

When Financial Institutions Are Large Shareholders: The Role of Macro Corporate Governance Environments

DONGHUI LI, FARIBORZ MOSHIRIAN, PETER KIEN PHAM, and JASON ZEIN*

ABSTRACT

While financial institutions' aggregate investments have grown substantially worldwide, the size of their individual shareholdings, and ultimately their incentive to monitor, may be limited by the free-rider problem, regulations, and a preference for diversification and liquidity. We compare institutions' shareholding patterns across countries and find vast differences in the extent to which they are large shareholders. These variations are largely determined by macro corporate governance factors such as shareholder protection, law enforcement, and corporate disclosure requirements. This suggests that strong governance environments act to strengthen monitoring ability such that more institutions are encouraged to hold concentrated equity positions.

INSTITUTIONAL INVESTMENTS IN WORLD EQUITY MARKETS have grown substantially in recent decades.¹ While this trend has led to financial institutions becoming the largest investor class in many countries, the extent to which they are willing to take concentrated ownership positions remains unclear.² From a corporate governance perspective, analyzing concentrated shareholdings is important because they provide an incentive to monitor (Shleifer and Vishny (1986)). However, acquiring such shareholdings can be prohibitively costly for financial institutions due to the free-rider problem, regulatory investment limits, as well as a preference for diversification and liquidity (Admati, Pfleiderer, and Zechner (1994), Bhidé (1994), Black (1990), Coffee (1991), Parrino, Sias, and Starks (2003), Roe (1990)). Thus, while some institutions may find that the

*The authors are from the School of Banking and Finance, University of New South Wales, Sydney, Australia. We would like to acknowledge valuable comments made by Rebel Cole, Ruoshan Li, Ronald Masulis, Ike Mathur, Arie Melnik, Toan Pham, Robert Stambaugh (the editor), Qian Sun, Peter Swan, Lihui Tian, Terry Walter, Steven Wei, Wuxiang Zhu, an anonymous referee, and an associate editor, as well as seminar participants from Fudan University, Hong Kong Polytechnic University, Monash University, Nan Yang Technological University, Peking University, Tsinghua University, University of New South Wales, and University of Queensland. All remaining errors are our own.

¹ During the period from 1992 to 2002, financial institutions based in Organization for Economic Co-operation and Development (OECD) countries increased their total assets as a percentage of GDP by 143%, while the proportion of equity holdings in their portfolios more than doubled (source: www.SourceOECD.org).

² For example, Edwards and Hubbard (2000) show that while total institutional ownership in the United States increased by 24 percentage points from 1980 to 1997, shareholdings of the top five institutional investors in each firm increased by only nine percentage points.

monitoring gains associated with large shareholdings justify the costs, others may find it optimal to remain diversified shareholders. Although such ownership choices are undoubtedly influenced by both institution and target firm characteristics, we argue that broader environmental factors that facilitate effective monitoring can also affect the decision of institutions to become large shareholders. Analyzing these factors is particularly important given their direct relevance to policy efforts aimed at improving the infrastructure supporting institutional activism.

In this study we investigate the environmental factors that affect institutional ownership decisions by comparing the prevalence of large institutional shareholdings across countries. Our analysis uncovers vast cross-country differences in the extent to which institutions are large shareholders. Indeed, in some countries, despite relatively high levels of aggregate institutional investments, large institutional shareholdings are disproportionately scarce. For example, in Singapore and Korea, the total equity investments of domestic institutions in 2002 amounted to approximately 17% and 18% of stock market capitalization, respectively. In contrast, the average percentage ownership by institutions with at least a 5% stake was markedly different across the two countries (about 12% for Singaporean firms compared to only 4% for Korean firms). These patterns highlight the significance of looking beyond the expansion of institutions' total equity investments and investigating other country-level factors that drive their ownership decisions. We find that after controlling for aggregate institutional equity investment, a strong macro corporate governance environment plays an important role in inducing institutions to hold more concentrated equity positions.

Our finding can be understood within the theoretical framework of large shareholder monitoring. The theory implies that the willingness of institutions to become or remain large shareholders can vary with external conditions that affect potential monitoring costs and benefits. In particular, a favorable monitoring environment can encourage existing large shareholders to maintain their stakes, while also enticing the formation of new large shareholdings as a way of partially capturing monitoring gains, especially when trading is nonpublic (e.g., negotiated block purchases) or is conducted under information asymmetries (Admati et al. (1994), Kahn and Winton (1998), Maug (1998), Noe (2002)). In a similar vein, we expect that a strong macro governance environment influences institutional ownership decisions by providing the necessary infrastructure to increase monitoring effectiveness and efficiency. This conjecture is also consistent with the legal literature on activism that attributes the passivity of institutions to regulatory barriers (Black (1990), Gordon (1994), Pound (1991)).³

³ This is supported by anecdotal evidence from Anand (1993), who reports shareholder activism expanding from proxy-season to year-round activity after SEC proxy voting rules were relaxed in 1992, and from Gordon (1994), who highlights how cumulative voting (a mechanism for significant minority shareholders to achieve proportional representation on the board) would substantially enhance institutional activism. Another example is the legal requirement to deposit shares before they can be voted upon (e.g., in France and Italy), which is frequently cited as the main hurdle to more active voting by institutions (International Corporate Governance Network (2003)).

Our argument suggests that monitoring by institutions should thrive where, for instance, strong shareholder rights and extensive disclosure requirements improve their ability to publicly challenge or privately pressure self-serving managers. This should affect country-level institutional ownership concentration because when monitoring abilities are strengthened, large shareholdings by institutions, which are necessary to make monitoring efforts worthwhile, should become more widely observed.

The above arguments do not suggest that institutions are the only investor class with the incentive to monitor nor that they are superior monitors. However, we focus on financial institutions because they are perhaps the most prevalent and identifiable representative of outside minority shareholders and hence provide a channel through which we can examine the importance of a strong governance environment to minority shareholding patterns. In contrast, individuals and companies with large shareholdings are often insiders or associates, from which it would be difficult to distinguish the occasional outside shareholder, and while independent activists are perhaps more identifiable, these investors are scarce, have limited wealth, and would optimally focus on state-contingent intervention, such as hostile takeovers (Gorton and Kahl (2002)).⁴ Further, unlike that of other large shareholders, the shareholding size of institutions is often restricted by regulations. Having to be content with minority shareholdings, institutions are thus likely to place a greater emphasis on governance environments when making ownership decisions.

Using ownership data for 19,883 nonfinancial firms from 45 countries, our empirical analysis shows that differences in macro governance characteristics substantially explain cross-country variations in institutional ownership concentration. In particular, large shareholdings by institutions are more prevalent in countries with stronger shareholder rights, greater access to voting rights, more effective legal enforcement, and extensive financial disclosure. However, when institutions in poor governance countries do acquire ownership blocks, the size of such blocks is often very large. This suggests that when infrastructures supporting monitoring are deficient, institutions tend to avoid becoming large shareholders or they hold a controlling stake to ensure that monitoring is effective. We also examine other potential regulatory barriers to the ability of institutions to hold large ownership stakes. Among them, we find that investment portfolio restrictions significantly curtail large institutional shareholdings.

Multivariate regression analysis shows that the above relations are not driven by cross-country differences in macroeconomic and stock market conditions. More importantly, we construct measures to control for characteristics

⁴ In a simple experiment, we examine individual investors in the United States whose investment strategy involves holding multiple (two or more) large ownership blocks (above 5%). In our database, the total number of blocks held by these investors as a proportion of those held by institutions is only 4.2%. The corresponding figure for a list of well-known activists (Carl Icahn, Warren Buffet, Victor Posner, T. Boone Picken, Irwin Jacobs, Saul Steinberg, the Bass brothers, the Belzberg family, Carl Lindner, Peter Lynch, Jeffrey Gendell) is only 0.7%.

of the institutional investment industry such as the aggregate size and concentration of institutional investors. While these factors appear to be significant determinants of the prevalence of large institutional shareholdings, they do not confound the relation between macro governance environments and institutions' ownership decisions. Further analysis also shows that this relation cannot be attributed simply to the fact that control is closely held by insiders and families in countries with poor governance standards. Finally, we find that factors that affect large ownership decisions differ substantially across types of institutions. At one end of the spectrum, due to firm–bank relationships, banks appear to be less concerned about governance environments when making ownership decisions. At the other end of the spectrum, large shareholdings of fund managers, who often invest on a more arms-length basis, are significantly more prevalent in strong governance countries.

Our findings add to previous evidence on institutional investment. For example, complementing Gompers and Metrick (2001), who focus mainly on firm-level characteristics that attract *aggregate* institutional investment in the United States, we examine why the *concentration* of institutional ownership varies across countries. Further, our study expands the growing literature on the effect of corporate governance environments on financial market development. La Porta et al. (1997, 1998) and La Porta, Lopez-de-Silanes, and Shleifer (1999) establish that strong investor protection makes the equity market more attractive and ownership structure less concentrated.⁵ Aggarwal, Klapper, and Waddock (2005), Chan, Corvig, and Ng (2005), Gelos and Wei (2005), and Khorana, Servaes, and Tufano (2005) also find that the quality of a country's legal system and corporate transparency promote the *aggregate* equity investments of mutual funds. Our study differs from those above in that it examines all types of financial institutions and shows that macro governance variables are just as useful in explaining the tendency of institutions to hold *concentrated* equity positions. As highlighted earlier, ownership concentration is theoretically related to the incentive to monitor. Thus, our analysis establishes an empirical link between the "Law and Finance" and "Institutional Activism" streams of literature.

