

# Do domestic and foreign fund managers have similar preferences for stock characteristics? A cross-country analysis

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### **Abstract**

Using a new unique data set on mutual fund stockholdings, we identify several interesting similarities and differences in the stock preferences of domestic and foreign fund managers from 11 developed countries. Results show that both groups of managers prefer stocks with high return on equity, large turnover, and low return variability, and that they also exhibit differential investment behavior. Domestic managers also favor firms that pay large dividends, have low financial distress and high growth potential, whereas foreign managers prefer to invest in corporations that are globally well known. The demand for globally visible stocks by foreign managers is especially strong when their fund mandate is to diversify globally or across regions, and is weakened when their stock holdings are concentrated mainly in a specific local market. The results also show no difference in the stock preferences of American-, European- and Asian-based funds. In general, our overall evidence suggests that the differential mandates of fund managers and hence the geographic allocations of their fund investments influence their stock preferences, but not the geographic location of the managers.

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# Introduction

Mutual fund assets worldwide rose to \$12.83 trillion at the end of the third quarter of 2003, an increase of about 38% from 1998. Although the growth in the fund management industry is phenomenal, there is still limited evidence on how mutual funds allocate their money across the thousands of different stocks available worldwide and what factors influence their investment behavior. The goal of this paper is to address this issue. Specifically, we examine the type of stocks that fund managers invest in, and also investigate whether such stock preferences vary across foreign and domestic fund managers and across countries.

Existing empirical studies have observed some systematic patterns in the stock preferences of domestic and foreign investors. Several studies (Falkenstein, 1996; Gompers and Metrick, 2001) examine holdings of domestic institutional investors, and show that investors prefer large stocks, or stocks with high dividend yields, high turnover, or high liquidity. Other studies focus on

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international markets and analyze holdings of domestic equities by foreigners in Japan (Kang and Stulz, 1997) and in Sweden (Dahlquist and Robertsson, 2001). These international studies provide evidence that foreign investors tend to invest in large firms or firms with high export sales. Furthermore, their results are consistent with the Merton (1987) investor-recognition hypothesis that investors do not have equal information and hence they invest only in those stocks that they know about. A recent international study (Fei and Ng, 2005) finds the stock preferences of Chinese individual investors to vary with their wealth levels. Wealthier individuals prefer highly liquid and volatile stocks, and stocks with greater state-ownership and strong past performance, whereas less wealthy individuals prefer high beta, low price, and small-size stocks, and stocks with poor past performance.

In most of the previous studies, the foreign or domestic investors typically include institutions, corporations, and individual investors. Such an aggregation masks the distinction between the sophisticated, generally more informed institutional investors and the less sophisticated and less informed non-institutional investors, such as individual investors. Furthermore, existing research focuses mainly on a single country. Unless the results of a single country can be representative of those across the world, a robustness test of their results is warranted.

In this study, we investigate whether there are any differences in the investment behavior of foreign and domestic fund managers, as revealed by their portfolio holdings in 11 developed markets. Specifically, we examine these managers' preferences for certain types of stock characteristics. Unlike existing studies, we focus only on fund managers, because they are professional money managers and should be regarded as equally sophisticated and talented. Given their expertise in the profession and their general ability to access local resources, there is no compelling reason to assert that foreign managers are more sophisticated and professionally more skilled at evaluating the performance of domestic stocks than domestic managers.<sup>2</sup> Thus, one would expect their preferences for basic stock characteristics, as manifested in their mutual fund portfolio holdings, to be similar.<sup>3</sup> On the other hand, foreign and domestic fund managers, though equally sophisticated, might not be equally informed.<sup>4</sup> If foreign managers are less informed than their domestic counterparts, then the former would be likely to invest

primarily in stocks with high visibility abroad or worldwide recognition, or stocks that are associated with lower information-acquisition costs. In this case, variables that are proxies for worldwide visibility and investor recognition should play a more important role in determining the stockholdings of foreign managers than those of domestic managers.

More importantly, the results will have important implications about the shareholder base, clientele effects, stock liquidity, visibility, and cost of capital<sup>5</sup> - all of which are of interest to firms that look to international equity markets for equity financing or those that intend to attract foreign investors to invest in their firms.

Our study employs a unique, rich dataset from Thomson Financial Securities (TFS) that allows us to conduct a thorough and in-depth analysis of foreign and domestic investment fund holdings across a diverse group of 11 developed countries: Australia, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Singapore, Sweden, Switzerland, and the United Kingdom (UK). The data include all the fund equity holdings in years 1999 and 2000, a period in which all the countries in our sample have almost no restriction on foreign capital transactions.<sup>6</sup> Using the most currently available data and focusing only on developed markets ensures that our results are not driven by the restrictions that countries impose on foreign investment.

The current study also employs more effective measures of investor recognition and firm visibility in the global markets. Prior studies use firms with large market capitalization, firms with large export sales, or firms whose stocks are listed in other foreign exchanges as a means to gauge the firms' visibility abroad. Our study expands these variables to include new additional measures: (1) the extent of analyst coverage of a stock; and (2) stocks' memberships in international market indexes such as those constructed by Morgan Stanley Capital International, Dow Jones, and Financial Times/ Standard and Poor's. The greater the analyst coverage of a firm, the more internationally recognized is the firm. Similarly, firms with international index memberships would have greater global visibility or recognition than those without.

Using seemingly unrelated regressions, we find strong evidence of both similar and differential stock preferences between foreign and domestic fund managers, and this evidence is robust across 11 developed countries. Both domestic and foreign fund managers typically concentrate more in shares of firms with high return on equity, high stock turnover, and low return variation. Domestic managers also favor firms that pay large dividends, have low financial distress and high growth potential, but foreign managers also tend to hold shares of firms with large market capitalization, large foreign sales, extensive analyst coverage, and whose stocks have foreign listings and index memberships.

Our further analyses suggest that the different investment preferences between foreign and domestic funds managers are driven by their differential fund mandates. The reason is that domestic and foreign managers with different mandates have different marginal benefits and marginal costs of gathering and processing information. If the concentration of her stock holdings in a particular market is low, the manager should have lower marginal benefits of gathering and processing domestic information. Conversely, if a fund manager's mandate is to place more than 80% of her holdings in a particular market, then her cost-benefit tradeoff is likely to be similar to that of a domestic manager who invests mainly in the local market. Our results support these predictions. The demand for globally visible stocks by foreign managers, while not domestic managers, is especially strong when the fund mandate of foreign managers is to diversify globally or across regions, and becomes weaker when their stock holdings are concentrated mainly in a specific local market. The results show that American-, European-, and Asianbased funds display similar stock preferences when selecting stocks from developed markets. Overall, the evidence suggests that the differential mandates of fund managers and hence the geographic distribution of their fund allocations rather than the geographic location of these managers have a greater impact on their investment decisions.

The next section provides a brief literature review, followed by a section describing the databases we employ in this study. The third section contains the empirical results on the relationship between equity ownership, basic firm and industry characteristics, and investor-recognition and visibility proxy variables. The fourth section of the paper examines the plausible underlying factors that drive the results. The final section concludes the paper.

# Literature review

The recent availability of portfolio holdings data has afforded many researchers an opportunity to study the stock preferences of investors, as revealed by their holdings. Based on such data, Falkenstein (1996) presents the first comprehensive and through analysis of the information from the mutual fund equity holdings for the period 1991-1992. Focusing only on the US market, he documents that mutual funds have a significant preference for stocks with high visibility and low transaction costs, and that they avoid stocks with low idiosyncratic volatility. As in Falkenstein, Gompers and Metrick (2001) also analyze institutional investors' demand for stock characteristics, but, unlike his study, their analysis includes only large US institutions with at least \$100 million under management for the period 1980–1996. They find that institutions invest in stocks that are larger, more liquid, and have had relatively low returns in the previous year.

Other studies, such as Kang and Stulz (1997) and Dahlquist and Robertsson (2001), examine the holdings of foreign investors in non-US markets and find that foreign investors reveal preferences for certain firm-specific characteristics. For example, Kang and Stulz employ annual Japanese firmholdings data from 1975 to 1990 to analyze the stock preference of foreign investors. Their results show that foreign investors tend to invest in large, financially solid, and well-known Japanese firms. On the other hand, Dahlquist and Robertsson analyze the determinants of aggregated foreign ownership in individual Swedish firms between 1993 and 1997, and find that foreigners prefer large firms, firms paying low dividends, and firms with large cash holdings. Their result on firm size is driven by liquidity and international presence as measured by foreign listings and export sales.

In addition, Aggarwal *et al.* (2005) look at the portfolio holdings of 576 US mutual funds invested in emerging markets as of February 2002. Their results are broadly consistent with those documented by Kang and Stulz (1997) and Dahlquist and Robertsson (2001). They find that US mutual funds tend to invest in larger firms, firms with lower leverage, and firms that have better accounting quality. Taken together, these results suggest that foreign fund managers dislike information asymmetry.<sup>7</sup>

In contrast to the above studies that examine institutional holdings data, Fei and Ng (2005) examine the trading decisions of individual investors to draw inferences on the type of stocks that individual investors in mainland China generally prefer. Based on 64.2 million trades executed by





about 6.8 million Chinese investors from April 2001 to 2002, they show that stock preferences of individual investors vary with wealth levels. Wealthier individuals prefer highly liquid and volatile stocks, stocks with greater state-ownership, and stocks that have performed well in the past year, whereas less wealthy individuals prefer high beta, low price, and small-size stocks, and stocks that have performed poorly in the past year.

In summary, the existing studies have looked mainly at the stock preferences of US institutional investors, or those of foreign investors in a single equity market. In the case of the latter, their sample of foreign investors does not distinguish the different types of foreign investors such as individuals, corporations, and institutions. In contrast, our new data on mutual fund holdings from 11 different countries worldwide allow us not only to compare and contrast the stock preferences of a similar type of domestic  $\nu s$  foreign investors (mutual fund managers), but also to determine how their commonalities and differences vary across countries and regions.

# **Data description**

The sample employed in this study is gathered from various sources for the years 1999 and 2000. The reason for selecting this 2-year period is that we are only able to obtain these 2 years of TFS's mutual fund equity holdings data, which are also employed in Chan *et al.* (2005). The information on firm characteristics and variables that are proxies for firm recognition and visibility is obtained from Global Vantage, Worldscope, Bloomberg, and I/B/E/S. Accuracy of the information from Global Vantage, Worldscope, and I/B/E/S is further verified with information provided by Bloomberg and Reuters.

# Domestic and foreign fund equity holdings

The mutual fund holdings database contains information on the equity holdings of 21,711 mutual funds from 37 countries in 1999 and of 26,145 funds from 39 countries in 2000. It also provides information on the names of the fund and the management company, the report date, security holdings, and the located country of the mutual funds and securities. Restricted by the availability of data on firm-specific characteristics and other firm attributes, especially investor-recognition and global-visibility proxies, this study will focus only on domestic and foreign mutual fund holdings in 11 developed countries, namely Australia, France,

Germany, Hong Kong, Italy, Japan, the Netherlands, Singapore, Sweden, Switzerland, and the UK.<sup>8</sup>

About one-half of the mutual funds report their holdings twice a year and about a third more than twice. To compute foreign and domestic fund holdings in a particular stock, we use the portfolio holdings that are reported between July and December of each year. More than 51% of these funds report their equity holdings in November and December. Since our objective is to investigate the similarities and differences between domestic and foreign managers' equity preferences, our sample includes only those firms whose stocks are held by either fund or both. Following Falkenstein (1996), we divide the number of shares held in a firm by the number of outstanding shares on that date. We then sum up this fraction for all mutual funds that reported holdings during the period. Thus the holding of a particular stock by a domestic fund is measured by the fraction of a firm's total number of outstanding shares held by domestic mutual funds, and the holding of a particular stock by a foreign fund is measured by the fraction of a firm's total number of outstanding shares held by foreign mutual funds.

Although the mutual fund equity holdings data from TFS offer us an excellent opportunity to study the stock preferences of domestic and foreign fund managers worldwide, they provide no information on the objective of each fund. One way to determine the investment style is to look at the name of the fund. But, on average, for only <1% of the funds from each country does the name describe the investment style of the fund. We hereby propose a simple approach to determine each fund's investment style. The approach might not be precise, but it ought to give us some indication about the distribution of all sample funds across investment styles.

First, we classify funds into domestic and foreign funds. The located country of a fund determines whether the fund is domestic or foreign. For example, if a fund is located in Australia, it is classified as a domestic fund in Australia. For funds that invest their money in Australia but their located countries are not Australia, they are then classified as foreign funds. Therefore, the located country of the foreign fund can be any of the remaining countries in the TFS database. We further group each type of fund into country, regional, and global funds. Domestic and foreign country funds are funds that invest at least 80% of their total net

asset value (TNAV) in the domestic stocks of a country. Domestic and foreign regional funds are those that put their money primarily in a regional market. And, finally, domestic and foreign global funds are funds that hold stocks concentrated in more than one regional market. We group countries into five regions, namely North America, Europe, Asia, Latin America, and Africa/Middle East, in accordance with the classification given by International Finance Corporation (IFC) or Morgan Stanley Capital International (MSCI).

