos and Weisbach (2003) for details.

use internationally recognized accounting standards (U.S. GAAP or International Accounting Standards), and zero otherwise. Firms that use internationally recognized accounting standards are viewed as having financial statements that present a "true and fair" picture of firm performance. The relationship between adoption of U.S. GAAP and institutional investment is examined by Bradshaw, Bushee and Miller (2002). They find that firms with greater degree of conformity with U.S. GAAP exhibit greater levels of institutional ownership.[20]

We create an index of firm-level *Accounting Quality* which equals the sum of the four separate accounting quality variables. The value of *Accounting Quality* ranges from 0 to 4, with 0 being the weakest and 4 being the strongest accounting quality at the firm-level. We use the index *Accounting Quality* in our analysis instead of each of the four separate variables.

We first provide descriptive evidence on the characteristics of emerging market firms included in the portfolio holdings of U.S. mutual funds and compare them to all firms in the Worldscope database. Worldscope covers a total of 3,820 firms for the emerging markets in our sample. We assume this is the population of publicly traded firms in emerging markets available to U.S. mutual funds to make investment allocations. Table 6 shows the median values for firm characteristics classified in three groups. Group 1 consists of all 3,820 Worldscope firms; Group 2 consists of 2,540 firms that are in Worldscope but are not included in the mutual fund portfolio holdings; and Group 3 consists of 1,280 firms that are in Worldscope and in the mutual funds portfolio holdings.

A comparison of the three columns in Table 6 shows that U.S. mutual funds invest in firms that are on average (median) larger as measured by market capitalization and have higher leverage as measured by total debt to total capital. They also invest in firms that have higher

[20] In addition, Heflin, Shaw and Wild (2000) find that firms with higher quality disclosures have greater market liquidity.

profitability as measured by *ROE*, *ROA* and *Price/Book* and higher dividend yield, relative to the average firm in Worldscope. U.S. funds also invest in firms with relatively higher float. Overall, we find that the float for emerging market firms is low and has a median value of only 45.75%, which suggests that more than half the shares are closely held.[21] We expect that funds will invest in firms with higher float since greater inside ownership reduces liquidity in secondary market trading and institutions do not like to invest in firms with low liquidity. There is also a large difference in the number of analysts following a firm between the groups. On average, four analysts follow firms that are in fund portfolios compared to only one for all firms in Worldscope. The median accounting quality is identically two for each of the three categories.

Table 7 presents correlation coefficients for firm-level attributes. The correlation between firm size measured as the natural logarithm of total assets or as the natural logarithm of market capitalization, and number of analysts; between market value and accounting standards; and between number of analysts and accounting standards is positive and significant at the 5% significance level. The *ADR* dummy variable has a positive and significant correlation with firm size, number of analysts, and accounting quality. Therefore, in our multivariate framework we are careful not to include all of these attributes as explanatory variables in the same model.

4.2Firm-level regressions

We test for the major firm-level determinants of U.S. mutual fund investments decisions by estimating a logit model with robust standard errors to analyze differences between firms from Worldscope that are included in the portfolio holdings and those firms that are not included in the portfolio. In our models the dependent variable (*DFUND*) equals one if a Worldscope firm

[21] This is consistent with previous literature that finds lower firm-level float in emerging markets. For example, Dahlquist et al. (2002) conclude that home bias is linked to corporate governance. They report that in countries where investors are poorly protected it is optimal for firms to be closely held.

is included in the funds' portfolio holding, and zero otherwise. We include country dummies to control for country-level factors and allow for country-level interaction terms similar to the methodology of Rajan and Zingales (1998).[22] An advantage of using fixed country effects in the regressions that try to identify firm-level features that matter for portfolio allocation, is that we can eliminate certain aspects of cross-country heterogeneity. For example, without fixed country effects if the *ADR* variable is significant it can mean two things: a) firms that issue ADRs tend to be more in demand by portfolio investors; or b) certain countries have on average more issuance of ADRs, and those countries are more popular with foreign investors. Clearly, both can be true at the same time. But having fixed country effects allows us to ascertain whether explanation a) holds by itself--that is, within a country, firms that issue ADRs are more popular with foreign investors. Cross-country analysis by Ahearne et al. (2003) finds that countries whose firms do not reduce information costs by adopting the U.S. regulatory environment are more severely underweighted in U.S. portfolios.

Industry dummies indicating 1-digit SIC industrial codes are also included in all models. Gillan, Hartzell and Starks (2002) empirically find that an industry's investment opportunities, competitive environment, and information environment play an important role in its corporate governance structure. Therefore, industry fixed effects are also included, but not reported. In addition to a baseline model, we also estimate different models that separately include ADR listing or accounting standards as determinants of U.S. mutual fund investment. These models are estimated separately because of the high correlation between the three variables. We do not report results that include float and firm-level turnover because a number of observations are lost due to missing data on these two variables. .