The remainder of this paper is organized as follows. Section I describes the data, the process for identifying large institutional shareholdings, and the construction of the main variables. Section II investigates the relation between macro governance environments and institutional ownership concentration. Section III examines how this relation differs across types of institutions and across firms with different control characteristics. Finally, Section IV concludes and discusses the implications of our research.

I. Data and Methodology

A. Description of the Sample and Ownership Data

To measure country-level institutional ownership concentrations, we collect firm-level ownership data from two main sources, the OSIRIS database

⁵ See Denis and McConnell (2003) for a comprehensive review of this literature.

provided by Bureau Van Dijk and Lexis/Nexis (through which ownership data are obtained from Worldscope, The Major Companies Database, and Thompson Financial's Extel Cards).⁶ From these sources, we obtain shareholder names and percentage shareholdings reported in 2002 for listed domestic firms in the 45 countries for which detailed ownership data are available.⁷ We exclude financial firms (three-digit SIC codes ranging from 600 to 700) from the sample because institutional investments in these firms may be motivated by strategic considerations (e.g., as in a parent–subsidiary relationship) and financial firms, especially banks, are often subject to specific ownership restrictions that vary across countries. Both of these issues lead to potential selectivity bias.

In total, we obtain ownership data for 19,883 nonfinancial firms from 45 countries. This sample of countries is larger than those used in previous research into international ownership patterns, such as La Porta et al. (1999), Claessens, Djankov, and Lang (2000), and Faccio and Lang (2002). We also attempt to cover the largest percentage of listed domestic nonfinancial firms possible. Using the number of listed nonfinancial firms in each country in 2002 covered by OSIRIS, Worldscope, or The Major Companies Database (whichever provides a larger number) as an estimate of the population base, on average our sample covers about 89% of these firms per country. More importantly, this estimated coverage does not differ substantially across countries, being always greater than 70% and it is not significantly correlated with any of the macro governance variables we describe below. Thus, it is unlikely that our analysis of the relation between governance environments and institutional block holdings is confounded by cross-country differences in the degree to which firms in each market are covered.

B. Identifying Block Holdings of Financial Institutions

For each sample firm, we measure institutional ownership concentration by first identifying institutional blockholders, where a block is defined as a holding larger than or equal to 5% of the firm's issued shares.⁸ Financial institutions in this study include entities whose primary business is in the areas of banking, insurance, investment banking, brokerage, mutual and pension fund management, and other noncollective investment schemes (e.g., private equity funds, venture capital funds, hedge funds, etc.).

⁶ Multiple data sources allow us to cross-check outlying observations. When replicated using data solely from OSIRIS (the source with the largest coverage), our main findings remain unchanged. To further improve our coverage, we also obtain ownership data for many firms in Mexico, Malaysia, Pakistan, Sri Lanka, Singapore, and Thailand directly from their annual reports, and for firms in India and Chile from their stock exchanges' web sites.

⁷ During our data collection process, OSIRIS and Worldscope gradually updated their ownership database. As a result, some firms with no ownership data in 2002 were updated with such data in 2003. For the sake of providing better coverage, especially for countries with a small number of firms, we also include these firms in the sample.

⁸ In many countries, the 5% threshold is used to define a "substantial" shareholding, which confers upon the respective shareholder some important rights (e.g., the power to nominate directors, to call extraordinary general meetings, etc.) and responsibilities (e.g., continuous disclosure of ownership changes). This threshold has also been widely used in past empirical studies such as McConnell and Servaes (1990) to construct ownership concentration variables.

We develop a comprehensive five-step matching algorithm to identify whether a shareholder is a financial institution. The first step involves eliminating a large number of shareholders that do not operate in the financial services industry by comparing shareholders from our sample to companies listed in Bureau Van Dijk's Company Directory Service, which has a generic industry classification for about 10 million international firms. In the second step, we match the remaining shareholders against a master list of known financial institutions around the world.⁹ The third step searches through the names of the remaining unidentified shareholders for keywords (in English or languages of the sample countries) that indicate whether a shareholder is a financial institution (e.g., "bank," "insurance company," etc.). These first three steps allow us to construct a list of shareholders that are likely to be financial institutions. In the fourth step, we narrow our focus to those on the list that own more than 5% of a firm's issued shares. We search for these blockholders' primary business activities individually, using company information databases (Lexis/Nexis and Dun and Bradstreet), business news stories (through Factiva, Proquest, and the Google internet search engine), or the shareholders' web sites and eliminate those that are not in fact financial institutions. In the final step, we focus on the shareholders not already identified by the preceding steps, who own more than 5% and are not individual persons. Again, we individually verify the primary business of each of these shareholders using the sources described in step 4, eliminating those that are indeed not financial institutions. Note that by manually identifying individual blockholders in the final two steps, we are able to categorize institutions based on their primary activity, which will be of interest below.

Several issues may potentially compromise the accuracy of the above institution identification process. First, large institutional shareholdings may be more observable in some countries due to the presence of ownership disclosure requirements imposed on institutions. However, since our data sources rely on the reporting of shareholdings from issuing firms or from all large shareholders alike, cross-country differences in institution-specific ownership disclosure requirements should not materially confound our analysis.¹⁰ A more likely source of selection bias arises with cross-country differences in the definition of a large shareholding that triggers ownership disclosure. For 36 countries in our sample, large shareholders are required to disclose ownership stakes in excess of 5% of issued shares (the level used in our study to define a block holding). In the other nine countries, this requirement is imposed at the 10% level or does

⁹ We compile this master list using 16 different directories that provide the names of these institutions, including financial firms listed in Bureau Van Dijk's Company Directory Service and the web sites of various financial industry associations in specific countries. These sources and the final list of institutions are available from the authors upon request.

¹⁰ In the United States, large investment managers are also required to report their shareholdings through 13-F filings. However, we do not rely exclusively on this disclosure; rather, we consider shareholdings by all blockholders, so that our institution identification process can be consistently applied to all countries. Note that, excluding the United States from our analysis does not materially affect our results.

not exist. To analyze the extent of this potential bias, we compare our measures of country-level institutional block holdings across these two groups of countries. None of the measures are significantly different across the two groups. Further, when we reconstruct institutional block holding measures using the 10% threshold, the main results of this study remain unchanged. It is therefore unlikely that cross-country variations in institutional ownership concentration are a result of differing definitions of a large shareholder.

Second, the institution identification process can be complicated to the extent that registered shareholders are nominee and custodian companies. These companies hold shares on behalf of other entities, including financial institutions, but are not themselves beneficial owners of the shares. Where a nominee holds more than 5% of a firm's issued shares, we rely upon additional disclosure of substantial shareholders' beneficial interests to identify institutional blockholders. We obtain this additional information from OSIRIS, Extel Cards, or firms' annual reports.¹¹

Finally, to verify and improve the accuracy of our institution identification process, we cross-check our data with the LionShares database constructed by Factset Research Systems, Inc., which collects shareholdings of more than 4,000 large investment managers domiciled around the world. While this database only focuses on a subset of institutions analyzed by our study (i.e., large investment managers) and covers fewer firms, it offers an independent source of institutional ownership information that is suitable for cross-checking purposes. In particular, we search LionShares for managers with a shareholding larger than 5% in 2002 and find that only about 1.3% of the total number of institutional block holdings reported in LionShares are not already identified by the process that we discuss above. We then update our data set to include these missing block holdings. However, even when our analysis is conducted without the data being updated, the results are quantitatively similar.

C. Country-Level Institutional Ownership Concentration Variables and Statistics

We employ two principal measures of country-level institutional ownership concentration. The first is the mean level of institutional block holdings (*Mean IBH*), calculated by first identifying the total percentage ownership held by institutional blockholders in each firm and then taking an average of this figure across all sample firms in each country. However, this variable by itself may not adequately capture cross-country variations in institutional ownership concentration. For example, two countries may have similar *Mean IBH* statistics, but one may have a few firms with very large institutional block holdings, while the

¹¹ We cannot identify the real beneficial owners for a small number of firms. For such cases, nominee shareholders are assumed not to be financial institutions. This is a conservative approach because nominees are more prevalent in strong governance countries (e.g., Australia, Hong Kong, Ireland, Malaysia, New Zealand, Singapore, South Africa, and the U.K.). If we assume that unidentified nominees are financial institutions, our results are even more significant.

other may have block holdings that are smaller and spread over a larger number of firms. Therefore, to capture the diffusion of institutional block holdings, we also use the percentage of firms in each market with at least one institutional blockholder (*% Firms with IBH*) as an alternative measure (see Table I for a brief description of main variables).