Next, we proceed to determine the investment style of each fund. For each market, we rank all the stocks based on firm size as given by their market capitalization and, separately, on book-to-market equity to determine the median value of each characteristic. We then assign a dummy variable of 1 to all stocks whose firm size is greater than the median value and 0 otherwise. Similarly, we assign a dummy variable of 1 to all stocks whose book-tomarket equity is greater than the median value and 0 otherwise. For each fund, we calculate its valueweighted average dummy firm size of its stockholdings. Note that the TNAV of a fund is used as the weight to calculate all value-weighted variables referred to throughout the study. Based on the value-weighted average dummy firm size, we sort funds into three groups: large, mid-cap, and small funds. Similarly, we calculate the value-weighted average dummy book-to-market equity of each fund, and then based on the value-weighted average dummy book-to-market equity, we divide funds into two groups: value and growth funds.

Table 1 presents the distribution of both domestic and foreign mutual funds across different investment styles by country. Panels A, B, and C of the table show the distribution of the funds sorted into country, regional, and global funds, respectively. For the period 1999–2000, stocks from the 11 developed equity markets on average are held in the portfolios of 10,330 domestic mutual funds and 63,623 foreign mutual funds. Note that the average total number of foreign funds does not adjust for multiple accounting, as it is possible that one foreign fund may own stocks in all 11 countries. Among these countries, Germany offers the greatest number of domestic mutual funds (4,504), followed by the UK (2,167), and France (1,402). On the other hand, the Netherlands and Australia have the fewest domestic funds, with 169 and 161, respectively. The proportion of country funds that is concentrated mainly in domestic stocks ranges from 11% (Germany) to 67% (Australia). Except for those in Singapore and Hong Kong, on average only about 16% of the domestic funds in the other nine developed markets are invested globally. To illustrate, out of 2,167 domestic funds in the UK, about 30% are country funds (i.e., 646 funds; see Panel A), about 43% are regional funds (i.e., 934 funds; see Panel B), and the remaining 27% are global funds (i.e., 587 funds; see Panel C). In contrast, at least 50% of the domestic funds registered in Singapore and Hong Kong are global funds, which invest a disproportionate share of their money in more than one regional market.

Panel A reveals a few systematic patterns in the styles of domestic and foreign funds. Not surprisingly, a majority of both the domestic and foreign funds are concentrated in large and mid-cap stocks and growth stocks. For instance, on average, about 83% of the domestic country funds are large and mid-cap funds, and about 62% are growth funds. Similarly, on average, about 92% of the foreign country funds are large and mid-cap funds, and about 83% are growth funds. These results are consistent with earlier findings obtained by US studies that US mutual funds generally prefer to invest in large firms. These investment patterns are more pronounced in regional and global funds, where they exhibit a much stronger preference for large and mid-cap stocks and growth stocks. As Panels B and C indicate, both the domestic and foreign funds place almost all their money in large and mid-cap stocks, with <2% of their holdings in smaller stocks. Furthermore, domestic regional and global funds put, respectively, <12 and 7% of their holdings in value stocks, and their foreign counterparts hold less than 9% in these stocks.

Table 2 shows primarily the descriptive statistics of domestic and foreign mutual funds at the individual fund level by country. The statistics represent average values across the 2 years of sample. The table contains the mean total stock market capitalization, mean aggregate market values (in percent) of domestic and foreign mutual funds holdings in the domestic market, average number of domestic stocks held by domestic and foreign funds, and average equal- and valueweighted market values of the firms invested by domestic and foreign funds, with all median values shown in box parentheses. Additionally, it also reports the *t*-test of the difference between the average value-weighted market values of the firms invested by domestic funds and by foreign funds. All market values are expressed in US dollars.



Table 1 Distribution of mutual funds across investment styles by country

		Domestic funds				Foreign funds				
Country	No. of funds	Large/mid-cap	Small	Growth	Value	No. of funds	Large/mid-cap	Small	Growth	Value
Panel A: Country funds										
Australia	108	89	19	62	46	57	45	12	39	18
France	616	491	125	391	225	71	61	10	44	27
Germany	491	456	35	289	202	97	88	9	82	15
Hong Kong	50	48	2	32	18	31	29	2	26	5
Italy	97	79	18	46	51	51	48	3	44	7
Japan	216	176	40	122	94	462	438	24	423	39
Netherlands	34	25	9	19	15	94	85	9	64	30
Singapore	25	23	2	19	6	13	11	2	12	1
Sweden	45	37	8	34	11	14	13	1	8	6
Switzerland	56	36	20	32	24	71	64	7	52	19
UK	646	524	122	441	205	182	163	19	148	34
Total	2,380	1,980	400	1,485	895	1,138	1,042	97	940	198
Panel B: Regional funds										
Australia	37	33	4	23	14	762	755	7	722	40
France	645	619	26	492	153	6,820	6,799	21	6,507	313
Germany	3,740	3,731	9	3,544	196	3,363	3,341	22	3,136	227
Hong Kong	69	68	1	60	9	556	549	7	479	77
Italy	176	171	5	153	23	5,909	5,892	17	5,413	496
Japan	173	165	8	161	12	1,858	1,836	22	1,584	274
Netherlands	107	105	2	81	26	7,247	7,208	39	6,656	591
Singapore	66	66	0	59	7	440	436	4	366	74
Sweden	224	220	4	200	24	4,610	4,597	13	4,310	300
Switzerland	215	212	3	164	51	5,735	5,720	16	5,228	507
UK	934	906	28	691	243	6,008	5,974	34	5,321	687
Total	6,383	6,295	88	5,626	757	43,305	43,105	200	39,720	3,585
Panel C: Global funds										
Australia	16	16	0	13	3	1,508	1,499	9	1,387	121
France	141	137	4	125	16	1,728	1,721	8	1,603	126
Germany	273	272	1	259	14	1,805	1,793	12	1,684	121
Hong Kong	161	161	0	161	0	1,932	1,922	10	1,826	106
Italy	61	61	0	58	3	1,468	1,459	9	1,387	81
Japan	74	74	0	68	6	2,188	2,175	13	2,027	161
Netherlands	28	28	0	23	5	1,767	1,756	11	1,614	153
Singapore	99	99	0	93	6	1,691	1,681	10	1,570	121
Sweden	60	60	1	54	6	1,468	1,461	7	1,340	128
Switzerland	68	68	0	54	14	1,509	1,499	10	1,381	128
UK	587	581	6	552	35	2,119	2,106	13	1,936	183
Total	1,567	1,555	11	1,461	106	19,180	19,069	109	17,752	1,426

This table shows the distribution of both domestic and foreign mutual funds across styles, with funds further sorted into country, regional, and global funds. Country funds invest at least 80% of their total net asset value in domestic stocks; regional funds put their monies primarily in one regional market; and global funds hold stocks concentrated in more than one regional market. Our definition of regional markets (i.e., North America, Europe, Asia, Latin America, and Africa/Middle East) is in accordance with the classification given by International Finance Corporation or Morgan Stanley Capital International. To determine the investment style of each fund, we rank all the stocks in each market based on firm size and book-to-market equity, separately, to determine the median value of each characteristic. We then assign a dummy variable of one to all stocks whose firm size or bookto-market equity is greater than the median value and zero otherwise. For each fund, we calculate its value-weighted average dummy firm size or its value-weighted average dummy book-to-market equity of its stockholdings. Based on the value-weighted average dummy firm size, we sort funds into three groups: large, mid-cap, and small funds. Similarly, based on the value-weighted average dummy book-to-market equity, we sort funds into two groups: value and growth funds.



Table 2 Descriptive statistics of domestic and foreign mutual funds by country

			Domestic fui	nd holdings			For	eign fund hol	dings	
Country	MCAP (\$bil) (1)	% in MCAP (2)	No. of stocks (3)	ETNA (\$mil) (4)	VValue (\$bil) (5)	% in MCAP (2)	No. of stocks (3)	ETNA (\$mil) (4)	VValue (\$bil) (5)	t-stat (5)(9)
Australia	400	2.8	35.4 (24.2)	92.7 (13.3)	7.1 (7.3)	5.1	8.1 (3.7)	9.8 (1.6)	10.8 (11.5)	-7.1 <sup>a</sup>
France	1,460	5.6	29.7 (29.2)	74.6 (15.9)	27.9 (30.1)	10.9	9.8 (8.3)	17.5 (3.6)	41.3 (43.2)	$-22.4^{a}$
Germany	1,366	9.4	19.7 (16.5)	34.3 (7.8)	59.3 (58.6)	6.9	8.6 (6.3)	24.8 (4.1)	54.7 (55.1)	5.4 <sup>a</sup>
Hong Kong	617	1.1	13.4 (12.7)	32.7 (7.9)	24.8 (22.4)	4.8	6.2 (3.8)	11.1 (1.8)	31.3 (28.9)	$-4.7^{a}$
Italy	749	4.4	22.1 (17.4)	129.4 (20.1)	30.2 (27.7)	6.8	5.4 (3.6)	14.6 (1.2)	44.5 (48.4)	$-12.9^{a}$
Japan	3,852	1.4	73.2 (57.5)	164.6 (53.7)	37.4 (31.9)	5.6	24.5 (10.5)	53.8 (4.9)	68.7 (54.5)	$-7.3^{a}$
Netherlands	868	1.3	13.2 (9.5)	99.7 (10.5)	27.6 (26.1)	11.6	5.4 (5.5)	12.1 (2.0)	41.3 (37.9)	$-6.4^{a}$
Singapore	176	1.2	14.4 (12.0)	15.1 (4.7)	6.6 (6.7)	7.7	5.8 (3.1)	7.4 (1.3)	9.3 (8.9)	$-4.5^{a}$
Sweden	351	9.8	25.3 (25.5)	142.8 (19.3)	30.4 (21.7)	9.3	3.2 (2.1)	7.4 (1.2)	64.8 (66.1)	$-17.8^{a}$
Switzerland	743	2.3	17.2 (11.5)	87.3 (10.6)	46.6 (49.1)	9.7	5.1 (4.5)	11.7 (1.7)	60.7 (70.4)	$-4.2^{a}$
UK	2755	9.6	53.3 (29.0)	136.5 (20.7)	37.4 (40.2)	6.8	10.8 (5.5)	20.9 (2.6)	71.2 (67.3)	$-26.7^{a}$

<sup>&</sup>lt;sup>a</sup>Denotes significance at the 5% level.

The table reports descriptive statistics of mutual funds by country for the period 1999–2000. It contains the total stock market capitalization (MCAP) in US\$ billion of each country, the aggregate percentage of MCAP held by domestic funds, the average number of stocks held by individual domestic funds, the equal-weighted total net asset value of mutual funds (ETNA), and the value-weighted market values of firms (VValue) invested by individual domestic funds, with their corresponding median values reported in square brackets. ETNA and VValue are both in US\$ billion. We present the same statistics for the foreign funds invested in each country. The last column of the table shows the *t*-statistic for the test of the difference in VValue between domestic and foreign funds.

Among the 11 countries, Japan and the UK have the largest total stock market capitalization, of about \$3.9 and 2.8 trillion, respectively, whereas Sweden and Singapore have the smallest, of about \$351 and 176 billion, respectively. In aggregate, domestic funds hold an average of between 1.1% (Hong Kong) and 9.8% (Sweden) of the total stock market capitalization. In contrast, foreign funds hold an average of between 4.8% (Hong Kong) and 11.6% (Netherlands) of the local stock market capitalization. On average, foreign mutual funds hold a larger fraction of the total market capitalization of local stock markets than do domestic mutual funds. The investment pattern clearly suggests that increased access to financial markets across the world has facilitated mutual funds' diversification in foreign markets. This result is also apparent in Table 1, where we observe a greater number of foreign funds than domestic funds investing in domestic stocks.

Table 2 further shows that, at the fund level, domestic fund managers on average invest in a wide array of domestic stocks, as compared with foreign fund managers, who invest only in a selected number of domestic stocks. For example, the average number of Netherlands stocks held by domestic funds is 13.2 compared with 5.4 held by foreign funds, and the average number of UK stocks in the portfolio holdings of domestic

funds is 53.3 compared with 10.8 in those of foreign funds.

Most of the average and median equal-weighted market values of domestic funds' holdings are at least twice those of foreign funds' holdings. Given the larger number of foreign funds that hold domestic stocks and, in aggregate, own a larger fraction of the local stock market capitalization, the smaller market value of their holdings suggests that on average each foreign fund must have held a significantly smaller fraction of the local securities. The implication of this finding is that foreign funds on average have a small equity investment in each market, and that it explains why their global portfolio generally consists of a small number of stocks from each market. This investment strategy perhaps reflects the objective of foreign investors to diversify worldwide. In contrast to equal-weighted statistics, the mean and median value-weighted market capitalizations of firms invested by funds are generally smaller for domestic than foreign funds; their difference is statistically significant at the 5% level. As opposed to foreign funds, domestic funds tend to prefer smaller rather than larger stocks.