[22] Instead of country dummies we also repeated the analysis with specific country variables discussed earlier, these results are not reported.

We also analyze the relationship between U.S. funds' investment allocations and country-level shareholder rights and firm-level discretionary policies.[23] Countries have the option to select an appropriate shareholder rights regime that is conducive to foreign investment. Similarly, firms also have the option to issue an ADR and adopt higher disclosure requirements. They can also create transparency and provide more information by adopting better accounting policies. Therefore, we estimate two different specifications that include the interactive effects of shareholder rights, ADR listings and accounting quality. The coefficient on ADR listings suggests that a one rank improvement in accounting quality leads to an average asset allocation increase of 0.71% and this impact is statistically significant. The coefficients of the interaction terms in the two models (*ADR* and *Shareholder Rights, Accounting Quality and Shareholder Rights*) are negative and significant. This leads to the conclusion that the marginal effect of both firm-level policies - ADR and accounting quality – is significant in countries with below-average outside shareholder protection laws. In general, we can conclude that funds invest a larger proportion of their assets in firms with more disclosure and transparency and this effect is most pronounced in countries with weak shareholder rights.

Four main conclusions can be reached from the logit regression results reported in Table 8. First, size and visibility of the firm as proxied by firm size, number of analysts following the firm, and ADR dummy are significant and positively associated with U.S. mutual fund investments. Second, an ADR listing is significant, whether or not the firm lists in the U.S. on an exchange (*Listed ADR*) or trades over-the-counter (*Unlisted ADR*). This suggests that the greater visibility and lower trading costs associated with even a non-listed U.S. listing may encourage

[23] *Legality* is not included in the specifications due to concerns about high correlation. The significance of *ADR* and *Accounting Quality* increases if some other firm-level variables such as size and analyst coverage are not included in the model. There is high correlation among some of these variables.

foreign investment, although the impact is larger for firms listed on an exchange that also have mandatory disclosure requirements. Third, firms with better accounting quality (*Accounting Quality*) are associated with allocations from U.S. mutual funds.[24] Fourth, the interaction of country-level *Shareholder Rights* with *Accounting Quality* is significant and negative. This suggests that firm-level discretionary policies with regard to transparency and disclosure as captured by accounting quality are more important in countries that have weak shareholder protection.[25] The coefficient of *ADR* is also significant however the interaction of *ADR* with country-level *Shareholder Rights* is not significant. This may suggest that country-level laws are less important to investors with the option of holding U.S. listed firm shares, which are subject to U.S. legal protection

Finally, we analyze U.S. fund managers' active investment allocations to emerging market firms that deviate from passive MSCI benchmarks. These tests allow us to identify firm characteristics and policies that are associated with greater U.S. mutual fund investment allocations relative to the MSCI benchmark.

Table 9 provides a comparison of three groups of firms. Group 1 consists of 756 firms that are included in our funds' portfolio holdings, but are not in the global MSCI Index.[26] Group 2 consists of 524 firms that are both in the MSCI Index and in our sample of U.S. mutual funds' holdings. Group 3 consists of 124 firms that are in MSCI Index, but are not included in any of the funds' holdings.[27] There is considerable overlap between firms included in the MSCI Index and in portfolio holdings. However, funds invest in a large number of firms that are not part of

[24] We also estimated the regressions with the individual accounting quality variables and the results are similar.
[25] The analysis was repeated by weighting allocation by size of the funds as measured by total market value of the fund's assets. The results are not reported here.
[26] Funds may be included in any of the three fund categories for the purpose of this analysis.
[27] 36 firms that are included in the MSCI index are not covered in Worldscope. Frequently these are newer firms that recently had an IPO and therefore coverage in Worldscope has not started.

the index. This is not surprising because these are "actively managed" funds. This highlights that funds are not simply mimicking the MSCI portfolio.

The mean and median market capitalization of firms in the MSCI index is US$1.25 billion and US$366 million, respectively. The minimum and maximum values are US$9 million and US$40.65 billion, respectively. The index consists of both some very large and very small firms. The mean and median weight of the firms in the index is 0.124% and 0.04%, respectively. The minimum weight can be quite small and almost equal to zero percent and the largest weight in the index is 4.03%. The three firms with the largest weights in the index are Samsung Electronics, Taiwan Semiconductor and China Mobile.

We first focus on analyzing the differences between characteristics of firms in Group 1 (in funds' portfolios, but not in the MSCI Index) and Group 2 (in funds' portfolios and also in the MSCI Index). Table 9 shows that firms in the funds' portfolio holdings that overlap with the MSCI index are larger in size, have higher dividend yield and lower leverage. These firms perform better as measured by ROE. The median number of analysts following firms that are included in both the funds' holdings and in MSCI (Group 2) is 10, which is much higher than the median 2 analysts following firms that are not in the MSCI index (Group 1). 40% of the firms that are included in both fund portfolios and the MSCI Index have ADRs (listed or unlisted) and almost half of the ADRs are listed.