Table II reports the values of the above two variables and other supplementary institutional block holding statistics calculated for 45 sample countries, from which we make several important observations. First, despite the free-rider problem in acquiring large shareholdings (Shleifer and Vishny (1986)) and a general preference for liquidity and diversification (Bhide (1994), Coffee (1991)), instances of institutional block holdings are not rare. Averaged across our sample countries, the mean level of institutional block holdings (*Mean IBH*) is 9.69% of issued shares, and the proportion of firms with at least one institutional blockholder (*% Firms with IBH*) is 47.57%. Second, the typical within-country distribution of institutional block holdings is quite uneven (average skewness is 2.19), reflecting a concentration of very large institutional shareholdings in a few firms. Third, when institutions acquire large blocks, they appear to remain minority shareholders in most cases. For instance, the country-level average size of blocks held by institutions is usually less than 20% of issued shares, which is commonly used to define control (La Porta et al. (1999)); and on average, institutions are the largest shareholder in only about 16.81% of firms. Finally, we find vast cross-country differences in the prevalence of institutional block holdings. For example, *% Firms with IBH* varies from a minimum of 18.93% for Greece to a maximum of 92.73% for Ireland.

D. Classifying Institutional Investors

We categorize financial institutions into different types because the factors affecting their ownership decisions are likely to differ. In particular, banks and insurance companies can be classified as “pressure-sensitive” investors due to the possibility of their monitoring activities being inhibited by existing business relationships with firms (Brickley, Lease, and Smith (1988), Parrino et al. (2003), Van Nuys (1993)). Further, as debt contracts with firms may provide alternative means of monitoring (e.g., loan covenants), shareholder protection may be less important for banks than for other institution types. Another important consideration is investment regulation. Banks, insurance companies, mutual funds, and pension funds face very different regulatory restrictions in relation to acquiring large shareholdings (Roe (1990)).

It should be noted that by using firm-level ownership disclosure, we can observe only identities of managers of institutional investments, rather than those of individual funds, since shareholdings are usually registered in the name of the former. For example, it is often not possible to determine whether a large shareholding by a professional fund manager arises as a result of a mutual fund or pension fund investment. Therefore, our study classifies

Table I
Descriptions of Main Variables

<i>Main measures of country-level institutional ownership concentration</i>	
<i>Mean IBH</i>	The country average of a firm's percentage ownership held by institutional blockholders, where a block is an ownership stake of 5% of issued shares or above.
<i>% Firms with IBH</i>	The percentage of firms in a country that have at least one institutional blockholder.
<i>Macro corporate governance variables</i>	
<i>Anti-director index</i>	Constructed by La Porta et al. (1997), the index quantifies the extent to which a country's company law or commercial code protects basic shareholder rights. We use a version of the index that is updated up to the end of 2000 by Pagano and Volpin (2005).
<i>% Multiple-class firms</i>	The percentage of firms in a country in 2002 that issue shares with differential voting rights. Sources: Datastream, Mergent Online, Lexis/Nexis, and Faccio and Lang (2002).
<i>Enforcement index</i>	The principal component of three aspects of enforcement, namely, rule of law, regulatory quality, and absence of corruption. Source: Kaufmann et al. (2003).
<i>WEF minority rights</i>	A survey-based variable measuring both the presence and enforcement of minority shareholder rights. Source: WEF <i>Global Competitiveness Report 2003</i> .
<i>WEF disclosure</i>	A survey-based variable measuring the extent of financial information disclosure. Source: WEF <i>Global Competitiveness Report 2003</i> .
<i>Corporate disclosure</i>	An index that measures financial disclosure in a country by rating annual reports based on their inclusion or omission of 90 items. Source: Bushman et al. (2004).
<i>Governance disclosure</i>	An index that measures the extent to which firms are required to disclose governance-related matters in their annual reports. Source: As above.
<i>Measures of regulatory ownership restrictions</i>	
<i>Investment limits</i>	An index formed separately for banks, insurance firms, pension funds, and mutual funds that counts whether (1) an institution cannot hold more than 10% of a firm's shares and (2) equity investment in a single firm cannot exceed 10% of an institution's investment assets (or 15% of capital in the case of a bank), calculated based on regulations as of 2002. Sources: OECD, Institute of International Bankers, Fitch Ratings, KPMG, PWC, and regulators' web sites.
<i>Five-percent limit</i>	A dummy that equals one if at least one institution type cannot hold more than 5% of a firm's shares, and zero otherwise.
<i>Ownership disclosure</i>	An index that counts whether (1) shareholders with a holding that exceeds 5% must report their holdings and (2) they have to disclose ownership changes continuously. Sources: La Porta et al. (2006), listing rules, and securities industry regulators' web sites.
<i>Characteristics of the institutional investment industry</i>	
<i>Inst Equity Investment</i>	Total equity investments of banks, insurance companies, pension funds, and mutual funds in a country scaled by the domestic stock market's capitalization, collected at various points during 2001–2002. Sources: OECD publications, web sites of national regulators, and international associations (EFRP, FEFSI, and FIAP).

(continued)

Table I—Continued

<i>Mutual Assets/GDP</i>	Total assets of mutual funds in a country scaled by GDP. Sources: As above.
<i>Pension Assets/GDP</i>	Total assets of pension funds in a country scaled by GDP. Sources: As above.
<i>Industry concentration</i>	A Herfindahl index constructed based on the market capitalization of all listed financial companies in a country as of the end of 2001. Source: Datastream.
<i>Fund concentration</i>	A Herfindahl index constructed based on the total equity investment of individual investment managers in a country, as of 2002. Source: LionShares.
<i>Bank concentration</i>	The fraction of banking assets held by the three largest banks in a country as of 2001. Source: World Bank.
<i>Other economic and market-related control variables</i>	
<i>Log GDP</i>	The natural logarithm of a country's GDP as of 2001. Source: World Bank.
<i>Log median size</i>	The natural logarithm of the median capitalization of all listed firms in a country as of the end of 2001. Source: Datastream.
<i>Market cap/GDP</i>	Total market capitalization of all domestic listed firms scaled by GDP as of the end of 2001. Sources: World Bank and the World Federation of Exchanges.

institutions according to the type of manager rather than the type of fund. We examine five different categories: (1) banks (including bank holding companies, banks' trust departments, and other deposit-taking institutions), (2) insurance companies, (3) professional fund managers, (4) investment banks (including brokerage firms), and (5) others (including mainly venture capital funds, hedge funds, private equity funds, and other noncollective investment schemes). We allocate each institution with a block holding into one of the above categories according to its primary activity, the identification of which is discussed above. For the third category, although the individual funds of each manager cannot be identified, we are able to distinguish managers that exclusively manage mutual funds or pension funds from the rest (which are assumed to be mixed managers) and report their large shareholdings individually.

Table II reports % *Firms with IBH* statistics calculated separately for different types of managers for each sample country. On average, the relative importance of bank block holdings is greater in traditionally bank-centered economies. For example, the % *Firms with IBH* figures for banks in Germany and Japan are 9.39% and 39.30%, respectively (note that % *Firms with IBH* calculated for all institutions for the two countries are 33.92% and 49.21%, respectively).¹² In contrast, block holdings by professional fund managers are the

¹² The figure for Germany still understates the true extent of bank block holdings as many own shares indirectly (e.g., through venture capital arms under the 1987 German law on private equity). In Japan, banks cannot hold more than 5% of a firm's shares. However, we find that many bank shareholdings hover above this limit, mainly due to bank mergers, capital changes in issuing firms, and the fact that bank trust divisions are not subject to the same restriction.

Table II
Institutional Block Holdings across All Sample Countries

The table reports various institutional block holding statistics for 45 sample countries. % Coverage estimates the extent to which nonfinancial firms in each country are covered in our sample, and is calculated by dividing the number of firms for which we obtain ownership data by the total number of nonfinancial firms in either OSIRIS, Worldscope, or The Major Companies Database (whichever provides a higher number). Mean IBH is the country-level average of a firm's percentage ownership held by institutional blockholders, where a firm is an ownership stake in excess of 5% of issued shares. % Firms with IBH is the percentage of firms in a country that have at least one institutional blockholder. No. of IBH per Firm is the country average of the number of blocks held by institutions per firm. % IBH = Largest Owner is the percentage of firms in a country in which an institution with a block holding is also the largest shareholder. Skewness is the level of skewness of the within-country distribution of a firm's percentage ownership held by institutional blockholders. Average Block Size is the average size (in percentage of issued shares) of all individual blocks held by institutions in a country. % Firms with IBH statistics are calculated separately for each individual institution category in the last eight columns. Note that these statistics may not sum to the % Firms with IBH statistic calculated for all institutions, as a single firm can have multiple block holdings by different institution categories.