# Firm characteristics

Drawn from existing studies, and also to facilitate a comparison, we employ the following seven firm





characteristics; the data on such characteristics are obtained from Global Vantage and Worldscope.

- (1) *Debt–Equity*: The ratio of book value of total liabilities to book value of total equity at year end. It measures a firm's financial leverage.
- (2) *Dividend Yield*: The value of dividends paid during the year divided by the market value of the firm at year end.
- (3) *Return on Equity*: The net income divided by book value of equity at year end.
- (4) Market-to-Book: Market value divided by book value of equity at the year end. It measures a firm's growth potential. It is a common notion that growth funds tend to invest in firms with high market-to-book equity ratios, whereas value funds are likely to invest in firms with low market-to-book equity ratios.
- (5) Firm size: The market capitalization of a firm at the end of the year. As Kang and Stulz (1997) point out, more information is generally available on large firms, and thus foreign investors are inclined to have more knowledge about large than about small firms. In this case, one should expect significantly less information asymmetry, or lower information acquisition costs, between domestic and foreign investors in large-size firms.
- (6) *Turnover*: The ratio of the monthly average number of shares traded over the past year to the number of shares outstanding. It measures a firm's market liquidity.
- (7) *Variance*: The variance of monthly returns estimated using the previous 3 years of monthly returns. It measures the total risk of a firm's stock.

To ensure consistency with the existing studies, all the variables, except return on equity, are expressed in natural logarithms. For ease of discussion, we label these common seven firm characteristics as the 'basic' characteristics of a stock.

# **Industry characteristics**

We also incorporate industry effects in our analysis in order to determine whether funds display any preferences for sector stocks, and whether such preferences differ between domestic and foreign funds. In line with most of the existing studies, we group firms from each country into seven sectors based on a two-digit SIC code:

- (1) construction (C);
- (2) financial and real estate (F);

- (3) manufacturing (M);
- (4) mining, petroleum, agriculture, fishing, and basic industries (B);
- (5) retail and textiles (R);
- (6) services and leisure (S); and
- (7) utilities and transportation (U).

Industry dummy variables are used to capture the different industries. For example, the dummy variable for the manufacturing sector will take the value of 1 if a firm belongs to that specific sector and 0 if otherwise.

# Investor recognition/firm visibility proxies

In his model, Merton (1987) argues that investors prefer to invest in securities that they know about.<sup>9</sup> In our context, his model would suggest that foreign investors, who are typically informationally disadvantaged, tend to invest in stocks that they are familiar with. Such stocks are generally internationally known, or have greater visibility in the global markets. The related studies, as discussed in the literature review section, test the Merton hypothesis by using measures such as the listings of a firm's stock in foreign stock exchanges, or the level of a firm's export sales, as proxies for how widely the firm is known abroad. 10 In addition to the two proxies, our analysis also includes two more measures for investor recognition and firm visibility, namely analyst coverage and stock index memberships. They are briefly described below.

- (1) The number of analysts following a stock: The information on analyst coverage is easily available from the I/B/E/S international file, and is for the period December 1998 and 1999. The larger the number of analysts following a security, the greater is the visibility of the firm in the markets.
- (2) *Index memberships*: A firm's stock is a member of any of the following international indices: Morgan Stanley Capital International, Dow Jones, and Financial Times/Standard and Poor's. The data are obtained from Worldscope for December 1998 and 1999. Forming part of an international index gives the stock more visibility in the global markets.
- (3) Foreign sales: The ratio of total exports to total sales, expressed as a percentage. The data are available from Worldscope, and are recorded in December 1998 and 1999. Export sales are used as a proxy for how well known a firm is to foreign investors. Firms with larger foreign sales would enjoy greater recognition worldwide.

(4) Depositary receipts: A dummy variable that takes the value of 1 if a firm's stock is listed in one or more foreign stock exchanges, and 0 if otherwise. This information is obtained from the Bloomberg service. Previous studies have shown that the number of shareholders increases after a firm cross-lists its stock in foreign exchanges, indicating that cross-listing helps to enhance a company's visibility internationally.

# **Empirical results**

In this section, we examine for evidence of any differential investment behavior between foreign and domestic fund managers across 11 countries. Based on a stock-level analysis of the fund holdings, we study:

- (1) whether both domestic and foreign managers demand for certain stock characteristics;
- (2) whether their preferences for stocks are industry-specific; and
- (3) whether their holdings are weighted towards stocks with worldwide visibility and reputation.

Any finding of differential stock demands or preferences would imply that the two groups of managers make different stock selections.

# Fund ownership and basic firm and industry characteristics

Table 3 summarizes results from the seemingly unrelated regressions, <sup>11</sup> as given by

$$\mathbf{Y} = \mathbf{X}\mathbf{B} + \mathbf{E} \tag{1}$$

In the baseline model (1), Y is a  $\left(\sum_{i=1}^{11} N_i\right) \times 1$  column vector, which stacks the 11 cross-sectional data of domestic (Holdd) or foreign fund stockholdings (Holdf), where  $N_i$  is the number of stocks from country I; X is a  $\left(\sum_{i=1}^{11} N_i\right) \times 11K$  matrix of stock characteristics; B is a  $(11K \times 1)$  column vector of parameters, where K represents the set of basic firm and industry characteristics, as described in the data section;  $^{12}$  and E is a  $\left(\sum_{i=1}^{11} N_i\right) \times 1$  vector of random errors.

We estimate (1) using the 1999 and 2000 observations, separately. In the table, we provide the cross-sectional mean slope coefficient on each variable and the adjusted  $R^2$ , together with their *t-statistics* in parentheses below. All the statistics are computed using the Fama–Macbeth (1973) method. It also contains three different F-test statistics: (i) the F-test of the null hypothesis that each variable of interest has the same explanatory power for

 Table 3
 Determinants of domestic and foreign fund ownerships

				Restriction tests		
	Holdd	Holdf	F-stat	F-stat(1)	F-stat(2)	
DE	-0.06 (-1.36)	-0.11 (-1.69)	4.91 (5)	3.83 (0.00)	5.94 (0.00)	
DY	0.30 (3.69)	0.01 (0.19)	9.29 (11)	6.71 (0.00)	1.91 (0.15)	
ROE	0.31 (2.06)	0.54 (2.38)	1.77 (4)	1.88 (0.05)	1.25 (0.21)	
MB	0.63 (4.16)	0.21 (1.39)	9.48 (13)	5.94 (0.00)	4.93 (0.00)	
SIZE	-0.12 (-0.43)	1.86 (10.5)	29.54 (18)	7.48 (0.00)	6.30 (0.00)	
TURN	0.78 (5.35)	1.01 (8.04)	5.34 (9)	9.14 (0.00)	2.90 (0.00)	
VAR	-0.64 (-2.99)	-0.61 (2.64)	5.31 (9)	1.81 (0.06)	1.87 (0.05)	
$D_{C}$	8.12 (5.59)	3.70 (4.71)	9.93 (12)	2.70 (0.00)	6.66 (0.00)	
$D_F$	6.77 (5.16)	3.84 (5.18)	12.01 (11)	2.71 (0.00)	6.08 (0.00)	
$D_M$	8.60 (6.02)	4.74 (5.95)	13.07 (13)	2.55 (0.00)	6.42 (0.00)	
$D_B$	7.95 (5.84)	4.21 (6.30)	13.16 (15)	2.38 (0.00)	6.17 (0.00)	
$D_R$	7.27 (5.98)	4.21 (5.87)	11.74 (13)	2.58 (0.00)	5.99 (0.00)	
$D_{S}$	8.05 (6.09)	5.12 (5.92)	13.04 (16)	2.63 (0.00)	6.50 (0.00)	
$D_U$	7.30 (5.61)	4.31 (5.72)	13.03 (16)	2.44 (0.00)	6.31 (0.00)	
Adj. $R^2$	0.20 (9.99)	0.27 (14.6)	, ,	, ,		

The table summarizes results from seemingly unrelated regressions of stock ownerships (Holdd and Holdf) against seven industry dummy variables and seven basic firm characteristics (debt–equity ratio (DE), dividend yield (DY), return on equity (ROE), market-to-book equity (ROE), firm size (SIZE), turnover (TURN), and return variance (VAR)) for 1999 and 2000. The industry variables,  $D_C$ ,  $D_F$ ,  $D_M$ ,  $D_B$ ,  $D_R$ ,  $D_S$ , and  $D_U$ , take the value of 1 if a firm belongs to the respective seven sectors, namely construction (C), financial and real estate (F), manufacturing (F), mining, petroleum, agriculture, fishing, and basic industries (F), retail and textiles (F), services and leisure (F), and utilities and transportation (F), and 0 if otherwise. F0 if otherwise. F1 table contains cross-sectional mean coefficient estimates and adjusted F2, with t-statistics in parentheses. The F2-statistic (F2-stat) tests the hypothesis that the variable of interest has the same explanatory power for F1 the slope coefficients are equal across 11 countries when F1 countries when F3 and F4 respective dependent variables; all F2-values are reported below. All coefficients are multiplied by 100.





Holdd and Holdf of a particular country, with the number of significant cases at the 5% level reported in square brackets; and (ii) for Holdd and Holdf, separately, the F-test of the null hypotheses that the coefficients associated with each variable are jointly equal across the 11 countries, with *P*-values reported in parentheses below.

Several notable observations emerge from Table 3. Both the industry and basic firm-specific variables have consistently greater explanatory power for the level of foreign ownership than for the level of domestic ownership across the 11 countries. Their cross-sectional mean adjusted  $R^2$ s are 20 and 27%. respectively. 13 For both Holdd and Holdf, the crosssectional average coefficients of all the seven industry dummy variables are positive and statistically significant at the 5% level. The positive constant component of the mean percentage of fund ownership suggests that domestic and foreign fund managers do hold a fraction of the firms' stock in each sector. One notable difference is that these coefficients are consistently larger for domestic than for foreign fund ownership. This finding is consistent with our earlier observation that, when compared with foreign funds, domestic funds tend to hold a larger fraction of local stocks. Based on the number of statistically significant F-statistics, the results indicate that industry characteristics generally display different effects on the two types of fund ownership. The values of F-stat(1) and F-stat(2) further suggest that industry characteristics have varying influences on the investment decisions of domestic and foreign fund managers across different countries.

Table 3 also shows some regularity in the economic significance of the basic firm-specific variables across the type of equity ownership. While they prefer stocks with high return on equity, large turnover and low return variability, both domestic and foreign fund managers also display differences in their stock preferences. Domestic managers also tend to prefer liquid stocks (larger dividend yields) and growth stocks (higher market-to-book equity). Large dividend yields measure income appreciation, whereas high market-tobook equity ratios typically reflect firms with high growth potential, or firms with low financial distress. 14 The cross-sectional mean coefficients on dividend yields and market-to-book equity are 0.30 (t-statistic=3.7) and 0.63 (t-statistic=4.2). In contrast, both of these coefficients are statistically insignificant in foreign ownership. It is evident that domestic funds tend to concentrate in shares

of firms with high-income appreciation and especially those with high potential growth and low financial distress. On the other hand, foreign managers are also more inclined to invest in large market-capitalization stocks. The cross-sectional mean coefficient on firm size in foreign ownership is 1.86 (t-statistic=10.5), as opposed to an insignificant effect of -0.12 (t-statistic=-0.43) in domestic ownership. The F-tests show a difference in the firm size effect, followed by market-to-book and dividend yields, in domestic and foreign fund ownerships.

Contrary to our expectations, on average, neither the domestic nor foreign managers appear to be overly concerned about firm leverage when they make equity investments. The coefficient on debtequity ratio is negative, but only marginally significant in the foreign ownership regression.

Overall, our results identify several similarities as well as differences between foreign and domestic fund preferences for industry and basic firm-specific characteristics. Both types of fund manager consider turnover rates, return on equity, and return variance, but not financial leverage, important in their investment decisions. In contrast, however, domestic managers also attach considerable importance to firms that pay large dividends and have low financial distress and high growth potential, while foreign managers also invest more in shares of large firms.

# Fund ownership and visibility/recognition proxies

In this subsection, we expand our earlier crosssectional regression models by increasing the number of independent variables to include investor recognition and firm visibility variables. The proxy recognition/visibility variables are

- (1) foreign sales;
- (2) analyst coverage;
- (3) depositary receipts; and
- (4) index membership dummy variable, which equals 1 if the stock is a member of an international index and 0 if otherwise.