Finally, we examine U.S. mutual funds' firm-level investment allocations relative to MSCI benchmarks. The relative fund allocation can be positive, negative, or zero. It will be positive if the fund allocates a larger percentage of its assets to the firm than the market index. This will certainly be the case for the firms that are part of the fund portfolio holdings, but are not included in the MSCI index. Relative fund allocation will be negative if the fund allocates a

smaller percentage of its assets to a firm than the index does. Again, this will certainly be the case for firms that are included in the MSCI index, but are not found in U.S. funds' portfolios.

The MSCI benchmark regressions for fund investment allocations are presented in Table 10. Each regression includes country and industry dummies. Consistent with the logit results in Table 8, we find that U.S. funds significantly overweight their holdings (relative to the MSCI benchmark) to larger firms, firms with lower leverage and higher Price/Book and firms with greater analyst following. It should be noted that firm size also captures other firm characteristics such as visibility and/or liquidity. Again, the impact of the number of analysts on U.S. mutual fund allocation (relative to the MSCI Index) is consistent with our prior findings. Firms over-weight firms that have either listed or unlisted ADRs. Relative to the MSCI weights they also invest more in firms with stronger accounting quality. We next turn to the specifications that include firm-level and country-level policies. Consistent with our logit results, we find that ADR listings are significant, but the interaction of *ADR* with country level *Shareholder Rights* is not significant. The firm also has discretion in selecting its accounting policies. We again find *Accounting Quality* to be positive and significant. The interaction of *Accounting Quality* with *Shareholder Rights* is negative and significant.

These MSCI benchmark regression results suggest that the firm-level accounting quality is an important determinant of fund allocations, even relative to country-level investor protection, and that firm-level accounting quality is more important in countries with weaker shareholder protection. Specifically, the marginal effect of accounting quality is significant in countries with below average shareholder protection laws.

5. Summary and Conclusions

This paper examines the relationship between country-level and firm-level policies and characteristics that affect U.S. mutual fund investment allocations in 30 emerging markets after the Asian financial crisis. We focus on emerging markets because foreign capital plays an important role in promoting economic growth in countries with developing financial systems. Moreover, emerging markets exhibit wide variation in country-level and firm-level policies that potentially affect foreign investment flows, especially after the lessons learned from the Asian crisis. Our empirical evidence suggests that (a) country-level policies such as floating exchange rates and strong shareholder rights and legal institutions, and (b) firm-level policies related to greater transparency and disclosure are positively associated with U.S. mutual fund investment in emerging markets in the post-crises period. Moreover, the impact of firm-level policies is most pronounced in countries with weak shareholder rights.

Our mutual fund sample allows us to isolate the role of countries' and firms' "arms-length" governance policies on foreign investment decisions. In addition, in contrast to prior related research, we analyze funds' investment allocations that deviate from passive investment strategies that mirror the Morgan Stanley Capital International (MSCI) Emerging Markets Free Index. While there is considerable overlap between the emerging markets holdings of U.S. funds and the MSCI Index, we find that funds do not limit their investments to firms included in a major market index.

At the country-level, our results show that, over and above other measures of macroeconomic development, exchange rate policies, shareholder rights and legal framework are important determinants of U.S. mutual fund investment in emerging markets. Our results also provide insights into the impact of firm-level policies on U.S. funds' investment allocations. We

examine both ADR issuance and the adoption of high quality accounting and disclosure choices as possible mechanisms for emerging market firms to attract U.S. mutual fund investment. The voluntary disclosure choices include internationally-recognized accounting standards, auditor quality, auditor opinion and the use of consolidated statements. While results verify that U.S. funds tend to invest in larger growth firms and firms with greater analyst coverage, we also find that funds allocate a larger proportion of their assets to firms with better accounting policies.

Our results suggest that investment by foreign institutions depends not only on the firm's financial attributes but also on transparency and disclosure. We find corporate governance attributes to be important at both the country- and firm-level for emerging markets in the post crises period. However, the two can serve as substitutes. Therefore, steps can be taken at both the country and the firm-level to attract foreign capital and create an environment conducive to foreign institutional investment. Investment by foreign institutional investors should lead to higher demand for a firm's stock and therefore lower the firm's cost of capital. Emerging market firms with lower cost of capital will be able to compete effectively in the global market. This should help the economic development of the country.

Our findings on emerging markets extend the growing literature on the determinants of global investment flows and allocations. Prior research focuses on international portfolio flows and examines the relationship between portfolio flows and stock returns. We extend this analysis and undertake a comprehensive analysis of all emerging markets and provide more detailed analysis of country- and firm-level factors that influence investment allocations by U.S. funds. Our work builds on the findings of La Porta et al. (1997) who show that country-level investor protection has a positive impact on market development and the emerging-market evidence of Johnson et al (2000), Mitton (2002), and Joh (2003) who show that disclosure and governance

were linked to returns and performance before and during the East Asian financial crisis. Our study complements these studies by investigating whether foreign investors consider country- and firm-level policies in their post-crises investment allocation decisions. These results are relevant for both policy makers and firms in emerging markets seeking foreign capital to help promote economic and firm growth.