Country	N	% Coverage	Mean IBH	Block Holdings Statistics of All Institutions					% Firms with IBH for Institution Categories						
				% Firms with IBH	No. of IBH per Firm	% IBH = Largest Owner	Skewness	Average Block Size	Insurance Companies	Fund Managers	of Which			Investment Banks	Others
											Pension	Mutual	Mixed		
Argentina	52	86.67	6.41	28.85	0.58	7.69	2.82	11.11	3.85	0.00	23.08	5.77	13.46	5.77	5.77
Australia	831	84.11	13.59	65.58	1.36	29.84	1.42	10.02	4.93	7.94	52.47	3.13	26.84	35.62	5.90
Austria	79	96.34	9.77	40.51	0.63	16.46	2.17	15.44	8.86	5.06	17.72	0.00	8.86	8.86	0.00
Belgium	110	97.35	9.57	42.73	0.68	13.64	2.91	14.03	3.64	3.64	23.64	0.00	15.45	9.09	0.91
Brazil	272	81.19	6.91	29.04	0.45	6.99	3.35	15.27	8.82	1.47	18.38	13.24	5.15	1.84	2.21
Canada	779	70.52	14.19	69.45	1.27	40.56	1.24	11.14	1.28	0.51	59.56	9.37	25.29	42.49	3.98
Chile	145	85.29	10.00	47.59	0.79	9.66	2.57	12.61	0.00	1.38	30.34	14.48	16.55	3.45	15.79
Colombia	44	95.65	8.27	31.82	0.68	15.91	1.43	12.12	0.00	13.64	15.91	0.00	13.64	2.27	15.91
Czech Rep	67	97.10	4.90	19.40	0.25	4.48	3.61	19.31	8.96	0.00	5.97	0.00	5.97	0.00	7.46
Denmark	110	100.00	14.36	77.27	1.51	21.82	1.29	9.51	8.18	10.91	70.00	61.82	12.73	11.82	0.91
Finland	125	99.21	6.92	45.60	0.83	18.40	1.76	8.32	6.40	20.00	24.80	16.00	6.40	4.00	8.80
France	664	95.68	8.80	45.33	0.78	11.30	2.58	11.34	6.63	2.11	28.46	2.26	17.17	13.40	8.73
Germany	628	89.33	7.11	33.92	0.51	11.31	2.73	13.95	9.39	4.62	12.26	0.96	5.57	7.96	3.18
Greece	206	98.10	4.34	18.93	0.23	5.83	4.08	19.01	7.77	1.94	4.37	0.00	1.46	2.91	1.46
Hong Kong	355	72.15	10.15	52.39	0.85	10.70	2.29	11.94	4.23	1.13	31.83	0.56	16.90	22.54	5.92
Hungary	38	95.00	10.42	47.37	0.61	7.89	1.39	17.21	13.16	0.00	18.42	0.00	15.79	2.63	13.16
India	556	70.74	9.60	62.77	1.08	16.55	1.56	8.92	10.43	25.00	30.40	0.00	29.68	1.98	10.07
Indonesia	227	97.42	6.19	36.12	0.53	6.17	2.74	11.71	2.64	1.32	13.22	1.32	9.25	2.64	7.05

(continued)

Table II—Continued

Block Holdings Statistics of All Institutions										% Firms with IBH for Institution Categories									
Country	N	% Coverage	Mean IBH	% Firms with IBH	No. of IBH =		% IBH = Largest Owner	Skewness	Average		Insurance Companies	Fund Managers	of Which			Investment Banks	Others		
					IBH per Firm	IBH = Largest Owner			Block Size	Banks			Pension	Mutual	Mixed				
Ireland	55	100.00	19.46	92.73	2.53	41.82	0.70	7.70	27.27	18.18	90.91	3.64	21.82	80.00	18.18	7.27			
Israel	210	72.41	8.30	40.95	0.61	14.29	2.20	13.61	3.81	0.95	19.52	1.43	10.00	9.52	2.86	19.05			
Italy	180	99.45	5.96	33.33	0.50	7.22	2.64	11.91	10.00	1.11	15.56	1.67	3.89	10.56	5.00	9.44			
Japan	2,644	86.46	5.50	49.21	0.81	19.29	2.50	6.79	39.30	13.69	5.56	0.11	2.50	3.06	1.44	1.17			
Malaysia	612	97.83	9.79	56.21	0.86	12.75	2.42	11.39	2.78	2.78	47.55	23.37	28.59	2.45	5.56	7.03			
Mexico	113	87.43	6.34	36.28	0.45	7.96	4.15	14.05	11.50	0.88	21.24	0.00	15.04	6.19	2.65	4.42			
Netherlands	162	86.26	14.66	71.60	1.96	30.86	0.83	7.47	20.99	41.36	48.77	2.47	35.80	15.43	4.94	20.99			
New Zealand	83	100.00	10.28	59.04	1.05	24.10	1.57	9.80	3.61	13.25	32.53	2.41	9.64	25.30	4.82	21.69			
Norway	111	89.25	17.81	73.87	1.70	30.63	1.47	10.46	11.71	1.80	53.15	22.52	29.73	10.81	22.52	31.53			
Pakistan	191	97.37	10.30	58.64	0.80	14.14	1.30	12.94	5.76	8.90	48.69	0.00	48.17	1.05	5.76	4.71			
Peru	123	71.27	6.75	29.27	0.42	7.32	2.33	15.96	7.32	4.88	8.13	2.44	6.50	0.00	8.13	8.94			
Philippines	147	95.35	9.18	36.73	0.49	19.05	2.03	18.74	7.48	4.76	10.20	2.72	6.12	1.36	14.97	8.16			
Poland	90	98.00	10.38	48.89	0.88	11.11	2.62	11.82	18.89	8.89	30.00	14.44	12.22	8.89	10.00	6.67			
Portugal	67	76.27	6.39	37.31	0.58	5.97	1.38	10.98	28.36	2.99	7.46	2.99	4.48	0.00	2.99	4.48			
Singapore	293	98.53	11.89	56.66	0.96	15.02	2.08	12.40	8.87	4.44	23.89	0.68	15.02	13.31	20.48	16.04			
South Africa	214	77.11	16.40	71.96	1.43	24.30	1.55	11.50	7.94	16.82	48.60	16.36	14.49	34.58	7.94	15.89			
South Korea	1,307	75.09	4.10	23.72	0.31	7.04	3.86	13.23	8.42	1.38	6.89	0.54	4.59	2.30	1.76	8.19			
Spain	120	98.36	18.34	77.50	1.91	30.00	1.25	9.61	41.67	3.33	34.17	4.17	24.17	14.17	35.83	22.50			
Sri Lanka	102	70.34	5.67	26.47	0.48	3.92	2.44	11.79	7.84	0.98	12.75	0.00	11.76	2.94	5.88	10.78			
Sweden	185	86.85	12.20	63.78	1.18	23.78	1.35	10.31	9.73	9.19	41.08	9.73	33.51	7.03	9.73	19.46			
Switzerland	181	97.84	10.23	48.62	0.87	25.41	2.10	11.71	12.15	3.87	33.70	7.18	12.15	17.68	4.97	12.71			
Taiwan	324	80.20	4.28	29.01	0.39	14.51	3.43	11.10	4.01	1.23	10.80	0.62	6.79	4.63	5.86	12.04			
Thailand	289	95.07	6.53	38.75	0.55	8.65	2.63	11.87	11.07	3.81	6.92	0.00	2.77	4.50	12.11	13.49			
Turkey	176	96.13	8.13	20.45	0.24	12.50	2.40	33.27	11.36	0.00	7.95	5.68	2.27	0.00	0.00	1.70			
U.K.	1,236	92.45	15.57	72.65	1.53	46.44	1.11	10.19	2.91	11.41	62.30	3.07	20.95	51.21	7.12	10.36			
U.S.	5,354	85.25	17.99	69.20	1.82	43.26	1.34	9.90	7.84	5.25	56.44	2.54	27.59	46.40	6.84	22.54			
Venezuela	26	83.87	2.31	23.08	0.23	0.00	2.71	10.00	3.85	0.00	3.85	0.00	0.00	3.85	15.38	0.00			
Average		89.02	9.69	47.57	0.87	16.81	2.19	12.52	9.90	6.37	28.21	5.77	14.59	12.37	8.14	12.04			

most common in traditionally market-centered economies such as the United States (56.44%) and U.K. (62.30%). We further provide block holding statistics for three subcategories: pension, mutual, or mixed managers. Block holdings by pension managers appear to be more popular in countries with relatively larger public pension funds, where these funds are mainly managed inhouse rather than contracted out to external professional fund managers (e.g., the Employees' Provident Fund Board in Malaysia and the Labor Market Pension Fund in Denmark). Our final observation is that block holdings by institutions in the "other" category (e.g., venture capital funds) are also quite high in many economies. These institutions are not usually regulated by requirements to diversify and they have played an increasing role as large shareholders, especially in small, newly listed firms.

E. Determinants of Institutional Block Holdings

In this section, we identify potential country-level determinants of institutional block holdings and discuss how these factors are measured and incorporated into our analysis.

E.1. Country-Level Governance Environments

Macro corporate governance environments can affect the country-level extent of institutional block holdings because of their role in facilitating corporate monitoring. We focus on three key aspects of macro governance environments in this regard. To monitor management effectively, institutions must be able to (1) voice their opinions (or exert influence), (2) enforce their rights, and (3) obtain information necessary for monitoring purposes. While these abilities undoubtedly vary depending on institution- and firm-specific characteristics, they are largely the product of laws and regulations. Therefore, to explain the variation in monitoring incentives across countries, we measure the extent to which each of the above abilities is strengthened or supported by macro governance environments.