Our unreported preliminary data analysis showed that these variables are highly cross-correlated. To circumvent the problem of multicollinearity, we regress equity ownership against the industry and basic firm characteristics and each of the proxy variables at a time. As a result, there are four cross-sectional regression models. Panels A–D of Table 4 present the cross-sectional mean regression coefficients on the industry and basic firm characteristics

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Table 4 Effects of visibility/investor-recognition on domestic and foreign funds

				Restriction tests	
	Holdd	Holdf	F-stat	F-stat(1)	F-stat(2)
Panel A: Fore	eign sales				
DE	-0.09 (-1.09)	-0.37 (-2.50)	2.79 (4)	3.86 (0.04)	4.89 (0.00)
DY	0.25 (3.08)	0.02 (0.33)	4.28 (5)	2.13 (0.02)	4.01 (0.35)
ROE	0.78 (1.47)	0.76 (2.48)	1.42 (2)	1.39 (0.38)	1.28 (0.40)
MB	0.64 (3.71)	0.46 (2.11)	5.96 (9)	3.99 (0.00)	4.97 (0.00)
SIZE	-0.17 (-0.92)	0.99 (5.02)	14.00 (15)	6.97 (0.00)	3.82 (0.02)
TURN	0.74 (4.08)	1.30 (6.47)	4.33 (6)	4.69 (0.01)	5.79 (0.00)
VAR	-0.75 (-3.64)	-0.69 (-2.33)	3.40 (6)	1.74 (0.41)	2.25 (0.06)
V/R	0.39 (0.84)	3.03 (3.63)	4.66 (8)	2.52 (0.08)	2.04 (0.14)
$D_C$	8.45 (6.06)	5.46 (3.25)	10.67 (18)	3.32 (0.00)	4.99 (0.00)
$D_F$	6.81 (5.28)	5.13 (2.69)	12.82 (16)	3.42 (0.00)	4.31 (0.00)
$D_{\mathcal{M}}$	8.90 (5.87)	6.40 (3.42)	12.46 (16)	5.59 (0.00)	5.07 (0.00)
$D_B$	8.13 (5.98)	6.55 (2.89)	12.05 (16)	4.83 (0.00)	4.45 (0.00)
$D_R$	7.71 (6.04)	6.04 (3.57)	11.06 (16)	5.18 (0.00)	5.65 (0.00)
$D_{S}$	8.62 (6.25)	7.24 (3.76)	12.55 (16)	5.56 (0.00)	5.22 (0.00)
$D_U$	11.58 (2.72)	6.55 (3.34)	12.16 (18)	4.41 (0.00)	4.27 (0.00)
Adj. R <sup>2</sup>	0.20 (11.2)	0.31 (14.3)			
Panel B: Ana	lyst coverage				
DE	-0.08 (-2.11)	-0.15 (-2.94)	4.43 (7)	3.13 (0.01)	3.98 (0.00)
DY	0.27 (3.26)	0.01 (0.22)	6.00 (4)	6.35 (0.00)	1.73 (0.18)
ROE	0.59 (1.64)	0.99 (1.62)	1.21 (1)	1.67 (0.09)	0.86 (0.54)
MB	0.75 (4.54)	0.31 (2.09)	7.19 (7)	4.01 (0.00)	4.24 (0.00)
SIZE	-0.46 (-3.09)	0.52 (2.52)	9.84 (12)	7.84 (0.00)	3.08 (0.03)
TURN	0.73 (5.39)	0.81 (7.34)	5.29 (10)	11.62 (0.00)	2.38 (0.05)
VAR	-0.70 (-2.06)	-0.69 (-2.38)	4.27 (6)	1.87 (0.06)	2.24 (0.03)
V/R	0.10 (3.69)	0.30 (5.69)	4.33 (13)	2.72 (0.02)	1.55 (0.40)
$D_C$	7.87 (4.73)	2.87 (3.25)	10.56 (12)	3.00 (0.01)	5.93 (0.00)
$D_F$	6.50 (4.22)	2.50 (2.81)	11.60 (14)	3.20 (0.00)	5.40 (0.00)
$D_{\mathcal{M}}$	8.01 (4.78)	3.96 (4.10)	11.50 (12)	3.84 (0.00)	5.56 (0.00)
$D_B$	7.34 (4.56)	3.99 (3.79)	11.04 (14)	3.31 (0.02)	5.18 (0.00)
$D_R$	6.86 (4.64)	3.35 (4.07)	11.56 (14)	3.65 (0.01)	6.16 (0.00)
$D_{S}$	7.63 (5.07)	4.97 (4.88)	11.31 (13)	4.27 (0.00)	5.75 (0.00)
$D_U$	6.70 (4.18)	3.61 (3.59)	12.40 (14)	3.42 (0.02)	5.33 (0.00)
Adj. R <sup>2</sup>	0.22 (10.6)	0.32(12.6)			
Panel C: Dep	oositary receipts				
DE	-0.05 (-1.00)	-0.10 (-1.85)	1.69 (4)	3.13 (0.12)	2.93 (0.02)
DY	0.26 (3.14)	0.04 (0.94)	4.79 (6)	3.38 (0.00)	2.95 (0.25)
ROE	0.41 (1.88)	0.67 (2.56)	1.19 (2)	1.47 (0.00)	2.35 (0.03)
MB	0.72 (4.37)	0.35 (2.59)	5.59 (8)	4.19 (0.00)	2.24 (0.20)
SIZE	0.01 (0.03)	1.07 (6.04)	14.51 (10)	4.93 (0.00)	2.97 (0.00)
TURN	0.84 (5.32)	1.09 (7.84)	5.47 (8)	9.46 (0.00)	6.89 (0.00)
VAR	-0.83 (-2.12)	-0.66 (-2.19)	3.78 (9)	2.78 (0.00)	3.13 (0.03)
V/R	-0.71 (-1.94)	2.50 (4.97)	9.75 (17)	2.56 (0.00)	9.01 (0.00)
$D_C$	8.36 (6.23)	4.48 (5.80)	9.03 (10)	2.75 (0.00)	4.49 (0.00)
$D_F$	6.73 (5.29)	4.24 (5.63)	10.56 (12)	2.85 (0.00)	4.37 (0.00)
$D_M$	8.68 (6.54)	5.58 (5.93)	10.80 (14)	5.21 (0.00)	4.71 (0.00)
$D_B$	7.81 (5.98)	5.46 (5.29)	10.22 (14)	4.44 (0.00)	4.46 (0.00)
$D_R$	7.36 (6.31)	5.22 (6.55)	9.62 (12)	4.95 (0.00)	5.42 (0.00)
$D_{S}$	7.93 (6.24)	6.06 (5.72)	11.50 (14)	5.32 (0.00)	5.23 (0.00)
$D_U$	7.32 (5.71)	4.98 (5.92)	10.06 (13)	3.81 (0.00)	4.19 (0.00)
Adj. $R^2$	0.22 (9.51)	0.31 (14.8)			



Table 4 Continued

				Restriction tests	
	Holdd	Holdf	F-stat	F-stat(1)	F-stat(2)
Panel D: Ind	ex memberships				
DE	$-0.04^{'}(-0.92)$	-0.06 (-1.09)	4.71 (7)	3.44 (0.10)	3.78 (0.00)
DY	0.28 (3.45)	0.03 (0.77)	5.18 (8)	3.99 (0.01)	4.10 (0.18)
ROE	0.44 (1.66)	0.81 (2.37)	1.34 (1)	1.37 (0.39)	2.12 (0.03)
MB	0.69 (4.56)	0.47 (3.55)	5.06 (11)	4.54 (0.00)	3.89 (0.28)
SIZE	-0.01 (-0.03)	0.51 (3.23)	10.69 (14)	5.96 (0.00)	5.15 (0.00)
TURN	0.82 (5.04)	0.90 (8.21)	5.03 (8)	8.75 (0.01)	6.22 (0.00)
VAR	-0.94 (-2.05)	-0.72 (-2.09)	3.65 (7)	2.25 (0.04)	2.52 (0.02)
V/R	-0.36 (-0.49)	4.22 (7.65)	13.70 (18)	5.69 (0.00)	17.23 (0.00)
$D_C$	8.22 (5.32)	4.08 (5.91)	10.27 (16)	3.91 (0.00)	3.36 (0.02)
$D_F$	7.24 (5.02)	4.05 (5.36)	10.77 (14)	4.02 (0.00)	3.53 (0.03)
$D_{\mathcal{M}}$	8.49 (5.48)	5.26 (6.44)	11.17 (14)	5.49 (0.00)	3.86 (0.02)
$D_B$	7.86 (5.50)	4.75 (5.61)	10.56 (14)	5.19 (0.00)	3.22 (0.02)
$D_R$	7.20 (5.37)	4.98 (7.79)	10.93 (14)	5.48 (0.00)	3.94 (0.00)
$D_{S}$	7.53 (5.22)	5.68 (6.47)	11.79 (15)	5.92 (0.00)	3.91 (0.00)
$D_U$	7.67 (4.74)	4.48 (6.40)	11.16 (6)	5.08 (0.00)	3.37 (0.00)
Adj. $R^2$	0.20 (9.11)	0.35 (15.2)		, ,	,

Panels A-D of the table summarize the effects of the respective four visibility/recognition proxy variables (V/R) on domestic (Holdd) and foreign equity (Holdf) ownerships after controlling for the seven firm-specific characteristics and industry effects, as defined in Table 3. The proxy variables include foreign sales, analyst coverage, depositary receipts, and index memberships. They contain cross-sectional mean coefficient estimates and adjusted  $R^2$ , with t-statistics in parentheses. The F-test tests the hypothesis that each independent variable has the same explanatory power for Holdd and Holdf at the country level, with the number of significant cases at the 5% level in square brackets below. The F-stat(1) and F-stat(2) test that the slope coefficients are equal across 11 countries when Holdd and Holdf are the respective dependent variables; all P-values are reported below. All coefficients are multiplied

and on the four respective visibility/recognition variables, together with the F-statistics.

Table 4 reveals several interesting observations on local and foreign equity preferences. In general, incorporating a proxy variable for visibility/recognition in each regression model associated with domestic or foreign equity ownership does not significantly affect the explanatory power of the industry and basic firm characteristics. Interestingly, the average explanatory power of the crosssectional regression models, while it remains fairly constant for domestic fund ownership regression models, increases for foreign fund ownership regression models. Compared with that reported in Table 3, the cross-sectional mean adjusted  $R^2$ value for local ownership models has remained the same at 20%, or has gone up just a little to 22%. In contrast, however, the adjusted  $R^2$  value increases from 27% (see Table 3) to about 31–35% for foreign ownership models. This is evidence that variables that are proxies for investor recognition or firm visibility have a greater impact on foreign than on local fund stockholdings.

Table 4 also highlights one striking result: foreign sales, analyst coverage, foreign listings or depositary receipts, and stock index memberships of a stock play a significant role in foreign equity ownership, but little in domestic equity ownership. This distinct difference is also supported by the F-test, whose statistic suggests, in most of the cases, a rejection of the hypothesis that each of the visibility/recognition variables has the same effect on domestic and foreign ownerships. For foreign equity ownership, the cross-sectional mean coefficients of foreign sales, analyst coverage, foreign listings, and index memberships of a stock are 3.03 (t-statistic=3.63), 0.30(t-statistic=5.69), (t-statistic=4.97), and 4.22 (t-statistic=7.65),respectively. On the contrary, only analyst coverage has a significant, albeit smaller, effect on domestic equity ownership, with its cross-sectional mean coefficient of 0.1 (t-statistic=3.69). It is therefore apparent that, compared with domestic managers, foreign managers place more emphasis on companies with large foreign sales, stocks with more extensive analyst coverage, stocks with foreign listings, and stocks with index memberships.

Furthermore, when compared with the results in Table 3, the magnitude of the size effect on foreign equity ownership has greatly reduced from 1.86 to 0.51–1.07, albeit at the same level of statistical significance. It is plausible that the size effect is partially subsumed by the effect of firm visibility or recognition. Also, this might imply that the economic significance of the size effect, as revealed in Table 3, probably emphasizes the role of investor recognition and firm visibility in foreign ownership. 15 That is, the larger the firm size, the more widely recognized and visible is the firm. Furthermore, in a majority of the cases, the F-statistics reject the null hypothesis that firm size exhibits the same explanatory power for domestic and foreign

However, one might argue that the above results are driven by firms whose stocks are constituents of an index. In order to evaluate the marginal impact of the other visibility/recognition proxies, we re-examine the results in Panels A–C of Table 4 by excluding stocks with index memberships. The unreported test results are substantially similar to those of Table 4. The cross-sectional means of the coefficients associated with recognition/visibility variables (i.e., foreign sales, analyst coverage, and foreign listings) remain statistically significant at the 5% level. Consistent with Table 4, the results also show a larger adjusted  $R^2$  associated with foreign-ownership than with local-ownership regressions. We have noticed that the marketbook equity ratio no longer has a significant effect on foreign ownership, and that size becomes statistically insignificant after adding analyst coverage to the regression model.

Thus, when making investment decisions, foreign managers tend to emphasize global visibility or recognition of a stock, whereas domestic managers lay stress on the fundamental stock characteristics.

# Visibility and fund mandates

So far, we have shown that a stock's visibility/ recognition in the global markets has a greater influence on the investment decisions of foreign fund managers than of domestic fund managers. This differential investment behavior might be attributed to the differential mandates of domestic vs foreign fund managers. Generally, it is costly for any fund manager to analyze and process information on the thousands of stocks available in the markets. 16 Therefore, domestic and foreign fund managers with different mandates would have different marginal benefits and marginal costs of gathering and processing information.