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Table 1
Mutual Fund Characteristics

This table shows summary statistics for the three types of funds examined in the analysis. These include Diversified Emerging Markets funds, Latin America funds and Asia funds (Pacific/Asia excluding Japan). These are the three categories of funds covered by Morningstar that invest primarily in emerging markets' equity. There are a total of 114 funds of which 74 are diversified emerging funds, 15 are Latin American funds, and 25 are Asian funds. The mean fund characteristic information is obtained from the Morningstar February 2002 database. Net Assets is the mean assets under management in millions of US dollars; Fund Holdings is the mean number of holdings in the fund's portfolio; Fund Turnover is the mean percentage of the fund's portfolio holdings that have changed over the past year; Fund Beta is calculated by Morningstar using the Standard and Poor's 500 as the proxy for market return; % Assets Invested in Equity is the mean percentage of the fund's assets invested in equity; and % Invested in Top Ten is the mean percentage of the fund's assets invested in top-ten holdings.

Fund Type	# Funds	Fund Net Assets ($M)	Fund Holdings	Fund Turnover (%)	Fund Beta	% Assets Invested in Equity	% Invested in Top Ten
All Funds	114	109.57	80	99.6%	1.24	94.0%	34.4%
Diversified Emerging	74	139.42	108	103.9%	1.21	93.5%	28.0%
Latin America	15	33.81	38	96.8%	1.39	94.4%	54.1%
Asia	25	66.65	31	89.6%	1.25	95.2%	41.5%

Table 2
Fund Portfolio Holdings and MSCI Index Weight in Countries

This table shows mean summary statistics of country allocations, by funds and the MSCI index. Fund's Portfolio is the percentage of assets allocated to a particular country. Index Weight is the country allocation by the MSCI index. % Relative Spread indicates the fund's over/under investment in a country relative to the MSCI Index:

% Relative Spread = (% Fund's Portfolio - % MSCI Index weight)

For example, the first row shows that on average, 9.01% of Asia Fund assets are invested in China, although the MSCI weight for China is 11.53% (indicating that on average China is underweighted by 2.52%). All 30 countries are not listed.

	Asia Funds			Latin America Funds			Diversified Funds		
Country	Fund's Portfolio (%)	Index Weight (%)	Relative Spread (%)	Fund's Portfolio (%)	Index Weight (%)	Relative Spread (%)	Fund's Portfolio (%)	Index Weight (%)	Relative Spread (%)
China	9.01	11.53	-2.52				2.39	6.23	-3.84
Indonesia	1.10	1.38	-0.28				1.29	0.74	0.55
India	9.43	10.83	-1.40				6.78	5.85	0.93
Korea	40.78	31.73	9.05				18.86	17.14	1.72
Malaysia	6.37	12.04	-5.67				3.86	6.51	-2.65
Pakistan	0	0.30	-0.30				0.10	0.16	-0.06
Philippines	1.04	1.28	-0.24				1.57	0.69	0.88
Sri Lanka	0.10	0	0.10				0.04	0	0.04
Taiwan	27.77	28.04	-0.27				11.17	15.15	-3.98
Thailand	4.40	2.87	1.53				3.29	1.55	1.74
Argentina				1.42	4.38	-2.96	0.59	1.01	-0.42
Brazil				40.98	40.44	0.54	10.17	9.30	0.87
Chile				8.62	11.48	-2.86	1.99	2.64	-0.65
Colombia				0.07	0.62	-0.55	0.05	0.14	-0.09
Mexico				47.78	40.14	7.64	13.50	9.23	4.27
Peru				1.11	1.71	-0.60	0.60	0.39	0.21
Venezuela				0.03	1.23	-1.20	0.02	0.28	-0.26
Czech Rep.							0.81	0.62	0.19
Egypt							0.68	0.19	0.49
Hungary							2.56	0.94	1.62
Israel							3.20	4.33	-1.13
Poland							1.60	1.14	0.46
Russia							4.35	3.37	0.98
S. Africa							8.19	10.06	-1.87
Turkey							2.24	1.88	0.36

Table 3
Correlation between Country Attributes

This table shows correlations and significance between nine country characteristics. The nine country characteristics are: *ln(GDP per capita)*, *Growth in GDP/capita*, the ratio of market capitalization to GDP (*Market Cap./GDP*), average accounting quality of firms (*Accounting Quality*), an index of *Shareholder Rights*, an index of country's legal framework (*Legality)*, exchange rate regime (*Floating Exch. Rate*), the five-year market return (*5 Year Market Return*), and *Market Turnover*. Macroeconomic indicators are from the IMF-IFS database; the exchange rate regime is from Reinhart and Rogoff (2003); *Accounting Quality* and *Shareholder Rights (*"anti-director rights") are from La Porta et al. (1998) and Pistor (2000); and *Legality* is an index constructed by Berkowitz, Pistor and Richard (2002) to measure the strength of the legal system. Market characteristics are from Datastream. ** and * indicate significance at the 5 percent and 10 percent level, respectively.