First, the ability of institutions to voice opinions depends on the degree to which a macro governance environment protects the voting rights of minority shareholders and offers them avenues to challenge insiders in the corporate decision-making process. To measure shareholder protection, La Porta et al. (1997, 1998) construct the anti-director rights index, which quantifies the presence of six important provisions related to shareholder rights in a country's company law or commercial code. For institutions interested in monitoring, these rights can significantly improve their intervention ability by (1) reducing the costs of voting or proxy contests, (2) improving access to the board of directors, (3) offering further avenues to challenge insiders other than in annual general meetings, and (4) restricting the ability of insiders to dilute the voting power of others through preferential share issues. Given that the original index is constructed as of 1993, it is likely to be outdated for the purpose of our study since many countries have since improved their corporate laws. Thus, we utilize an

updated version reported in Pagano and Volpin (2005).¹³ We label this variable *Anti-Director Index*.

Another important aspect of shareholder protection is whether outside shareholders can access voting rights and at what cost. In many countries, the widespread use of multiple classes of shares with differential voting rights allows insiders to hold concentrated voting power (Claessens et al. (2000), Faccio and Lang (2002)) and results in shares with full voting rights often being traded at a premium (Nenova (2003)). This limits institutions' access to voting shares, and ultimately their ability to intervene. To measure the extent to which a country's laws and regulations tolerate the use of shares with differential voting rights, we calculate the proportion of listed firms that issue multiple-class shares.¹⁴ These include firms that issue shares with no vote, with multiple votes, or with exclusive rights (e.g., to elect specific directors, to change articles of association, to enjoy veto power over important matters, etc.). We refer to this variable as *% Multiple-Class Firms* and employ it as another shareholder protection variable to complement *Anti-Director Index*. We collect details regarding share classes from Datastream, Moody's Mergent Online, Lexis/Nexis, and the internet resources listed in Faccio and Lang (2002).¹⁵

Second, while shareholder rights are an important feature of a governance environment, their effect is weakened if they are not effectively enforced. To measure the degree of enforcement, we employ quantitative assessments of the rule of law (the extent to which agents have confidence in and abide by the rules of society), regulatory quality (the ability of government to formulate and implement effective policies for the regulation of businesses and markets), and the control of corruption that come from Kaufmann, Kraay, and Mastruzzi (2003).¹⁶ To avoid multicollinearity problems, we follow Berkowitz, Pistor, and Richard (2003) and aggregate these factors (using weights based on a principal component analysis) into a single variable, which we label *Enforcement Index*. For robustness purposes, we also measure both the existence and enforcement of shareholder rights using data from a survey of world business

¹³ We use the anti-director rights index as updated by Pagano and Volpin (2005) up to the end of 2000 (1 year before our ownership data collection period) to account for the fact that corporate law changes may not affect ownership patterns instantaneously. We also cross-check and update this variable with similar data from a publication by Oxford Analytica, Ltd. titled "Shareholder and Creditor Rights in Key Emerging Markets 2003" (commissioned by the California Public Employees' Retirement System).

¹⁴ La Porta et al. (1998) also identify countries in which corporate laws prohibit nonvoting shares. However, this classification may not adequately capture the prevalence of multiple-class shares. For example, in Australia and the United States, while corporate laws do not prohibit nonvoting shares, the Australian Stock Exchange and the New York Stock Exchange require listed firms to apply the one-share-one-vote rule. In contrast, nonvoting shares are not allowed in Chile, but this rule is compromised as shares are issued with differential rights regarding director elections.

¹⁵ We use the number of nonfinancial firms in Datastream to proxy for the population of listed firms in a country.

¹⁶ La Porta et al. (1998) also use a different judicial efficiency variable. We do not consider this variable as it is based on assessments from 1980 to 1983, which are likely to have changed over a 20-year time period.

leaders reported in the World Economic Forum's *Global Competitiveness Report 2003*. Specifically, this variable (*WEF Minority Rights*) utilizes the responses to the following question: "Law protection of minority shareholders' interests in your country is: 1 = nonexistent and seldom recognized, 7 = total and actively enforced."

Third, the ability to access information relevant to monitoring decisions depends upon the extent to which regulations mandate sufficient, accurate, and timely corporate disclosure. We utilize several alternative measures for the extensiveness of reporting requirements. One variable (*Corporate Disclosure*) is Bushman, Piotroski, and Smith's (2004) corporate disclosure index, which is created by rating companies' annual reports based on their inclusion or omission of 90 items in seven categories (general information, income statements, balance sheets, funds flow statements, accounting standards, stock data, and special items) for 39 out of our 45 sample countries. Another variable (*Governance Disclosure*), also from Bushman et al. (2004), measures the extent of governance-related disclosure (e.g., remuneration and share ownership of managers, board members, etc.) for 41 out of our 45 sample countries. Our final measure of financial information disclosure is again based on survey data from the World Economic Forum's *Global Competitiveness Report*. We use responses to the question: "Access to reliable and timely information on company financial performance is: 1 = often insufficient, delayed and difficult to obtain, 7 = regular and easy," and label this variable *WEF Disclosure*.

E.2. Regulatory Barriers to the Acquisition of Large Shareholdings

According to Roe (1990), ownership and monitoring choices of institutions can be constrained by investment regulations. We extend Roe's (1990) analysis, which documents the investment portfolio restrictions imposed on banks, insurance companies, mutual funds, and pension funds in the United States, to all countries in our sample. We assemble a collection of reliable sources of current institutional investment regulations for this purpose, including publications by the OECD, Institute of International Bankers, Fitch Ratings, KPMG, and Price Waterhouse Coopers. In the event that a country is not fully covered by these publications or that inconsistencies exist among them, we obtain information regarding investment portfolio restrictions directly from the legislation governing a particular type of institution or web sites of relevant regulators. These investment regulations and relevant references are described in detail in a supplemental data appendix, which is available from the authors upon request.

Our collection of current regulatory information points to two principal types of restrictions on institutional shareholdings. First, institutions may not be allowed to hold more than a certain percentage of a firm's equity. To quantify this restriction for each institution category, we construct an indicator variable that equals one if the limit is imposed at 10% (the median level across all

countries) of a firm's equity or lower, and zero otherwise.¹⁷ Second, institutions may not be allowed to hold more than a certain percentage of their investment assets (or equity capital in the case of banks) in a single firm's equity. This restriction is quantified by another indicator variable that, for each institution category, equals one if the limit is imposed at the median level across all countries or lower, and zero otherwise (see Table I). The sum of the above two indicator variables (labeled *Investment Limits*) reflects the strictness of investment regulation for each institution category. Finally, we use the average of this variable across the four institution types as an overall measure of investment limits in the main regressions that examine block holdings of all institutions.

Institutional block holdings can also be limited by regulations that require large shareholders to disclose their ownership stakes and trades. According to Shleifer and Vishny (1986) and Black (1990), strict ownership reporting rules (e.g., SEC rule 13d) not only make it difficult for a potential monitor to discreetly acquire shares without prices incorporating the benefits of increased intervention, but also impose considerable administrative costs. To account for this issue, we gather information on current ownership disclosure rules around the world and quantify their stringency based on two aspects.¹⁸ The first is the definition of a large shareholder, which triggers the reporting of ownership (the common thresholds are 5% and 10%). The second is the existence of a continuous ownership disclosure requirement, whereby large shareholders must notify authorities of all their transactions or those resulting in their shareholdings crossing important thresholds (e.g., multiples of 5%). We measure the overall strictness of these disclosure regulations by an index labeled *Ownership Disclosure*, which counts whether (1) the large shareholder definition is imposed at 5% and (2) a form of continuous disclosure requirement exists in each country. A higher index value implies that greater disclosure costs are associated with acquiring large shareholdings.

E.3. Characteristics of the Institutional Investment Industry

In addition to institution-specific regulations, characteristics of the institutional investment industry are likely to explain the prevalence of institutional block holdings. In particular, the total amount of assets managed by financial institutions in a country can grow so large relative to the size of its stock market that large institutional shareholdings become unavoidable. Khorana et al. (2005) and Chan et al. (2005) also document that the legal enforcement of minority rights influences aggregate mutual fund investment in equity. Therefore, it is possible that the relation between institutional block holdings and

¹⁷ Another possible benchmark is 5%, but since only a few countries implement this level of restriction, we only use it for robustness purposes.

¹⁸ We consider all ownership disclosure requirements imposed by corporate laws, securities laws, and/or listing rules, which are gathered from a range of sources, including explanatory notes accompanying La Porta, Lopez-de-Silanes, and Shleifer (2006) as well as web sites of various national stock markets and securities industry regulators.

governance environments could be spurious due to the intervening effect of the aggregate size of institutional equity investments.