For example, the cost-benefit tradeoff is likely to be the same for foreign and domestic managers of country funds (i.e., with more than 80% of their funds allocated to a specific country). In such a

case, there should be no distinct differential behavior between foreign and domestic managers of country funds. Conversely, the cost-benefit tradeoff ought to differ for domestic managers and foreign managers of regional and global funds, or for domestic managers of country, regional, and global funds. Any such evidence would suggest that the stock preferences of domestic vs foreign fund managers are driven by their differential investment mandates. As such, the implication is that it is the geographic allocations of their fund investments rather than the geographic locations of fund managers that drive their differential stock preferences found earlier.

To address these issues, we perform several tests, as shown below, that further provide significant insights into the general investment behavior of foreign vs domestic fund managers.

# Stock preferences of funds and fund mandates

This subsection performs three major tests to examine how differential fund mandates of foreign and domestic managers drive the observed differential investment behaviors of foreign and domestic managers: foreign managers prefer more globally visible stocks than do domestic managers. Such tests allow us to determine whether the geographic distribution of fund investments or the geographic location of fund managers matters.

The first test examines whether domestic and foreign country funds, with the same large and mid-cap investment style, differ in their stock preferences. 17 Both groups of funds have at least 80% of their TNAV invested in domestic stocks and hence should face similar tradeoffs between the marginal benefit and marginal cost of acquiring and processing information. Table 5 summarizes the regression results.

The effects of basic characteristics on fund holdings remain qualitatively similar to those reported in Table 4, but the effects of visibility/ recognition proxies become weaker. When compared with those of Table 4, the number of significant F-statistics falls from 13 to 8 in the case of analyst coverage and from 18 to 10 in the case of index membership, but it remains fairly stable in cases of depositary receipts and foreign sales. With their stock holdings invested mainly in the same market as those of domestic fund managers, foreign country fund managers show less differential preference towards visible stocks. With the same investment mandate, foreign and domestic fund managers of country funds tend to face a similar



 Table 5
 Stock preferences of domestic and foreign country funds

				Restriction tests	
	Holdd	Holdf	F-stat	F-stat(1)	F-stat(2)
Panel A: Fore					
DE	-0.04 (-1.19)	-0.22 (-0.94)	1.17 (2)	7.71 (0.00)	7.22 (0.00)
DY	0.22 (2.69)	0.11 (0.83)	4.35 (6)	8.54 (0.00)	1.45 (0.41)
ROE	0.17 (1.09)	0.98 (1.54)	1.05 (1)	1.69 (0.16)	1.60 (0.00)
MB	0.54 (3.28)	-0.51 (-1.42)	7.26 (10)	13.62 (0.00)	3.10 (0.00)
SIZE	-0.47 (-2.02)	0.56 (0.85)	8.03 (12)	7.37 (0.00)	8.26 (0.00)
TURN	0.59 (4.95)	0.47 (2.05)	9.58 (10)	10.90 (0.00)	2.37 (0.01)
VAR	-0.41 (-4.31)	-0.51 (-0.96)	1.90 (2)	1.45 (0.22)	1.37 (0.18)
V/R	0.44 (1.69)	4.14 (3.05)	3.47 (8)	1.26 (0.30)	1.92 (0.25)
$D_{C}$	5.95 (4.23)	6.07 (3.40)	9.47 (11)	13.29 (0.00)	2.35 (0.01)
$D_{F}$	5.21 (4.11)	6.59 (4.65)	9.18 (13)	13.21 (0.00)	3.36 (0.01)
$D_{M}$	6.19 (4.49)	8.21 (5.28)	9.55 (12)	12.22 (0.00)	3.13 (0.00)
$D_{\rm B}$	5.68 (4.61)	6.73 (5.10)	8.45 (12)	12.57 (0.00)	2.90 (0.02)
$D_{R}$	5.20 (4.45)	7.21 (5.32)	8.71 (12)	13.70 (0.00)	2.79 (0.02)
$D_{S}$	5.90 (4.52)	8.50 (6.22)	10.16 (15)	13.53 (0.00) 13.12 (0.00)	2.72 (0.00)
D <sub>U</sub> Adj. <i>R</i> <sup>2</sup>	5.44 (4.37) 0.13 (8.05)	7.52 (4.17) 0.08 (6.18)	9.56 (14)	13.12 (0.00)	2.50 (0.02)
Panel B: Anal	lyst coverage				
DE	-0.04 (-0.95)	-0.23 (-1.02)	1.15 (1)	7.71 (0.00)	6.42 (0.00)
DY	0.22 (2.61)	0.01 (0.04)	5.79 (8)	8.69 (0.00)	1.45 (0.31)
ROE	0.17 (1.30)	1.00 (1.60)	2.38 (5)	2.05 (0.04)	1.80 (0.32)
MB	0.50 (3.20)	-0.47 (-1. <del>3</del> 7)	6.80 (10)	10.37 (0.00)	2.88 (0.00)
SIZE	-0.53 (-2.46)	-0.40 (-0.77)	5.85 (14)	7.82 (0.00)	3.08 (0.07)
TURN	0.55 (4.67)	0.58 (1.40)	8.59 (14)	10.99 (0.00)	2.64 (0.01)
VAR	-0.38 (-4.21)	-0.28 (-1.02)	2.23 (3)	1.35 (0.33)	3.80 (0.09)
V/R	0.02 (1.52)	0.61 (2.13)	3.07 (8)	3.66 (0.00)	7.65 (0.03)
$D_{C}$	5.67 (3.79)	2.79 (1.29)	8.89 (11)	9.63 (0.00)	1.45 (0.24)
$D_{F}$	4.84 (3.64)	3.31 (1.99)	9.78 (13)	10.46 (0.00)	3.25 (0.00)
$D_{M}$	5.96 (4.08)	5.20 (2.84)	9.86 (14)	10.60 (0.00)	2.16 (0.04)
$D_{B}$	5.38 (4.20)	3.68 (2.15)	8.75 (12)	9.67 (0.00)	2.51 (0.00)
$D_{R}$	4.91 (3.94)	3.95 (2.28)	9.45 (14)	10.00 (0.00)	1.99 (0.21)
$D_{S}$	5.66 (4.14)	5.26 (2.74)	10.31 (16)	9.04 (0.00)	4.81 (0.00)
$D_{U}$	5.13 (3.88)	3.88 (1.65)	9.15 (14)	9.57 (0.00)	2.35 (0.07)
Adj. R <sup>2</sup>	0.15 (7.97)	0.12 (6.26)			
	ositary receipts				
DE	-0.05 (-1.27)	-0.08 (-0.36)	1.24 (1)	7.40 (0.00)	6.09 (0.00)
DY	0.21 (2.66)	0.10 (0.66)	4.77 (9)	7.00 (0.00)	1.38 (0.30)
ROE	0.15 (1.19)	1.09 (1.16)	1.69 (3)	2.05 (0.14)	2.12 (0.11)
MB	0.53 (3.26)	-0.55 (8.16)	8.16 (12)	8.21 (0.00)	2.80 (0.00)
SIZE	-0.28 (-1.37)	0.33 (5.25)	5.24 (13)	8.36 (0.00)	4.08 (0.00)
TURN	0.61 (4.86)	0.49 (7.76)	7.75 (12)	10.79 (0.00)	2.29 (0.11)
VAR	-0.38 (-4.40)	-0.68 (2.20)	2.19 (2)	1.33 (0.36)	3.28 (0.08)
V/R	-0.57 (-1.78)	3.32 (4.53)	4.53 (16)	3.03 (0.02)	6.44 (0.00)
$D_C$	6.15 (4.20)	5.38 (3.95)	9.72 (11)	11.22 (0.00)	0.92 (0.40)
$D_F$	5.39 (3.94)	5.62 (4.15)	12.37 (13)	10.81 (0.00)	3.13 (0.00)
$D_M$	6.76 (4.54)	8.24 (5.95)	10.87 (13)	12.73 (0.00)	2.06 (0.04)
D <u>B</u>	6.01 (4.50)	7.02 (5.20)	9.83 (13)	11.91 (0.00)	3.17 (0.00)
$D_R$	5.57 (4.39)	6.73 (4.82)	9.61 (14)	11.23 (0.00)	2.08 (0.21)
$D_{S}$	6.30 (4.58)	8.22 (6.06)	9.72 (15)	11.01 (0.00)	4.92 (0.00)
$D_U$	5.73 (4.24)	6.69 (4.27)	10.27 (14)	12.58 (0.00)	2.30 (0.05)
Adj. $R^2$	0.16 (9.20)	0.13 (6.22)			

Table 5 Continued

				Restriction tests	
	Holdd	Holdf	F-stat	F-stat(1)	F-stat(2)
Panel D: Inde	ex memberships				
DE	$-0.03^{\circ}(-0.83)$	-0.03 (-0.11)	1.15 (0)	7.62 (0.00)	6.92 (0.00)
DY	0.21 (2.71)	0.04 (0.27)	5.35 (9)	7.32 (0.00)	1.40 (0.28)
ROE	0.31 (1.77)	1.45 (1.82)	1.84 (4)	2.03 (0.21)	2.32 (0.08)
MB	0.48 (3.19)	-0.55 (-1.58)	8.61 (11)	8.36 (0.00)	2.94 (0.00)
SIZE	-0.20 (-1.19)	0.22 (0.32)	4.70 (12)	6.83 (0.08)	3.96 (0.00)
TURN	0.60 (4.72)	0.38 (1.46)	10.72 (13)	7.30 (0.00)	2.34 (0.09)
VAR	-0.42 (4.67)	-0.88 (-1.84)	2.37 (2)	1.65 (0.00)	4.61 (0.01)
V/R	-0.75 (-1.07)	2.03 (2.15)	4.50 (10)	5.75 (0.00)	7.28 (0.02)
$D_C$	6.15 (3.73)	4.63 (3.18)	13.71 (13)	10.34 (0.00)	1.34 (0.26)
$D_F$	5.37 (3.59)	5.13 (3.39)	13.87 (15)	11.29 (0.00)	3.13 (0.00)
$D_{M}$	6.73 (4.09)	7.71 (4.74)	13.16 (16)	11.22 (0.00)	2.04 (0.03)
D <u>B</u>	5.89 (4.01)	6.33 (4.12)	12.15 (15)	10.50 (0.00)	2.43 (0.01)
$\overline{D_R}$	5.49 (3.86)	6.18 (3.82)	12.57 (14)	10.18 (0.00)	2.54 (0.00)
$D_{S}$	6.11 (4.17)	7.41 (4.76)	13.09 (17)	10.56 (0.00)	4.74 (0.01)
$D_U$	5.76 (3.77)	6.14 (3.27)	13.01 (16)	9.99 (0.00)	1.58 (0.11)
Adj. $R^2$	0.17 (7.88)	0.11 (5.84)			

Panels A–D of the table summarize the effects of the respective four visibility/recognition proxy variables (V/R) on domestic (Holdd) and foreign equity (Holdf) country fund ownership after controlling for the seven firm-specific characteristics and industry effects, as defined in Table 3. The proxy variables include foreign sales, analyst coverage, depositary receipts, and index memberships. The panels contain cross-sectional mean coefficient estimates and adjusted  $R^2$ , with associated t-statistics in parentheses. The F-statistic (stat) tests the hypothesis that each independent variable has the same explanatory power for Holdd and Holdf at the country level, with the number of significant cases at the 5% level in square brackets below. The F-stat(1) and F-stat(2) test that the slope coefficients are equal across the 11 countries when Holdd and Holdf are the respective dependent variables; all P-values are reported below. All coefficients are multiplied by 100.

cost–benefit tradeoff. This finding implies that it is the geographic dispersion of fund investments rather than the geographic location of fund managers that plays a role in the investment decisions of fund managers.

The second test examines whether domestic managers with different investment mandates exhibit differential preferences for visibility/recognition variables. All domestic managers possibly have similar access to domestic information, but the marginal benefits of acquiring and processing local information depend on their funds' mandates. Given their low concentration in local stock holdings, domestic managers of regional and global funds ought to have lower marginal benefits of gathering and processing local information than do domestic managers of country funds. Results are contained in Table 6. Consistent with our prediction, visibility/recognition variables, except analyst coverage, have no significant effects on the local stock holdings of both domestic country funds and domestic regional/global funds.

Finally, if geographic allocations of fund investments plays a more significant role in the investment preferences of fund managers than geographic locations of fund managers, then

foreign regional/global funds and domestic country funds should display greater differential investment behavior. We perform the test and present the results in Table 7. The results show remarkable differences in the demand for information proxies between the two groups of managers. Comparing the F-statistics associated with visibility/recognition variables in Tables 6 and 7, we find the number of statistically significant F-statistics has increased substantially. It goes up from 2 to 13 (foreign sales in Panel A), from 7 to 21 (analyst coverage in Panel B), from 4 to 20 (depositary receipts in Panel C), and from 3 to 21 (index memberships in Panel D).

In this subsection, we provide several new results that add significant insights into the differential behaviors between foreign and domestic fund managers. We show that the differential investment behaviors of fund managers are due not to their geographic location but to their investment mandates, and hence to the geographic distribution of their fund investments.