	Growth in GDP/capita	Market Cap./GDP	Accounting Quality	Shareholder Rights	Legality	Exchange Rate Regime	12 Month Market Return	Market Turnover
ln(GDP per capita)	0.40*	0.27	0.42*	-0.04	0.75**	0.34*	0.05	-0.03
Growth in GDP/capita		0.02	0.40	0.03	0.34	0.17	-0.28	0.29
Market Cap/GDP			0.60**	0.37*	0.53**	0.02	-0.14	-0.08
Accounting Quality				0.29	0.50**	0.44*	-0.10	0.26
Shareholder Rights					0.25	-0.12	0.01	0.18
Legality						0.07	0.09	0.41*
Floating Exch. Rate							0.17	0.20**
5 Year Market Return								-0.10

Table 4
Relationship between Fund Portfolio Holdings and Country Attributes

This table shows results of OLS estimations of the determinants of country-level fund allocations. The dependent variable is the cumulative percentage of a fund's assets allocated to firms in the country, by fund. For example, in the case of Asia there are 25 funds and they can invest in any of ten Asian emerging market countries. Therefore, the maximum number of observations for Asian Funds is 25 funds * 10 countries equal to 250. A fund with no investment in a country will have the country allocation set to zero. *Asia Fund Dummy* and *Diversified Fund Dummy* indicate Asian and Diversified funds, respectively. The country attributes examined are *ln(GDP per capita)*, the ratio of market capitalization to GDP (*Market Cap./GDP*), average accounting quality of firms (*Accounting Quality*), an index of *Shareholder Rights*, an index of country's legal framework (*Legality)*, exchange rate regime (*Floating Exch. Rate*), the five-year market return (*5 Year Market Return*), and *Market Turnover*. Macroeconomic indicators are from the IMF-IFS database; the exchange rate regime is from Reinhart and Rogoff (2003); *Accounting Quality* and *Shareholder Rights (*"anti-director rights") are from La Porta et al. (1998) and Pistor (2000); and *Legality* is an index constructed by Berkowitz, Pistor and Richard (2002) to measure the strength of the legal system. Market characteristics are from Datastream. Robust t-statistics are in parenthesis. ***. ** and * indicate significance at the 1, 5 and 10 percent level, respectively.

Intercept	-23.46 (-7.97)***	-23.65 (-8.19)***	-17.15 (-4.38)***	-36.80 (-5.12)***
ln(GDP per capita)	3.78 (14.16)***	3.84 (14.81)***	2.04 (3.73)***	2.66 (5.28)***
Floating Exch Rate	1.54 (13.51)***	1.25 (11.08)***	0.26 (1.31)	0.35 (1.43)
Market Cap./GDP	0.01 (3.90)***	0.02 (5.15)***	-0.002 (-0.18)	-0.04 (-6.21)***
5 Year Market Return	-	0.09 (1.03)	0.02 (0.05)	-0.38 (-0.99)
Market Turnover	-	0.02 (13.17)***	0.03 (13.18)***	0.03 (10.62)***
Accounting Quality	-	-	0.30 (4.45)***	0.43 (4.32)***
Shareholder Rights	-	-	1.69 (1.63)	-
Accounting Quality* Shareholder Rights	-	-	-0.05 (-2.20)**	-
Legality	-	-	-	1.57 (3.01)***
Accounting Quality* Legality	-	-	-	-0.02 (-2.64)***
Asia Fund Dummy	-3.74 (-1.84)*	-5.49 (-2.76)***	-5.35 (-2.55)**	-5.06 (-2.41)**
Diversified Fund Dummy	-10.95 (-5.95)***	-11.79 (-6.42)***	-11.79 (-6.78)***	-11.53 (-6.50)***
R^2	0.28	0.32	0.39	0.39
F-stat	111.9	91.46	78.80	75.85
N	2,501	2,501	1,513	1,513

Table 5
Relationship between Fund Holdings Relative to MSCI Weight and Country Attributes

This table shows results of OLS estimations of the determinants of country-level fund allocations, relative to the MSCI index. The dependent variable is % Relative Spread:

% Relative Spread = (% Fund's Portfolio in Country - % MSCI Index weight for Country)

The country attributes examined are *ln(GDP per capita)*, the ratio of market capitalization to GDP (*Market Cap./GDP*), average accounting quality of firms (*Accounting Quality*), an index of *Shareholder Rights*, an index of country's legal framework (*Legality)*, an indicator variable if country has a floating exchange rate regime (*Floating Exch. Rate*), the five-year market return (*5 Year Market Return*), and *Market Turnover*. Macroeconomic indicators are from the IMF-IFS database; the exchange rate regime is from Reinhart and Rogoff (2003); *Accounting Quality* and *Shareholder Rights (*"anti-director rights") are from La Porta et al. (1998) and Pistor (2000); and *Legality* is an index constructed by Berkowitz, Pistor and Richard (2002) to measure the strength of the legal system. Market characteristics are from Datastream. Robust t-statistics are in parenthesis. ***. ** and * indicate significance at the 1, 5 and 10 percent level, respectively.