To construct a proxy for aggregate institutional equity investments, we focus on the four largest classes of institutional investors, namely, banks, insurance companies, pension funds, and mutual funds, for which portfolio allocation statistics of investment assets can be systematically obtained at the national level. We collect the data directly from relevant national regulators or from the following international organizations: OECD, European Federation for Retirement Provision (EFRP), International Federation of Pension Funds Administrators (FIAP), and Fédération Européenne des Fonds et Sociétés d'Investissement (FEFSI). From these statistics, we construct a variable labeled *Inst Equity Investments*, which sums the ratios of equity investment value to domestic stock market capitalization (measured at the same month) for banks, insurance companies, pension funds, and mutual funds. We provide a detailed description of the construction and data sources of this variable in the supplemental data appendix mentioned earlier.¹⁹ In addition, we employ measures of total institutional assets scaled by GDP as an alternative control for the size of the institutional investment industry. However, as banks and insurance companies invest predominantly in debt markets, we focus on assets of pension and mutual funds only. These variables (*Pension Assets/GDP* and *Mutual Assets/GDP*) also control for the fact that the development of the managed fund industry may be influenced by governance environments (Khorana et al. (2005)).

The concentration of the institutional investment industry is another important control variable. Some countries may have a few dominant financial institutions with assets so large that for them block holdings become unavoidable. However, investment portfolio data of all individual institutions are difficult to obtain. Thus, to proxy for financial industry concentration, we utilize a Herfindahl index (*Industry Concentration*) based on the market capitalization of all listed financial companies in each sample country.²⁰ The rationale for using this proxy is that most large financial institutions today are either listed or owned by another listed financial firm. For robustness purposes, we also employ two alternative proxies. The first (*Fund Concentration*) is another Herfindahl index based on the equity investment values of individual investment managers in each country that are covered in the LionShares database mentioned earlier. The second (*Bank Concentration*) is the fraction of assets held by the three largest banks in each country, which we obtain from the World Bank.

¹⁹ In a few cases, the total equity investment of a particular institution type has to be estimated. For example, if the equity investment figure for banks in a country is not available, it is estimated from annual report data of all listed banks by multiplying the average proportion of individual listed banks' assets allocated to equity investments by the total asset value of the entire banking industry.

²⁰ We calculate the market capitalizations of the five largest financial firms as a percentage of the total capitalization of all financial firms in a country (using Datastream). The Herfindahl index is the sum of squares of these percentages.

E.4. Economic and Stock Market Characteristics

Our analysis also examines several potentially important economic and stock market conditions that may influence country-level institutional ownership concentration. First, we include the log of GDP to control for general economic size effects as smaller economies can create diversification constraints, which may force institutions to hold large ownership blocks. Second, we use the ratio of stock market capitalization to GDP to account for the possibility that a developed stock market, with its lower transaction and holding costs, may encourage institutional block holdings. This variable also reflects whether an economy is bank- or market-centered. Finally, considering institutions' general preference for large firms (Gompers and Metrick (2001)), we use the natural logarithm of the median market capitalization of all listed firms (as covered in Datastream) in each country to control for cross-country differences in firm size.²¹

II. Macro Governance Environments and Institutional Block Holdings

A. Univariate Analysis

Table III documents initial support for the hypothesized relation between macro governance environments and institutional ownership decisions. Specifically, our sample countries are split into "high" and "low" groups based on whether each macro governance variable is above or below the sample median. Comparisons are then made between the two groups with respect to different institutional block holding statistics. We find that *Mean IBH* and *% Firms with IBH* are always significantly higher in countries with above-median *Anti-Director Index*, *Enforcement Index*, *WEF Minority Rights*, *Corporate Disclosure*, *Governance Disclosure*, and *WEF Disclosure*. They are significantly lower in countries in which firms with multiple-class shares are more prevalent (i.e., above-median *% Multiple-Class Firms*). The same results also obtain for other measures of the prevalence of institutional block holdings, including the average number of institutional blockholders per firm and the percentage of firms whose largest shareholder is an institution. These results suggest that strong macro governance environments appear to induce institutions to hold large ownership blocks since they strengthen the ability of institutions to monitor, consistent with Black (1990), Pound (1991), and Black and Coffee (1994).

While institutional block holdings are more prevalent among firms in strong compared to weak governance countries, several statistics in Table III suggest that this difference is reversed with respect to very large controlling stakes. First, the skewness of within-country distributions of institutional block holdings is significantly higher in the latter group of countries, that is, firms either have a very large institutional blockholder or none at all. Second, the average size of individual blocks held by institutions, which is sensitive to the presence

²¹ These variables are measured at a 1-year lag to minimize potential endogeneity. See Table I for their sources.

Table III
Univariate Comparisons of Measures of Institutional Block Holdings across
Different Governance Characteristics

This table compares institutional block holding statistics across different governance environments. *Anti-Director Index*, % *Multiple-Class Firms*, *Enforcement Index*, *WEF Minority Rights*, *Corporate Disclosure*, *Governance Disclosure*, *WEF Disclosure* are country-level corporate governance measures. For each of these measures, "High" and "Low" groups refer to whether the value for an individual group member is above or below the sample median. *Mean IBH* is the country average of a firm's percentage ownership held by institutional blockholders. % *Firms with IBH* is the percentage of firms in a country that have at least one institutional blockholder. *No. of IBH per Firm* is the country average of the number of blocks held by institutions per firm. % *Firms with IBH = Largest Owner* is the percentage of firms in a country in which an institutional blockholder is also the largest shareholder. *Skewness* is the level of skewness of the within-country distribution of a firm's percentage ownership held by institutional blockholders. *Average Block Size* is the average size (in percentage) of all blocks held by institutions in a country. % *Firms with IBH ≥ 20%* is the percentage of firms in a country that have an institution holding at least 20% of issued shares.

	<i>N</i>	Mean IBH	% Firms with IBH	No. of IBH per Firm	% Firms with IBH = Largest Owner	Skewness	Average Block size	% Firms with IBH ≥ 20%
<i>High</i> anti-director index	21	11.651	57.389	1.115	21.501	1.798	10.995	9.100
<i>Low</i> anti-director index	24	7.981	38.977	0.655	12.707	2.524	13.858	9.127
<i>t-stat</i>		3.191 ^a	3.788 ^a	3.207 ^a	2.789 ^a	-3.092 ^a	-2.356 ^b	-0.021
<i>High</i> % multiple-class firms	22	8.270	40.244	0.657	13.087	2.326	13.806	9.893
<i>Low</i> % multiple-class firms	23	11.055	54.575	1.074	20.374	2.052	11.295	8.369
<i>t-stat</i>		-2.313 ^b	-2.778 ^a	-2.857 ^a	-2.253 ^b	1.071	2.041 ^b	1.253
<i>High</i> enforcement index	22	12.036	58.752	1.187	23.648	1.757	10.711	8.931
<i>Low</i> enforcement index	23	7.453	36.872	0.567	10.271	2.595	14.255	9.290
<i>t-stat</i>		4.291 ^a	4.862 ^a	4.841 ^a	4.874 ^a	-3.718 ^a	-3.030 ^a	-0.290
<i>High</i> WEF minority rights	22	11.961	57.634	1.139	22.579	1.895	11.457	9.328
<i>Low</i> WEF minority rights	23	7.525	37.941	0.612	11.294	2.464	13.541	8.909
<i>t-stat</i>		4.099 ^a	4.164 ^a	3.830 ^a	3.819 ^a	-2.334 ^b	-1.669 ^c	0.339
<i>High</i> corporate disclosure	19	12.531	60.767	1.238	24.639	1.686	10.589	9.091
<i>Low</i> corporate disclosure	20	7.859	39.095	0.636	12.569	2.546	13.815	9.167
<i>t-stat</i>		4.101 ^a	4.446 ^a	4.192 ^a	3.942 ^a	-3.504 ^a	-2.478 ^b	-0.062
<i>High</i> governance disclosure	20	11.849	59.201	1.178	22.336	1.773	10.626	9.370
<i>Low</i> governance disclosure	21	7.969	38.264	0.624	12.392	2.515	14.039	8.910
<i>t-stat</i>		3.405 ^a	4.509 ^a	4.066 ^a	3.221 ^a	-3.160 ^a	-2.875 ^a	0.370
<i>High</i> WEF disclosure	22	11.982	58.917	1.154	22.868	1.826	10.984	9.253
<i>Low</i> WEF disclosure	23	7.504	36.714	0.599	11.017	2.530	13.994	8.981
<i>t-stat</i>		4.153 ^a	4.975 ^a	4.116 ^a	4.082 ^a	-2.985 ^a	-2.500 ^b	0.220

^a, ^b, and ^c denote significance at the 1%, 5%, and 10% levels, respectively.

of very large (potentially controlling) blocks, is also consistently and significantly higher in countries with weak macro governance characteristics. Third, when we recalculate the % *Firms with IBH* variable using the 20% threshold (which La Porta et al. (1999) use to define controlling ownership positions), the difference across “high” and “low” groups (according to individual governance measures) becomes mostly insignificant. On the whole, these results suggest that deficiencies in macro governance environments make it more likely for institutional investors to employ an “all or nothing” approach, whereby equity investments are either well diversified or concentrated in very large (potentially controlling) blocks. Shareholder protection seems to matter only when institutions decide to become large, but not controlling, shareholders.