# Stock preferences of funds from different geographic regions

This subsection examines whether fund managers from North America, Europe, and Asia display





 Table 6
 Stock preferences of domestic country funds versus domestic regional/global funds

				Restriction tests	
	Holdd	Holdrg	F-stat	F-stat(1)	F-stat(2)
Panel A: Fore	eign sales				
DE	-0.04 (-1.19)	-0.02 (-0.79)	1.99 (2)	7.50 (0.00)	4.86 (0.00)
DY	0.22 (2.69)	0.14 (1.61)	3.55 (5)	8.90 (0.00)	2.29 (0.01)
ROE	0.17 (1.09)	0.55 (2.12)	0.89 (0)	1.90 (0.00)	2.68 (0.00)
MB	0.54 (3.28)	0.04 (0.43)	6 (10)	13.30 (0.00)	2.96 (0.00)
SIZE	-0.47 (-2.02)	0.29 (1.99)	6.91 (11)	7.20 (0.00)	11.67 (0.00)
TURN	0.59 (4.95)	0.27 (2.29)	6.76 (13)	10.10 (0.00)	2.56 (0.00)
VAR	-0.41 (-4.31)	-0.09 (-0.48)	2.86 (4)	1.50 (0.20)	1.41 (0.17)
V/R	0.44 (1.69)	0.14 (0.56)	1.12 (2)	1.20 (0.30)	2.89 (0.00)
$D_C$	5.95 (4.23)	2.97 (2.92)	9.46 (9)	13.60 (0.00)	2.14 (0.02)
$D_F$	5.21 (4.11)	2.75 (3.07)	10.65 (7)	13.40 (0.00)	2.35 (0.01)
$D_{M}$	6.19 (4.49)	3.39 (2.98)	10.04 (8)	12.60 (0.00)	2.46 (0.00)
$D_B$	5.68 (4.61)	3.28 (3.11)	9.18 (8)	12.30 (0.00)	1.89 (0.04)
$D_R$	5.20 (4.45)	2.93 (3.15)	9.72 (7)	13.40 (0.00)	2.12 (0.03)
$D_{S}$	5.90 (4.52)	2.88 (3.10)	11.64 (9)	13.30 (0.00) 13.00 (0.00)	2.57 (0.00)
D <sub>U</sub> Adj.R <sup>2</sup>	5.44 (4.37) 0.13 (8.05)	2.74 (3.07) 0.11 (5.27)	11.69 (8)	13.00 (0.00)	1.98 (0.04)
Panel B: And	ılyst coverage				
DE	-0.04 (-0.95)	-0.07 (-2.01)	1.6 (4)	7.89 (0.00)	3.28 (0.00)
DY	0.22 (2.61)	-0.02 (-0.76)	8.75 (7)	8.84 (0.00)	2.26 (0.01)
ROE	0.17 (1.30)	0.12 (1.64)	1.17 (2)	1.93 (0.04)	1.21 (0.10)
MB	0.50 (3.20)	0.09 (1.51)	6.94 (10)	10.23 (0.00)	2.94 (0.00)
SIZE	-0.53 (-2.46)	0.26 (1.98)	2.63 (9)	7.76 (0.00)	0.97 (0.22)
TURN	0.55 (4.67)	0.51 (3.61)	5.71 (13)	10.77 (0.00)	1.19 (0.20)
VAR	-0.38 (-4.21)	-0.04 (-0.46)	4.89 (12)	1.47 (0.30)	1.33 (0.00)
V/R	0.02 (1.52)	0.04 (2.11)	4.45 (7)	3.85 (0.00)	3.28 (0.00)
$D_C$	5.67 (3.79)	2.37 (2.63)	8.4 (14)	9.67 (0.00)	8.16 (0.00)
$D_F$	4.84 (3.64)	1.49 (1.83)	9.32 (12)	10.25 (0.00)	9.75 (0.00)
$D_M$	5.96 (4.08)	1.60 (2.38)	9.28 (13)	10.51 (0.00)	7.94 (0.00)
$D_B$	5.38 (4.20)	1.41 (1.83)	8.63 (12)	9.90 (0.00)	8.05 (0.00)
$D_R$	4.91 (3.94)	1.52 (2.37)	10.54 (12)	10.73 (0.00)	10.27 (0.00)
$D_{S}$	5.66 (4.14)	1.72 (2.59)	9.48 (13)	9.02 (0.00)	9.46 (0.00)
$D_U$	5.13 (3.88)	1.36 (1.71)	9.08 (11)	9.68 (0.00)	6.29 (0.00)
Adj.R <sup>2</sup>	0.15 (7.97)	0.11 (6.97)			
Panel C: Dep DE	oositary receipts	0.00 / 1.27\	1.23 (1)	7.31 (0.00)	2 10 (0 00)
DY	-0.05 (-1.27) 0.21 (2.66)	-0.08 (-1.37) -0.02 (-0.99)	3.38 (4)	7.37 (0.00)	2.10 (0.00) 1.10 (0.43)
ROE	0.21 (2.00)	0.08 (1.02)	0.67 (0)	2.20 (0.02)	0.77 (0.65)
MB	0.13 (1.19)	0.08 (1.02)	3.04 (3)	8.07 (0.00)	2.70 (0.00)
SIZE	-0.28 (-1.37)	0.44 (3.28)	3.52 (7)	8.57 (0.00)	5.63 (0.00)
TURN	0.61 (4.86)	0.44 (3.28)	7.39 (10)	10.51 (0.00)	4.64 (0.00)
VAR	-0.38 (-4.40)	-0.06 (-0.37)	3.96 (4)	1.12 (0.20)	1.38 (0.40)
V/R	-0.57 (-1.78)	-0.09 (-0.55)	2.31 (4)	2.94 (0.02)	1.56 (0.11)
D <sub>C</sub>	6.15 (4.20)	2.11 (3.48)	9.4 (4)	11.45 (0.00)	9.17 (0.00)
$D_F$	5.39 (3.94)	2.47 (2.39)	9.89 (5)	10.03 (0.00)	8.63 (0.00)
$D_M$	6.76 (4.54)	1.76 (3.58)	10.9 (5)	12.49 (0.00)	10.72 (0.00)
$D_B$	6.01 (4.50)	1.59 (2.32)	10.92 (6)	12.23 (0.00)	11.30 (0.00)
$D_R$	5.57 (4.39)	1.68 (3.57)	9.44 (5)	11.02 (0.00)	8.28 (0.00)
$D_{S}$	6.30 (4.58)	1.6 (3.32)	9.14 (4)	10.66 (0.00)	10.91 (0.00)
$D_U$	5.73 (4.24)	1.46 (2.20)	10.04 (4)	12.80 (0.00)	14.37 (0.00)
Adj. R <sup>2</sup>	0.16 (9.20)	0.12 (7.61)	` '	· · · /	()



Table 6 Continued

	Holdd	Holdrg	F-stat	F-stat(1)	F-stat(2)
Panel D: Ind	ex memberships				
DE	$-0.03^{'}(-0.83)$	-0.03 (-0.76)	0.66 (3)	7.39 (0.00)	1.50 (0.30)
DY	0.21 (2.71)	0.14 (1.44)	3.33 (4)	7.73 (0.00)	3.67 (0.00)
ROE	0.31 (1.77)	0.57 (2.12)	0.82 (1)	2.01 (0.02)	4.25 (0.00)
MB	0.48 (3.19)	0.04 (0.71)	2.44 (9)	8.06 (0.00)	4.84 (0.00)
SIZE	-0.20 (-1.19)	0.19 (2.30)	5.92 (12)	6.59 (0.00)	2.76 (0.00)
TURN	0.60 (4.72)	0.38 (2.12)	5.72 (13)	7.50 (0.00)	3.10 (0.00)
VAR	-0.42 (4.67)	-0.03 (-0.23)	4.99 (5)	1.51 (0.20)	1.24 (0.33)
V/R	-0.75 (-1.07)	0.43 (0.91)	1.28 (3)	3.10 (0.00)	3.38 (0.00)
$D_C$	6.15 (3.73)	2.98 (2.76)	7.17 (8)	10.70 (0.00)	6.36 (0.00)
$D_F$	5.37 (3.59)	2.41 (3.08)	7.74 (7)	11.67 (0.00)	7.06 (0.00)
$D_M$	6.73 (4.09)	2.76 (2.87)	6.77 (8)	11.56 (0.00)	6.42 (0.00)
$D_B$	5.89 (4.01)	2.82 (2.73)	6.99 (9)	10.38 (0.00)	8.97 (0.00)
$D_R$	5.49 (3.86)	2.56 (2.84)	6.99 (8)	10.20 (0.00)	6.68 (0.00)
$D_{S}$	6.11 (4.17)	2.54 (2.89)	9.73 (7)	10.75 (0.00)	5.23 (0.00)
$D_U$	5.76 (3.77)	2.37 (2.97)	9.22 (8)	9.50 (0.00)	5.86 (0.00)
Adj. R <sup>2</sup>	0.17 (7.88)	0.11 (6.97)			

Panels A–D of the table summarize the effects of the respective four visibility/recognition proxy variables (V/R) on domestic country fund (*Holdd*) and domestic regional/global fund (*Holdrg*) ownerships after controlling for the seven firm-specific characteristics and industry effects, as defined in Table 3. The proxy variables include foreign sales, analyst coverage, depositary receipts, and index memberships. The panels contain cross-sectional mean coefficient estimates and adjusted  $R^2$ , with associated t-statistics in parentheses. The t-statistic (stat) tests the hypothesis that each independent variable has the same explanatory power for *Holdd* and *Holdrg* at the country level, with the number of significant cases at the 5% level in square brackets below. The t-stat(1) and t-stat(2) test that the slope coefficients are equal across the 11 countries when *Holdd* and *Holdrg* are the respective dependent variables; all t-values are reported below. All coefficients are multiplied by 100.

Table 7 Stock preferences of domestic country funds versus foreign regional/global funds

				Restriction tests	
	Holdd	Holdfr	F-stat	F-stat(1)	F-stat(2)
Panel A: Forei	ign sales				
DE	-0.04 (-1.19)	-0.49 (-3.04)	3.85 (7)	7.40 (0.00)	3.20 (0.00)
DY	0.22 (2.69)	0.06 (1.45)	5.27 (7)	8.80 (0.00)	0.60 (0.70)
ROE	0.17 (1.09)	0.88 (2.82)	3.56 (5)	1.90 (0.00)	1.50 (0.10)
MB	0.54 (3.28)	0.59 (3.17)	1.34 (4)	13.10 (0.00)	1.30 (0.20)
SIZE	-0.47 (-2.02)	1.42 (5.69)	9.47 (16)	7.00 (0.00)	7.10 (0.00)
TURN	0.59 (4.95)	1.54 (8.87)	7.58 (10)	9.80 (0.00)	5.60 (0.00)
VAR	-0.41 (-4.31)	-0.83(-3.01)	2.45 (5)	1.40 (0.30)	1.60 (0.00)
V/R	0.44 (1.69)	4.11 (4.02)	4.17 (13)	1.20 (0.30)	6.30 (0.00)
$D_C$	5.95 (4.23)	5.33 (3.89)	4.28 (12)	13.90 (0.00)	2.90 (0.00)
$D_F$	5.21 (4.11)	6.17 (5.12)	6.13 (15)	13.60 (0.00)	3.30 (0.00)
$D_{\mathcal{M}}$	6.19 (4.49)	7.12 (6.39)	5.76 (14)	12.80 (0.00)	3.20 (0.00)
$D_B$	5.68 (4.61)	6.86 (6.34)	5.93 (12)	12.10 (0.00)	3.70 (0.00)
$D_R$	5.20 (4.45)	6.74 (5.96)	5.32 (11)	13.20 (0.00)	2.80 (0.00)
D <u>s</u>	5.90 (4.52)	7.65 (5.44)	5.72 (12)	13.10 (0.00)	3.00 (0.00)
$\overline{D_U}$	5.44 (4.37)	6.98 (4.07)	5.88 (13)	12.80 (0.00)	2.70 (0.00)
Adj. R <sup>2</sup>	0.13 (8.05)	0.38 (15.4)			
Panel B: Anal	yst coverage				
DE	_0.04 (_0.95)	-0.18 (-3.09)	4.94 (9)	7.80 (0.00)	3.12 (0.00)
DY	0.22 (2.61)	0.02 (1.31)	5.7 (6)	8.78 (0.00)	0.76 (0.83)
ROE	0.17 (1.30)	0.78 (3.08)	1.98 (3)	1.99 (0.04)	1.61 (0.54)
МВ	0.50 (3.20)	0.37 (2.02)	4.54 (9)	10.54 (0.00)	8.37 (0.00)