Intercept	-1.90 (-1.49)	-1.52 (-1.12)	1.79 (0.89)	-6.31 (-1.77)*
ln(GDP per capita)	0.22 (1.52)	0.19 (1.24)	-1.31 (-4.63)***	0.58 (1.63)
Floating Exch Rate	0.44 (6.21)***	0.50 (7.09)***	0.38 (3.32)***	0.26 (1.92)*
Market Cap/GDP	-0.03 (-12.04)***	-0.03 (-12.13)***	-0.001 (-0.1)	-0.04 (-9.72)***
5 Year Market Return	-	0.03 (0.57)	-0.06 (-0.27)	-0.01 (-0.05)
Market Turnover	-	-0.003 (-3.71)***	-0.002 (-1.22)	-0.002 (-0.75)
Accounting Quality	-	-	0.22 (7.95)***	0.12 (2.13)**
Shareholder Rights	-	-	3.16 (7.15)***	-
Accounting Quality* Shareholder Rights	-	-	-0.08 (-7.31)***	-
Legality	-	-	-	-0.03 (-0.12)
Accounting Quality* Legality	-	-	-	-0.01 (-1.15)
R^2	0.07	0.08	0.12	0.11
F-stat	73.15	45.68	32.02	27.75
N	2501	2501	1513	1513

Table 6
Characteristics of Firms in Fund Portfolios Relative to Worldscope

The table compares firm characteristics of three Groups of firms: Group 1 consists of all firms in Worldscope for emerging market countries in our sample; Group 2 consists of Worldscope firms in Group 1 that are not included in the portfolio holdings of any mutual funds; and Group 3 consists of firms in Group 1 that are in included in the portfolio holdings of at least one fund. Median values are reported for market capitalization (*Market Value)* in millions of U.S. $, *Total Assets* in thousands of US$, *Total Debt/Capital,* the ratio of market price to book value (*Price/Book*), return on equity (*ROE*), return on assets (*ROA*), *12 Month Stock Return, Div. Yield*, percentage float (*Float)*, an index of accounting standards, auditor quality, auditor opinion, and reporting of consolidated statements, (*Accounting Quality)*, which can have values between 0 (weakest) to 4 (strongest), # *Analysts* following a firm, the percentage of firms with a listed and unlisted ADRs (*% ADR Firms*) and percentage of firms with only a listed ADR on NYSE, Nasdaq or AMEX *(% Listed ADR Firms*). Firm financial characteristics and *Accounting Quality* are from Worldscope, # *Analysts* is from IBES, and ADR information is from the Bank of NY (BONY) website. N is based on observations that have market value data in Worldscope.

	Group 1 Worldscope N=3,820 Median	Group 2 Funds Invested = 0 N=2,540 Median	Group 3 Funds Invested =1 N=1,280 Median
Market Value (thousand US$)	71,964	38,882	255,507
Total Assets (thousand US$)	171,966	96,506	635,150
Float (%)	45.7%	44.2%	49.0%
# Analysts	1	1	4
Accounting Quality	2	2	2
% ADR Firms	13	6	28
% Listed ADR Firms	4	1	10
Total Debt/Capital	0.31	0.28	0.36
ROE (%)	7.51	6.12	9.44
ROA (%)	4.79	4.39	5.55
Div. Yield (%)	0.55	0	1.51
12 Month Stock Return (%)	-15.55	-12.54	-19.59
Price/Book	0.87	0.79	0.91

Table 7
Correlations between Firm Attributes

This table shows correlations between firm characteristics. The firm-level variables are: *ln(Mkt Capitalization)* where assets are in thousands of U.S.$, thousands of U.S.$ *ln(Total Assets)* where assets are in thousands of U.S.$, percentage float (*Float*), the number of analysts that follow a firm (*# Analysts)*, an index of accounting standards, auditor quality, auditor opinion, and reporting of consolidated statements, (*Accounting Quality)*, which can have values between 0 (weakest) to 4 (strongest), an ADR issuance dummy (*ADR*), *Total Debt/Capital*, return on equity (*ROE*), return on assets (*ROA*), *12 Month Stock Return*, *Div. Yield* and the ratio of market price to book value (*Price/Book*). Firm financial characteristics and *Accounting Quality* are from Worldscope. *# Analysts i*s from IBES, and ADR information is from the Bank of NY (BONY) website. ** and * indicate significance at the 5 percent and 10 percent level, respectively.