B. Country-Level Regression Analysis

This section examines the determinants of institutional block holdings in a multivariate regression framework. We analyze two sets of Ordinary Least Squares (OLS) regressions using either *Mean IBH* or % *Firms with IBH* as the dependent variable. For each set, the main explanatory variables are measures of (1) aspects of the macro governance environment, (2) regulatory barriers to acquiring large shareholdings, (3) size and concentration of the institutional investment industry, and (4) economic and stock market characteristics. Among our governance variables, we select *Anti-Director Index* and % *Multiple-Class Firms* to account for shareholder rights, *Enforcement Index* to measure the extent of legal enforcement, and *WEF Disclosure* to reflect the disclosure environment.²² We attempt to include these governance variables in one regression to analyze whether their individual effects on institutional ownership decisions are complementary. However, *Enforcement Index* cannot be included in the same model with either *WEF Disclosure* or any of the characteristics of the institutional investment industry because of its strong correlation with these variables. Khorana et al. (2005) also find that variables measuring the enforcement of minority rights introduced by La Porta et al. (1997, 1998) are significantly related to the size of the mutual fund industry and many other country-level factors.

Table IV reports the regression results. In Models 1 and 2, we examine shareholder rights together with enforcement (or financial disclosure). The observed coefficients of these governance variables indicate that they all significantly influence both *Mean IBH* and % *Firms with IBH* in the expected direction. Similar to the univariate results presented earlier, features of a strong governance environment appear to encourage institutions to hold large blocks more often, and their individual impact is unlikely to be entirely homogeneous.

²² The results are unchanged when *Enforcement Index* is replaced by *WEF Minority Rights*. The variable *WEF Disclosure* is selected to reflect the disclosure environment because it covers all sample countries. In contrast, the other two disclosure measures, *Corporate Disclosure* and *Governance Disclosure*, are only available for 39 and 41 countries, respectively. We test these variables and they are significant in the regression, but some other explanatory variables become less significant possibly because of a smaller sample size and reduced degrees of freedom.

Table IV
Multivariate Regression Analysis of Cross-Country Variations in Institutional Block Holdings

The table reports OLS regression results for a sample of 45 countries. The dependent variable is *Mean IBH* or % *Firms with IBH*. *Log GDP* is the natural logarithm of GDP. *Market Cap/GDP* is the total market capitalization scaled by GDP. *Log Median Size* is the natural logarithm of the median capitalization of all listed firms. *Ownership Disclosure* is an index that measures the stringency of ownership reporting. *Investment Limits* is an index and 5% *Limit* is a dummy variable, both of which measure the extent of institutional investment portfolio restrictions. *Anti-Director Index*, % *Multiple-Class Firms*, *Enforcement Index*, *WEF Disclosure* are country-level corporate governance measures. *Inst Equity Investment* is total institutional equity investments scaled by stock market capitalization. *Pension (Mutual) Assets/GDP* is total pension (mutual) fund assets scaled by GDP. *Industry Concentration* is a Herfindahl index that measures the concentration of a country's financial industry. Heteroskedasticity-consistent standard errors are reported in parentheses.

	Dependent Variable: Mean IBH						Dependent Variable: % Firms with IBH					
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	5.967 (4.280)	-1.837 (4.146)	-5.715 (3.624)	0.123 (4.075)	-1.917 (4.259)	-3.885 (4.272)	35.585 ^b (15.401)	-4.609 (15.671)	-31.932 ^b (13.317)	1.353 (15.229)	-4.799 (15.775)	-11.830 (15.575)
Log GDP	-0.231 (0.520)	-0.318 (0.531)	0.198 (0.529)	-0.394 (0.443)	-0.265 (0.403)	-0.058 (0.497)	-1.047 (1.456)	-1.520 (1.483)	0.155 (1.756)	-1.751 (1.172)	-1.370 (1.134)	-0.604 (1.466)
Market cap/GDP	-0.348 (0.899)	-0.560 (0.800)	-0.835 (0.693)	-0.418 (0.747)	-1.788 ^a (0.609)	-0.481 (0.830)	-1.134 (3.336)	-2.983 (2.870)	-3.977 (2.634)	-2.551 (2.668)	-6.610 ^a (2.366)	-2.703 (2.917)
Log median size	1.073 (0.653)	1.332 ^c (0.681)	1.142 ^c (0.627)	0.977 (0.709)	1.099 (0.710)	1.031 (0.748)	4.487 ^c (2.479)	5.551 ^b (2.595)	4.911 ^c (2.666)	4.472 ^c (2.584)	4.842 ^c (2.582)	4.490 (2.837)
Ownership disclosure	-0.842 (0.797)	-0.397 (0.763)	-0.517 (0.745)	-0.450 (0.620)	-0.605 (0.745)	-0.497 (0.734)	-3.478 (3.287)	-1.653 (2.994)	-1.023 (3.415)	-1.813 (2.633)	-2.275 (3.011)	-2.004 (2.899)
Investment limits	-2.839 ^b (1.152)	-2.458 ^b (1.147)		-1.748 ^c (0.898)	-1.316 (1.094)	-2.462 ^b (1.108)	-16.195 ^a (4.226)	-13.899 ^a (4.226)		-11.740 ^a (3.346)	-10.490 ^a (3.715)	-13.915 ^a (4.102)
5% limit			-2.927 ^a (1.002)						-7.814 ^c (4.490)			
Anti-director index	1.344 ^a (0.433)	1.119 ^b (0.458)	1.092 ^b (0.450)	1.083 ^a (0.420)	1.025 ^b (0.450)	1.156 ^a (0.432)	6.070 ^a (1.802)	4.918 ^a (1.828)	4.756 ^b (2.064)	4.808 ^a (1.738)	4.622 ^b (1.802)	5.049 ^a (1.715)
% Multiple-class firms	-5.273 ^b (2.639)	-5.537 ^b (2.392)	-4.493 ^c (2.397)	-5.146 ^b (2.050)	-4.551 ^c (2.454)	-5.549 ^b (2.420)	-26.209 ^b (12.818)	-26.324 ^b (10.602)	-21.042 ^b (9.687)	-25.133 ^a (8.891)	-23.415 ^b (10.967)	-26.364 ^b (10.595)

(continued)

Table IV—Continued

	Dependent Variable: Mean IBH						Dependent Variable: % Firms with IBH					
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
WEF disclosure		1.626 ^b (0.708)	1.727 ^a (0.646)	1.132 ^c (0.629)	1.489 ^b (0.699)	1.794 ^b (0.747)		8.508 ^a (2.797)	10.066 ^a (2.671)	7.006 ^a (2.533)	8.115 ^a (2.911)	9.099 ^a (2.868)
Enforcement index	0.850 ^a (0.329)						3.648 ^b (1.631)					
Inst equity investment				4.155 ^a (1.571)						12.637 ^c (7.154)		
Pension assets/GDP					0.030 ^a (0.010)						0.094 ^b (0.042)	
Mutual assets/GDP					0.037 ^b (0.015)						0.105 ^c (0.055)	
Industry concentration						4.786 ^b (2.173)						16.877 ^b (8.172)
Adjusted- <i>R</i> ²	0.384	0.390	0.437	0.476	0.443	0.409	0.512	0.551	0.483	0.588	0.566	0.561

^a, ^b, and ^c denote significance at the 1%, 5%, and 10% levels, respectively.

Investment portfolio regulations, on the other hand, are substantial barriers to the ability of institutions to acquire large shareholdings, as shown by the negative and significant coefficients of *Investment Limits* in the two regressions. As a robustness check, we use an indicator variable labeled *5% Limit* (equal to one if at least one type of institution in a country cannot hold more than 5% of a firm's issued shares, and zero otherwise) as an alternative measure of investment restrictions in Model 3. This variable also negatively and significantly influences *Mean IBH*, but its impact is weaker in the *% Firms with IBH* regression. In an unreported result, we examine another indicator variable for countries in which the "prudent man" rule rather than specific quantitative restrictions is applied to at least one type of institution.²³ This variable is significant in both regressions, indicating that institutional block holdings are more prevalent in countries that adopt the prudent man rule, which is often considered to be more subjective and potentially less restrictive than quantitative investment limits. In summary, our findings provide the first cross-country empirical support for Roe (1990), who argues that investment regulations restrict the ability of institutions to become large shareholders and thus effective monitors. More importantly, the coefficients of both the governance and regulation variables are significant in the same regression, suggesting that in strong governance environments, institutions are more inclined to acquire large shareholdings up to the limits imposed by regulations.

In contrast, reporting requirements related to large shareholdings (measured by *Ownership Disclosure*) do not seem to be an important regulatory barrier. More frequent and strictly defined ownership disclosures do not significantly influence the two measures of institutional block holdings. This finding implies that (1) existing ownership disclosure rules do not fully eliminate institutions' potential gains from acquiring large shareholdings through open market transactions or (2) institutions actively avoid the free-rider problem by engaging in less public transactions (e.g., private placements) when they wish to become large shareholders.

Models 4 through 6 further control for characteristics of the institutional investment industry. The positive and significant coefficients of *Inst Equity Investment* indicate that block holdings can indeed become quite unavoidable in countries in which the growth in institutionalized equity investments has surpassed the expansion of their stock market. Next, controlling for *Pension Assets/GDP* and *Mutual Assets/GDP*, their positive and significant coefficients again highlight the dependence of institutional block holdings on the aggregate size of institutional funds. Similar findings also obtain with respect to *Industry Concentration*. Institutional block holdings thus appear to be more prevalent when the industry is dominated by a few large institutions.