Table 7 Continued

				Restriction tests	
	Holdd	Holdfr	F-stat	F-stat(1)	F-stat(2)
SIZE	-0.53 (-2.46)	0.61 (2.91)	10.12 (18)	7.71 (0.00)	6.79 (0.00)
TURN	0.55 (4.67)	0.89 (8.37)	4.75 (8)	10.86 (0.00)	9.82 (0.00)
VAR	-0.38 (-4.21)	-0.67 (-2.54)	4.73 (3)	1.43 (0.30)	1.36 (0.43)
V/R	0.02 (1.52)	0.37 (8.88)	6.12 (21)	3.79 (0.00)	5.62 (0.00)
$D_C$	5.67 (3.79)	3.21 (2.33)	5.45 (9)	9.72 (0.00)	9.43 (0.00)
$D_F$	4.84 (3.64)	4.45 (4.43)	4.68 (8)	10.11 (0.00)	11.28 (0.00)
$D_M$	5.96 (4.08)	5.14 (5.11)	5.09 (9)	10.58 (0.00)	10.31 (0.00)
$D_B$	5.38 (4.20)	4.56 (5.22)	4.85 (9)	9.98 (0.00)	8.66 (0.00)
$D_R$	4.91 (3.94)	4.77 (4.82)	4.37 (8)	10.43 (0.00)	9.14 (0.00)
D <u>s</u>	5.66 (4.14)	5.59 (5.14)	3.97 (9)	8.92 (0.00)	8.81 (0.00)
$\overline{D_U}$	5.13 (3.88)	4.91 (4.62)	4.76 (8)	9.61 (0.00)	9.70 (0.00)
Adj. R <sup>2</sup>	0.15 (7.97)	0.35 (14.8)			
Panel C: Dep	oositary receipts				
DE	-0.05 (-1.27)	-0.11 (-2.08)	1.87 (5)	7.11 (0.00)	2.46 (0.00)
DY	0.21 (2.66)	0.10 (1.49)	3.47 (5)	7.23 (0.00)	0.72 (0.60)
ROE	0.15 (1.19)	0.98 (3.87)	4.39 (9)	2.17 (0.02)	1.81 (0.05)
MB	0.53 (3.26)	0.41 (3.06)	4.61 (12)	7.97 (0.00)	1.30 (0.21)
SIZE	-0.28 (-1.37)	1.17 (6.12)	9.63 (10)	8.62 (0.00)	5.17 (0.00)
TURN	0.61 (4.86)	1.12 (8.75)	6.44 (6)	10.44 (0.00)	6.12 (0.00)
VAR	-0.38 (-4.40)	-0.71 (-2.88)	3.77 (5)	1.10 (0.40)	1.20 (0.41)
V/R	-0.57 (-1.78)	2.79 (4.29)	8.62 (20)	2.88 (0.02)	9.96 (0.00)
$D_{C}$	6.15 (4.20)	5.76 (5.34)	5.43 (9)	11.53 (0.00)	4.81 (0.00)
$D_F$	5.39 (3.94)	5.89 (5.87)	4.65 (6)	9.87 (0.00)	6.15 (0.00)
$D_M$	6.76 (4.54)	7.32 (5.46)	5.72 (7)	12.46 (0.00)	5.52 (0.00)
$D_B$	6.01 (4.50)	7.21 (5.36)	6.21 (8)	12.15 (0.00)	7.37 (0.00)
$D_R$	5.57 (4.39)	7.31 (6.78)	5.87 (7)	11.08 (0.00)	5.96 (0.00)
$D_{S}$	6.30 (4.58)	8.62 (5.81)	5.69 (6)	10.72 (.00)	6.83 (0.00)
$D_U$	5.73 (4.24)	7.36 (4.84)	5.95 (4)	12.89 (0.00)	7.04 (0.00)
Adj. R <sup>2</sup>	0.16 (9.20)	0.34 (12.05)			
	ex memberships				
DE	-0.03 (-0.83)	-0.06 (-1.17)	2.13 (5)	7.33 (0.00)	2.89 (0.00)
DY	0.21 (2.71)	0.1 (1.78)	3.41 (6)	7.68 (0.00)	1.12 (0.43)
ROE	0.31 (1.77)	1.02 (3.32)	1.17 (2)	2.09 (0.02)	1.57 (0.11)
MB	0.48 (3.19)	0.44 (2.79)	3.09 (8)	7.99 (0.00)	1.63 (0.10)
SIZE	-0.20 (-1.19)	0.37 (2.31)	8.44 (15)	6.52 (0.00)	3.47 (0.00)
TURN	0.60 (4.72)	0.89 (8.92)	5.15 (10)	7.55 (0.00)	5.90 (0.00)
VAR	-0.42 (4.67)	-0.55 (-1.94)	2.38 (4)	1.44 (0.22)	1.18 (0.42)
V/R	-0.75 (-1.07)	4.59 (8.35)	10.78 (21)	3.41 (0.00)	15.23 (0.00)
$D_{C}$	6.15 (3.73)	4.12 (3.57)	5.76 (11)	10.77 (0.00)	3.87 (0.00)
$D_F$	5.37 (3.59)	4.78 (4.01)	4.89 (10)	11.62 (0.00)	3.40 (0.00)
$D_M$	6.73 (4.09)	5.74 (4.49)	5.09 (12)	11.67 (0.00)	4.17 (0.00)
$D_B$	5.89 (4.01)	5.95 (4.77)	3.85 (10)	10.30 (0.00)	3.34 (0.00)
$D_R$	5.49 (3.86)	5.92 (4.39)	4.15 (11)	10.25 (0.00)	3.68 (0.00)
$D_{S}$	6.11 (4.17)	6.03 (4.56)	4.19 (11)	10.81 (0.00)	3.27 (0.00)
$D_U$	5.76 (3.77)	5.86 (3.72)	4.31 (10)	9.56 (0.00)	4.24 (0.00)
Adj. $R^2$	0.17 (7.88)	0.37 (12.93)			

Panels A–D of the table summarize the effects of the respective four visibility/recognition proxy variables (V/R) on domestic country fund (*Holdd*) and foreign regional/global fund (*Holdfr*) ownerships after controlling for the seven firm-specific characteristics and industry effects, as defined in Table 3. The proxy variables include foreign sales, analyst coverage, depositary receipts, and index memberships. The panels contain cross-sectional mean coefficient estimates and adjusted  $R^2$ , with associated t-statistics in parentheses. The F-statistic (stat) tests the hypothesis that each independent variable has the same explanatory power for *Holdd* and *Holdfr* at the country level, with the number of significant cases at the 5% level in square brackets below. The F-stat(1) and F-stat(2) test that the slope coefficients are equal across the 11 countries when *Holdd* and *Holdfr* are the respective dependent variables; all *P*-values are reported below. All coefficients are multiplied by 100.

similar stock preferences when deciding to invest in stocks from the 11 target markets. The regional classification of countries is in accordance with either the MSCI or IFC categorization, and the 11 target markets are Australia, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Singapore, Sweden, Switzerland, and the UK. Given that our focus is on the investment behavior of foreign managers, we exclude those of domestic fund managers. To ensure that the results are not possibly driven by varying fund objectives, we only look at large and mid-cap funds. The results are offered in Table 8.

A couple of notable investment behavioral patterns emerge from the table. One, the predetermined variables have the largest explanatory power for the stock holdings of European managers and the least explanatory power for those of Asian managers. The adjusted  $R^2$  value ranges from about 24 to 29% for European stock holdings, from about 18 to 21% for North American stock holdings, and finally from about 9 to 10% for Asian stock holdings. Correspondingly, we find the constant mean holding level to be the largest for European managers and the lowest for Asians. The F-statistics indicate that the three groups of managers hold

varying levels of stock ownership in firms from each of the seven sectors.

Two, there are strong similarities in the regional managers' preferences for stocks in the 11 target developed markets. <sup>18</sup> For example, all three groups of managers place little emphasis on financial leverage, dividend yields, return on equity, or the riskiness of the stock. The average number of significant F-statistics associated with these variables is about 3. On the other hand, these managers generally are biased towards stocks that have large market-to-book equity ratio, large market-capitalization stocks, and stocks with high turnover. They also tend to invest in stocks with large international sales, extensive analyst coverage, foreign listings, and finally, constituent stocks in any international stock index.

The results in this subsection provide reinforcing evidence that the differential preferences for globally visible stocks between domestic and foreign managers can be attributed partly to their investment mandates. This particular difference in stock preferences is stronger if the objective of foreign investors is to achieve regional or global diversification, and is weaker if it is domestic diversification.

Table 8 Stock preferences of funds from North America, Europe, and Asia

					Restrict	ion tests	
	North America	Europe	Asia	F-stat	F-stat(1)	F-stat(2)	F-stat(3)
Panel A: I	oreign sales						
DE	-0.06 (-1.77)	-0.08 (-1.86)	0.01 (0.72)	3.40 (4)	4.65 (0.00)	4.45 (0.00)	4.61 (0.00)
DY	0.04 (1.50)	0.01 (0.15)	0.02 (0.94)	3.16 (3)	1.15 (0.43)	1.38 (0.22)	1.51 (0.11)
ROE	0.26 (2.15)	0.25 (1.71)	0.02 (1.87)	1.98 (1)	0.55 (0.92)	1.24 (0.46)	1.35 (0.15)
MB	-0.13 (-1.26)	0.33 (3.00)	0.04 (3.33)	6.87 (11)	4.21 (0.00)	3.77 (0.00)	3.79 (0.00)
SIZE	0.73 (8.59)	0.71 (3.37)	0.07 (2.46)	8.92 (12)	2.12 (0.06)	3.03 (0.02)	3.14 (0.00)
TURN	0.30 (4.08)	0.47 (5.34)	0.06 (3.38)	7.92 (13)	2.75 (0.02)	4.10 (0.00)	4.32 (0.00)
VAR	-0.26 (-2.12)	-0.17(-3.14)	0.19(-3.00)	3.17 (3)	0.73 (0.75)	1.37 (0.22)	1.18 (0.40)
V/R	1.64 (2.89)	1.33 (2.97)	0.11 (2.26)	8.65 (12)	6.81 (0.00)	3.50 (0.15)	4.99 (0.00)
$D_C$	2.15 (5.36)	2.71 (4.98)	0.17 (2.81)	6.39 (9)	2.17 (0.04)	3.12 (0.04)	2.78 (0.00)
$D_F$	2.15 (5.20)	2.97 (4.80)	0.19 (2.89)	7.17 (13)	1.58 (0.15)	2.74 (0.00)	4.74 (0.00)
$D_M$	2.62 (5.94)	3.49 (6.61)	0.15 (3.27)	7.74 (12)	2.34 (0.01)	2.75 (0.00)	4.73 (0.00)
$D_B$	2.97 (4.54)	2.92 (6.76)	0.17 (3.02)	7.62 (13)	3.21 (0.00)	2.52 (0.02)	4.72 (0.00)
$D_R$	2.53 (6.24)	3.35 (6.35)	0.20 (2.96)	6.84 (8)	2.32 (0.04)	3.25 (0.01)	4.23 (0.00)
$D_{S}$	3.00 (6.26)	4.38 (6.35)	0.18 (2.90)	7.12 (14)	2.70 (0.02)	2.25 (0.01)	4.12 (0.00)
$D_U$	2.79 (4.28)	3.54 (4.68)	0.20 (2.54)	6.60 (12)	1.73 (0.12)	2.37 (0.00)	3.77 (0.00)
Adj. $R^2$	0.18 (11.5)	0.24 (10.8)	0.09 (5.54)				
Panel B: A	Analyst coverage						
DE	-0.06 (-1.67)	-0.08(-2.36)	0.01 (0.00)	0.86 (3)	3.84 (0.00)	4.66 (0.01)	3.08 (0.00)
DY	0.03 (0.99)	0.01 (0.28)	-0.03 (-0.98)	0.71 (2)	1.93 (0.09)	1.91 (0.17)	1.45 (0.18)
ROE	0.20 (2.00)	0.18 (1.75)	0.02 (1.65)	0.47 (1)	0.42 (0.92)	1.54 (0.35)	0.90 (0.53)
МВ	-0.09 (-0.90)	0.27 (2.88)	0.11 (3.66)	1.31 (9)	3.52 (0.00)	3.38 (0.00)	3.34 (0.00)