	Float	# Analysts	Accounting Quality	Total Debt/ Capital	ROE	Div Yield	ADR	12 Month Stock Return	Price/ Book	ln(Total Assets)
ln(Mkt Capitalization)	0.02	0.49**	0.19**	-0.07**	0.26**	0.04**	0.34**	0.14**	0.26**	0.78**
Float	1.00	-0.01	-0.02**	0.06**	-0.06**	-0.05**	-0.02	-0.07**	-0.07**	0.09**
# Analysts		1.00	0.15**	0.01	0.14**	0.03*	0.30**	-0.05**	-0.07**	0.43**
Accounting Quality			1.00	-0.03*	0.04*	-0.05**	0.07**	0.04**	0.02	0.13**
Total Debt/Capital				1.00	-0.41*	-0.18**	0.03*	-0.09**	-0.06**	0.22**
ROE					1.00	0.21**	0.06**	0.14**	0.14**	0.10**
Div. Yield						1.00	-0.01	0.06*	-0.13**	0.06**
ADR							1.00	0.01	0.01	0.33**
12 Month Stock Return								1.00	0.19	-0.02
Price/Book									1.00	-0.09**

Table 8
Logit Models of Fund Holdings and Firm Characteristics

This table presents logit estimations of the determinants of firm-level fund holdings. The dependent variable in all models is a dummy variable equal to one if the fund invests in the firm and zero otherwise. All firms in emerging markets covered by Worldscope are used in the analysis. The firm-level variables are: *ln(Total Assets)* where assets are in thousands of U.S.$, percentage float (*Float*), the number of analysts following a firm (*# Analysts)*, an index of accounting standards, auditor quality, auditor opinion, and reporting of consolidated statements, (*Accounting Quality)*, which can have values between 0 (weakest) to 4 (strongest), an ADR issuance dummy (*ADR*), *Total Debt/Capital*, return on equity (*ROE*), return on assets (*ROA*), *12 Month Stock Return*, *Div. Yield* and the ratio of market price to book value (*Price/Book*). Firm financial data and *Accounting Quality* are from Worldscope. *# Analysts i*s from IBES, and ADR information is from the Bank of NY (BONY) website. Country and Industry dummy variables are included in all models. Robust z- statistics are in parenthesis. ***. ** and * indicate significant at the 1, 5 and 10 percent level, respectively.

Intercept	-13.75 (-20.11)***	-13.30 (-19.37)***	-14.28 (-19.71)***	-13.58 (-18.90)***	-14.19 (-18.92)***
Div. Yield	-0.01 (-1.00)	-0.01 (-0.79)	-0.01 (-0.89)	-0.01 (-0.76)	-0.01 (-0.87)
Total Debt/ Capital	-0.01 (-4.51)***	-0.01 (-4.34)***	-0.01 (-4.33)***	-0.01 (-4.20)***	-0.01 (-4.43)***
12 Month Stock Return	-0.001 (-1.06)	-0.001 (-0.96)	-0.001 (-1.02)	-0.001 (-1.28)	-0.001 (-1.14)
ROE	-0.002 (-0.68)	-0.001 (-0.65)	-0.002 (-0.83)	-0.002 (-0.73)	-0.002 (-0.92)
Price/Book	0.16 (4.51)***	0.17 (4.52)***	0.16 (4.64)***	0.18 (4.34)***	0.18 (4.46)***
ln(Total Assets)	1.01 (18.89)***	0.95 (17.55)***	1.01 (18.64)***	0.97 (17.10)***	1.02 (17.99)***
# Analysts	0.11 (7.09)***	0.09 (6.29)***	0.10 (6.88)***	0.12 (6.97)***	0.13 (7.52)***
Listed ADR	-	1.43 (3.90)***	-	-	-
Unlisted ADR	-	1.18 (6.39)***	-	-	-
Accounting Quality	-	-	0.21 (2.82)***	-	0.47 (3.52)***
Accounting Quality* Shareholder Rights	-	-	-	-	-0.09 (-2.99)***
ADR	-	-	-	1.01 (2.47)**	-
ADR* Shareholder Rights	-	-	-	0.04 (0.36)	-
Country Dummies	included	included	included	included	included
Industry Dummies	included	included	included	included	included
N	2,749	2,749	2,724	2,567	2,546
Adj. R^2	0.41	0.43	0.42	0.44	0.43
F	547	581	544	514	488
Log-Likelihood	1076	1049	1063	966	974

Table 9
Characteristics of Firms in Fund Portfolios Relative to MSCI

The table compares firm characteristics of three Groups of firms: Group 1 consists of all firms in Worldscope for emerging market countries in our sample; Group 2 consists of Worldscope firms in Group 1 that are not included in the portfolio holdings of any mutual funds; and Group 3 consists of firms in Group 1 that are in included in the portfolio holdings of at least one fund. Median values are reported for *Equity Mkt Capitalization* in million US$*, Total Assets* in million U.S.$, percentage float (*Float*), the number of analysts that follow a firm (*# Analysts)*, an index of accounting standards, auditor quality, auditor opinion, and reporting of consolidated statements, (*Accounting Quality)*, which can have values between 0 (weakest) to 4 (strongest), an ADR issuance dummy (*ADR*), *Total Debt/Capital*, return on equity (*ROE*), return on assets (*ROA*), *12 Month Stock Return*, *Div. Yield* and the ratio of market price to book value (*Price/Book*). Firm financial characteristics and *Accting Quality* are from Worldscope. *# Analysts i*s from IBES, and ADR information is from the Bank of NY (BONY) website.

	Group 1 Funds Invested = 1 & MSCI = 0 N=756	Group 2 Funds Invested = 1 & MSCI = 1 N=524	Group 3 Funds Invested = 0 & MSCI = 1 N=124
Equity Mkt Capitalization (million US$)	104,153	803,424	409,326
Total Assets (million US$)	367,220	1,409,471	750,770
Float (%)	48.95	49.19	48.99
# Analysts	2	10	5
Accting Quality	2	2	2
% ADR Firms	19	40	22
% Listed ADR Firms	5	17	8
Total Debt/Capital (%)	37.57	33.47	29.37
ROE (%)	6.89	12.56	11.77
ROA (%)	4.44	6.92	6.85
Div. Yield (%)	0.84	1.96	1.65
12 Month Stock Return (%)	-23.81	-13.90	-14.40
Price/Book	0.67	1.26	1.12

Table 10
Percentage Fund Holdings Relative to MSCI Weight and Firm Characteristics

The dependent variable in each of the regression models is the % Relative Spread:

% Relative Spread = (% Fund Allocation - % MSCI Weight)

All firms in fund portfolios or in the MSCI index are used in the analysis. The firm-level variables are: thousands of U.S.$ *ln(Total Assets)* where assets are in thousands of U.S.$, percentage float (*Float*), the number of analysts that follow a firm (*# Analysts)*, an index of accounting standards, auditor quality, auditor opinion, and reporting of consolidated statements, (*Accounting Quality)*, which can have values between 0 (weakest) to 4 (strongest), an ADR issuance dummy (*ADR*), *Total Debt/Capital*, return on equity (*ROE*), return on assets (*ROA*), *12 Month Stock Return*, *Div. Yield* and the ratio of market price to book value (*Price/Book*). Firm financial characteristics and *Accting Quality* are from Worldscope. *# Analysts i*s from IBES, and ADR information is from the Bank of NY (BONY) website. Country and Industry dummy variables are included in all models. Robust t-statistics are in parenthesis. ***, ** and * indicate significant at the 1, 5 and 10 percent level, respectively.

Intercept	-0.20 (-0.41)	-0.07 (-0.14)	-0.35 (-0.75)	-0.25 (-0.5)	-0.42 (-0.88)
Div. Yield	-0.01 (-1.01)	-0.01 (-0.75)	-0.01 (-0.76)	-0.01 (-1.14)	-0.01 (-1.03)
Total Debt/Capital	-0.01 (-2.61)***	-0.01 (-2.38)**	-0.01 (-2.59)***	-0.01 (-2.68)***	-0.01 (-2.87)***
12 Month Stock Return	0.001 (1.10)	0.001 (1.27)	0.001 (1.23)	0.001 (1.44)	0.001 (1.62)
ROE	0.002 (1.91)*	0.002 (1.85)*	0.002 (1.75)*	0.001 (1.68)*	0.001 (1.62)
Price/Book	0.06 (1.90)*	0.06 (1.95)*	0.06 (1.80)*	0.07 (2.28)**	0.07 (2.29)**
ln(Total Assets)	0.07 (2.37)**	0.05 (1.51)	0.07 (2.39)**	0.07 (2.11)**	0.08 (2.62)***
# Analysts	0.01 (2.30)**	0.01 (1.98)**	0.01 (2.47)**	0.01 (2.11)**	0.01 (2.40)**
Listed ADR		0.35 (2.11)**			
Unlisted ADR		0.26 (2.34)**			
Accounting Quality			0.07 (1.52)		0.22 (2.94)***
Accounting Quality* Shareholder Rights					-0.05 (-2.79)***
ADR				0.30 (1.46)	
ADR* Shareholder Rights				-0.03 (-0.45)	
Country Dummies	included	included	included	included	included
Industry Dummies	included	included	included	included	included
N	1,641	1,641	1,632	1,530	1,523
R^2	0.05	0.06	0.05	0.07	0.07
F	3.90	3.73	3.95	4.27	0.00