Table 8 Continued

		Europe	Asia	Restriction tests			
	North America			F-stat	F-stat(1)	F-stat(2)	F-stat(3)
SIZE	0.30 (2.57)	0.37 (2.03)	0.11 (1.34)	1.13 (8)	2.57 (0.03)	3.42 (0.00)	2.61 (0.01)
TURN	0.24 (3.02)	0.36 (4.73)	0.13 (2.31)	1.24 (12)	2.52 (0.03)	3.43 (0.00)	3.63 (0.00)
VAR	-0.21 (-2.40)	-0.23 (-2.60)	-0.35 (-2.18)	0.83 (5)	1.12 (0.30)	1.01 (0.35)	1.30 (0.20)
V/R	0.11 (6.51)	0.12 (7.06)	0.07 (2.40)	1.30 (14)	3.09 (0.00)	3.84 (0.00)	3.79 (0.00)
$D_C$	1.54 (3.93)	1.90 (4.85)	0.24 (1.85)	1.24 (4)	1.87 (0.06)	2.61 (0.04)	2.14 (0.07)
$D_F$	1.45 (3.78)	1.99 (4.72)	0.31 (1.86)	1.17 (10)	1.92 (0.04)	3.90 (0.00)	4.06 (0.02)
$D_M$	2.04 (4.18)	2.69 (5.90)	0.28 (2.17)	1.31 (10)	2.08 (0.03)	3.41 (0.00)	3.29 (0.06)
$D_B$	2.39 (3.36)	2.07 (5.99)	0.32 (2.27)	0.77 (9)	2.69 (0.01)	3.07 (0.01)	3.62 (0.04)
$D_R$	1.75 (4.10)	2.41 (5.67)	0.37 (2.06)	1.10 (7)	1.89 (0.08)	2.78 (0.03)	3.31 (0.01)
$D_{S}$	2.28 (4.80)	3.60 (6.02)	0.30 (1.96)	0.98 (9)	2.08 (0.02)	3.54 (0.02)	3.26 (0.00)
$D_U$	1.92 (3.17)	2.60 (4.08)	0.27 (1.61)	3.22 (9)	2.25 (0.02)	3.47 (0.00)	2.87 (0.02)
Adj. R <sup>2</sup>	0.19 (10.3)	0.29 (12.7)	0.10 (4.76)				
Panel C:	Depositary receipts						
DE	-0.03 (-0.77)	-0.07 (-0.26)	0.01 (1.02)	2.59 (3)	4.49 (0.00)	4.99 (0.00)	2.30 (0.18)
DY	0.04 (1.21)	0.04 (1.28)	-0.03 (-0.93)	2.28 (1)	1.31 (0.28)	1.32 (0.15)	1.76 (0.07)
ROE	0.28 (1.70)	0.15 (1.16)	0.17 (1.19)	2.07 (2)	0.82 (0.66)	1.85 (0.41)	1.07 (0.53)
MB	-0.14 (-1.24)	0.34 (3.38)	0.07 (3.00)	7.48 (10)	3.72 (0.00)	4.45 (0.00)	2.86 (0.00)
SIZE	0.67 (8.26)	0.59 (3.62)	0.11 (2.02)	10.53 (13)	3.38 (0.00)	2.41 (0.02)	2.67 (0.00)
TURN	0.35 (3.43)	0.53 (6.49)	0.06 (2.26)	8.35 (10)	3.24 (0.00)	4.00 (0.00)	3.04 (0.00)
VAR	-0.12 (-1.46)	-0.12 (-1.56)	-0.18 (-1.54)	3.22 (2)	0.84 (0.71)	0.93 (0.00)	0.83 (0.70)
V/R	0.97 (3.95)	1.54 (3.61)	0.77 (2.04)	8.37 (10)	3.41 (0.05)	2.41 (0.25)	2.52 (0.01)
$D_C$	2.46 (5.59)	3.30 (5.59)	0.45 (3.23)	7.03 (10)	2.56 (0.00)	5.06 (0.00)	3.98 (0.00)
$D_F$	2.24 (5.37)	3.28 (6.05)	0.52 (2.91)	8.61 (13)	2.01 (0.10)	3.63 (0.00)	4.75 (0.00)
$D_M$	3.15 (4.13)	4.15 (6.83)	0.46 (3.30)	8.12 (13)	3.31 (0.01)	4.04 (0.00)	2.93 (0.00)
$D_B$	3.54 (6.58)	3.47 (7.32)	0.52 (7.48)	7.48 (11)	2.68 (0.00)	4.76 (0.00)	3.38 (0.02)
$D_R$	2.94 (6.00)	3.97 (7.45)	0.57 (6.48)	6.48 (10)	3.23 (0.00)	4.53 (0.00)	3.87 (0.00)
$D_{S}$	3.37 (0.77)	4.91 (7.09)	0.48 (7.25)	7.25 (13)	2.66 (0.02)	4.23 (0.00)	4.39 (0.00)
$D_U$	2.71 (4.24)	3.82 (5.24)	0.46 (2.68)	7.04 (10)	2.33 (0.00)	3.40 (0.00)	3.44 (0.00)
Adj. R <sup>2</sup>	0.19 (11.0)	0.26 (16.5)	0.10 (5.63)				
	Index memberships			(-)		- o. (o. o.)	( 1)
DE	-0.02 (-0.51)	-0.04 (-1.08)	0.01 (1.40)	2.93 (3)	4.60 (0.00)	5.81 (0.00)	2.10 (0.14)
DY	0.03 (1.05)	0.03 (0.98)	-0.03 (-0.93)	2.85 (2)	1.19 (0.31)	1.43 (0.15)	1.87 (0.07)
ROE	0.29 (2.10)	0.36 (2.70)	0.02 (1.15)	1.96 (3)	0.64 (0.72)	2.22 (0.45)	0.78 (0.53)
MB	-0.07 (-0.58)	0.36 (3.53)	0.12 (3.36)	6.75 (9)	3.69 (0.00)	4.18 (0.00)	3.27 (0.00)
SIZE	0.30 (3.49)	0.34 (2.28)	0.13 (1.72)	6.88 (10)	2.63 (0.06)	2.81 (0.01)	2.92 (0.00)
TURN	0.28 (3.25)	0.47 (5.84)	0.12 (2.64)	7.93 (14)	2.93 (0.03)	3.60 (0.00)	3.59 (0.00)
VAR	-0.12 (-1.36)	-0.18 (2.10)	-0.39 (-2.03)	3.35 (4)	0.56 (0.76)	0.79 (0.60)	1.04 (0.45)
V/R	1.83 (6.53)	1.76 (5.16)	0.36 (2.53)	13.64 (17)	5.03 (0.01)	3.92 (0.00)	3.86 (0.01)
$D_C$	1.93 (5.21)	2.75 (4.87)	0.42 (4.06)	7.24 (10)	2.33 (0.04)	5.26 (0.00)	3.76 (0.00)
$D_F$	1.84 (5.11)	2.90 (5.08)	0.48 (4.04)	8.13 (14)	1.61 (0.17)	5.80 (0.00)	4.98 (0.00)
$D_M$	2.57 (6.04)	3.61 (6.44)	0.41 (4.02)	7.77 (12)	2.31 (0.01)	7.40 (0.00)	3.92 (0.00)
$D_B$	2.80 (3.73)	2.83 (5.88)	0.47 (4.17)	8.21 (11)	3.38 (0.00)	5.85 (0.00)	4.52 (0.00)
$D_R$	2.26 (5.93)	3.36 (6.71)	0.49 (3.48)	7.34 (10)	2.41 (0.04)	5.65 (0.00)	4.53 (0.00)
$D_{S}$	2.71 (5.59)	4.31 (6.43)	0.43 (3.89)	8.03 (12)	2.45 (0.02)	5.20 (0.00)	4.07 (0.00)
D <sub>U</sub> Adj. R <sup>2</sup>	2.10 (4.46) 0.21 (10.3)	3.16 (4.31) 0.27 (8.95)	0.40 (3.72) 0.10 (5.39)	7.36 (12)	1.98 (0.10)	5.30 (0.00)	3.40 (0.00)

Panels A-D of the table summarize effects of the respective four visibility/recognition (V/R) proxy variables on the holdings of funds from North America, Europe, and Asia, after controlling for the seven firm-specific characteristics and industry effects, as defined in Table 3. The proxy variables include foreign sales, the number of analysts following a security, depositary receipts, and index memberships. The panels contain cross-sectional mean coefficient estimates and adjusted  $R^2$ , with associated t-statistics in parentheses. The F-statistic (stat) tests the hypothesis that each independent variable has the same explanatory power for the holdings of fund managers from the above three regional markets, with the number of significant cases at the 5% level in square brackets below. The F-stat(1), F-stat(2), and F-stat(3) test that the slope coefficients are equal for fund managers in the respective three regional markets; all P-values are reported below. All coefficients are multiplied by 100.



# **Conclusions**

This paper identifies several similarities and distinctive differences between the preferences of foreign and domestic funds for stock characteristics and firm attributes, and the results are robust across 11 developed countries. Domestic funds typically concentrate more in shares of firms with high market-to-book equity ratios, large dividend yields and high turnover, whereas foreign funds generally invest more in firms with larger market capitalization and high turnover. In addition, foreign funds are weighted towards stocks that have greater investor recognition and worldwide visibility. In particular, our results show greater foreign equity ownership in firms with wider analyst coverage, larger exports, and finally, whose stocks have index memberships or are listed in other exchanges. These variables, on the other hand, play a significantly weaker role in determining domestic fund holdings.

Our further analyses provide several new results that help us better understand the observed differential stock preferences. The results show that the stock preferences of domestic and foreign managers are, in part, driven by their differential fund mandates. As a result, the marginal benefits and marginal costs of gathering and processing information for domestic vs foreign fund managers would differ. The preference for more visible stocks by foreign funds, while not domestic country funds, is especially strong when their investment mandate is to achieve global or regional diversification, but becomes weaker when their stock holdings are concentrated mainly in a particular local market. The results also show no differential stock preferences exhibited by American-, European-, or Asian-based funds. In general, our findings suggest that the differential stock preferences of domestic vs foreign fund managers are driven by their differential investment mandates. Hence, it is the geographic allocations of their fund investments and not the geographic locations of fund managers that influence the investment decisions of fund managers.

Finally, our results on the determinants of domestic and foreign stock holdings would be of relevance and interest to many corporations that look to global equity markets for equity financing, or those that intend to attract foreign investors to invest in their firms. Existing studies show that firms with a more international shareholder base tend to have a lower cost of capital and higher firm valuation. The reason is that risks of these firms are

shared more widely between foreign and domestic investors (e.g., Brealey *et al.*, 1999). Thus, to maximize benefits, firm managers might have more incentives to take actions to raise the visibility of their firm.

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### **Notes**

<sup>1</sup>See The Investment Company Institute (2004).

<sup>2</sup>Note that Grinblatt and Keloharju (2000) and Seasholes (2000) argue that foreign investors are more sophisticated and have the international expertise to better evaluate the underlying value of domestic stocks when compared with their domestic counterparts.

<sup>3</sup>The common basic stock characteristics, such as financial leverage, liquidity, firm size, volatility, dividend yield, market-to-book equity, and share turnover, employed in this study are drawn from the existing literature.

<sup>4</sup>It is conceivable that domestic managers might be better informed if they have private information when they trade and earn superior returns. We, however, do not see this as a potential problem in our sample of developed countries, where we expect insider trading to be less prevalent.

<sup>5</sup>For example, existing studies have shown that a larger shareholder base helps increase a firm's value (Amihud *et al.*, 1999).

<sup>6</sup>We used the index constructed by Economic Freedom Network to determine the varying degree of restrictions that different countries impose on capital flows. Economic Freedom Network assigns a rating of 0 to countries with restrictions imposed on both domestic investments by foreigners and foreign capital transactions by citizens, and a rating of 10 to those with unrestricted foreign capital transactions.



When investments are restricted in only a few industries (e.g., banking, defense, and telecommunications), countries are assigned a rating of 8. When these investments are permitted but regulatory restrictions slow the mobility of capital, countries are rated at 5. In our sample, Australia and Japan have ratings of 8, and the remaining nine countries receive ratings of 10.

<sup>7</sup>Choe et al. (2001) use high-frequency data and provide evidence that domestic investors are more informed than foreign investors. One way for foreign investors to avoid information asymmetry is to hold stocks with high  $R^2$  value in domestic market models. For example, Morck *et al.* (2000) find a higher  $R^2$  value in emerging market models than in developed market models, suggesting that less firm-specific information is produced in emerging markets.

<sup>8</sup>Our study does not include equity holdings in Canada and the US, because those data were not made available to us by TFS.

<sup>9</sup>Brennan and Cao (1997) show that asymmetric information induces investors to buy foreign assets when their return is high and sell them when their return is low.

<sup>10</sup>Other studies that test the Merton hypothesis have instead employed the number of investors who hold a security (Amihud *et al.*, 1999; Foerster and Karolyi, 1999), or the number of times a firm is cited in the newspapers (Bailey *et al.*, 1999).

<sup>11</sup>See Section 12.2 of Judge *et al.* (1984) for details of the approach. This approach will take into account any cross-correlation in the error terms.

<sup>12</sup>We also applied logistic transformation to both the dependent variables, but the results did not materially change the sign and level of significance of the determinants.

<sup>13</sup>Their corresponding median values, not reported, are 17 and 25%. Since the median values of all the coefficients reported in Table 3 are close to the mean values, in terms of the order of magnitude, we chose not to report them in order to conserve space. However, they are easily available upon request.

<sup>14</sup>See Fama and French (1992, 1996).

<sup>15</sup>See also Bailey and Jagtiani (1994) and Kang and Stulz (1997).

<sup>16</sup>James Cramer (2000), a well-known fund manager and commentator, states: 'I follow hundreds of stocks. But I don't own hundreds of them. We own 40 of them and we have six people who do nothing but make sure that those 40 stocks are the right ones to own. I don't think it is feasible for even the most inveterate of stock investors to keep track of 30 stocks.

<sup>17</sup>We also performed the same analysis using growth country funds. The results were qualitatively the same as those of large and mid-cap country funds reported in Table 5.

<sup>18</sup>The results remained qualitatively the same, even when we examined the stock preferences of foreign managers from different countries. For example, we also found that UK fund managers who invest in Singapore have the same stock preferences as US fund managers who invest in Singapore. These disaggregated results can be easily available from the authors upon request.

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