More importantly, governance variables remain mostly significant even after controlling for the size and concentration of the institutional investment

²³ The "prudent man" rule requires that managers of institutional assets invest such assets, as a person of prudence would do. This includes a general requirement to diversify investments and avoid concentration of risk.

industry. Thus, the relation between governance variables and the extent of institutional block holdings is not simply a result of their correlations with certain characteristics of the institutional investment industry as documented in Khorana et al. (2005) in relation to the mutual fund industry. The investment regulation variable (*Investment Limits*) also remains consistently significant in the last three models. These findings suggest that the development of the institutional investment industry does not automatically result in institutions becoming large shareholders. In some countries, despite the presence of large aggregate investment funds, institutions may still be discouraged from holding large ownership stakes by poor governance environments and strict investment portfolio regulations.

Among the other control variables, both *Log GDP* and *Market Cap/GDP* (a proxy for stock market development) are consistently insignificant across all models. The coefficients of *Log Median Size* are positive, suggesting that Gompers and Metrick's (2001) firm-level result regarding the preference of institutions for large, established firms is also observed at the country level. However, this relation is not consistently significant across different models.²⁴ In unreported regressions, we also include the log of median trading turnover of all listed firms in a country to control for differences in liquidity, but we find that this variable is insignificant. Overall, country-level institutional ownership concentration appears to be more influenced by governance and regulatory factors than economic and stock market characteristics.

C. Endogeneity

In this section we address the possibility that the direction of causality between governance environments and institutional block holdings may be opposite of what our hypothesis suggests. In particular, when more institutions become large shareholders, they can attempt to lobby for stronger shareholder rights so that their interests are better protected. Further, through their monitoring, institutions may be able to influence the corporate governance of individual firms, which would place pressure on regulators to improve minimum acceptable governance standards at the country level. These arguments, reinforced by recent changes to investor protection law in many countries (Pagano and Volpin (2005)), highlight the potential endogeneity of our governance variables as a legitimate concern.

In response to this issue, we reexamine the previous findings from the OLS regression analysis reported in Table IV using instrumental variable (IV) regressions. Several studies suggest that the legal origin of a country is a suitable instrument because it is historically predetermined and highly correlated with current governance environments (La Porta et al. (1999, 2006), Dyck and Zingales (2004)). Following these studies, we use a dummy variable for common law origin as the instrument because it is associated with greater shareholder

²⁴ This weak size effect may also reflect the fact that institutions remain conscious of diversification costs associated with concentrated equity positions in large firms (Admati et al. (1994)).

rights and transparency (La Porta et al. (1998)). However, because there is only one instrument, we follow La Porta et al. (2006) and aggregate the governance variables previously used in the OLS regressions (*Anti-Director Index*, *% Multiple-Class Firms*, *Enforcement Index*, and *WEF Disclosure*) into one single index (*Governance Index*) using weights based on a principal component analysis.

Table V reports the instrumental variable estimation results. Model 1 tests the impact of *Governance Index*. In addition, as Pagano and Volpin (2005) report substantial changes in shareholder rights (quantified by *Anti-Director Index*) in many countries, we also focus on this variable exclusively in Model 2. The control variables are drawn from Model 4 of Table IV (the one with the highest R^2).²⁵ In both models, we find similar results to those of the OLS regressions. The coefficients of *Governance Index* and *Anti-Director Index* are consistently positive and significant.

In Model 3 we use an alternative instrument specifically for shareholder rights, in particular, the value of the anti-director rights index in 1993 obtained from Pagano and Volpin (2005). This lagged measure is unlikely to be determined by the extent of institutional block holdings (the dependent variable) measured in 2002 since the institutional investment landscape has changed considerably in recent years (see footnote 1). The results from Model 3 show that like the OLS estimates, the coefficients of this variable remain significant. Overall, it is difficult to reject the influence of governance environments on the extent of institutional block holdings in favor of a reverse-causality explanation.

III. Additional Results

A. Analysis of Different Categories of Institutions

In this section, we extend the regression analysis in Table IV by examining the determinants of block holdings of the five distinct institution categories (banks, insurance companies, fund managers, investment banks, and others) identified earlier. The results are reported in Table VI. Most notably, the “banks” regressions produce quite different results from those obtained from the all-institution regressions in Table IV (i.e., among the governance variables, only *% Multiple-Class Firms* is weakly significant in the hypothesized direction, while the impact of *WEF Disclosure* is in fact reversed). This is consistent with the argument that, due to other business relationships with firms, banks are not overly concerned about governance environments when making ownership decisions. The significant and negative impact of financial disclosure further shows that blockholders with a banking relationship possess an information advantage in poor disclosure environments.

Compared with banks, block holdings of other institution categories are more strongly related to macro governance characteristics. However, the explanatory

²⁵ The variable *Inst Equity Investment* is excluded from Model 1 because of its strong correlation with *Enforcement Index* (a component of *Governance Index*), as mentioned earlier.

Table V
Instrumental Variable Regression Analysis of Cross-Country
Variations in Institutional Block Holdings

The table reports regression results for a sample of 45 countries using instrumental variable (IV) estimation. The dependent variable is either the country average of a firm's percentage ownership held by institutional blockholders (*Mean IBH*) or the percentage of firms with at least one institutional blockholder (*% Firms with IBH*). *Log GDP* is the natural logarithm of GDP. *Market Cap/GDP* is the total market capitalization scaled by GDP. *Log Median Size* is the natural logarithm of the median capitalization of all listed firms. *Ownership Disclosure* is an index that measures the stringency of ownership reporting. *Investment Limits* is an index that measures the extent of institutional investment portfolio restrictions. *Inst Equity Investment* is total institutional equity investments scaled by stock market capitalization. In Models 1 and 2, the instrument is a dummy variable that takes the value of one for countries with common law legal origin, and zero otherwise. Because there is only one available instrument for each regression, the selected governance variables have to be aggregated into a single variable (*Governance Index*) in Model 1 using weights based on a principal component analysis, or in Models 2 and 3, only the main governance variable, *Anti-Director Index* is used. Model 3 utilizes an alternative instrument, which is the lagged value of the *Anti-Director Index* variable as measured in 1993. Heteroskedasticity-consistent standard errors are reported in parentheses.

	Dependent Variable: Mean IBH			Dependent Variable: % Firms with IBH		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-9.626 (13.196)	-0.367 (6.129)	0.415 (4.524)	-42.263 (55.806)	2.274 (25.550)	13.152 (16.506)
Log GDP	-0.689 (0.855)	-0.488 (0.463)	-0.464 (0.482)	-3.308 (3.707)	-2.187 (1.427)	-1.848 (1.426)
Market cap/GDP	-5.139 (4.453)	-0.303 (1.116)	-0.466 (1.079)	-25.543 (20.487)	-1.619 (4.873)	-0.393 (4.238)
Log median size	0.551 (0.855)	1.186 (0.820)	1.101 (0.711)	1.983 (4.126)	5.806 ^c (3.153)	4.627 ^c (2.611)
Ownership disclosure	-2.688 (2.395)	-0.236 (0.722)	-0.172 (0.671)	-13.584 (11.205)	-1.164 (3.334)	-0.320 (3.056)
Investment limits	-0.616 (2.710)	-1.898 ^c (1.143)	-1.911 ^c (1.150)	-5.220 (11.715)	-12.975 ^b (5.299)	-12.779 ^a (4.594)
Inst equity investment		4.654 ^a (1.802)	4.718 ^a (1.778)		15.671 ^c (8.825)	16.535 ^c (8.497)
Governance index	7.781 ^c (4.503)			38.343 ^c (20.311)		
Anti-director index		2.590 ^b (0.982)	2.351 ^a (0.703)		13.276 ^a (4.283)	9.955 ^a (2.996)
Adjusted- <i>R</i> ²	0.143	0.311	0.348	0.189	0.300	0.425

^a, ^b, and ^c denote significance at the 1%, 5%, and 10% levels, respectively.

power of this relation remains weak for institutions with potential relationships with firms, such as investment banks and insurance companies, for which the selected governance variables (*Anti-Director Index*, *% Multiple-Class Firms*, and *WEF Disclosure*) together explain only 4.25% and 2.43% of the variation in *Mean IBH*, respectively. In comparison, these statistics are 7.55% for the “others” category and 17.87% for the “fund managers” category. The high

Table VI
Multivariate Regression Analysis of Cross-Country Variations in Institutional Block Holdings
for Different Institution Categories

The table reports OLS regression results using a sample of 45 countries. The dependent variable is either *Mean IBH* or *% Firms with IBH* calculated on five individual institution types: (1) banks, (2) insurance companies, (3) fund managers, (4) investment banks, and (5) others. *Log GDP* is the natural logarithm of GDP. *Market Cap/GDP* is the total market capitalization scaled by GDP. *Log Median Size* is the natural logarithm of the median capitalization of all listed firms. *Ownership Disclosure* is an index that measures the stringency of ownership reporting. *Investment Limits* is an index that measures the extent of institutional investment portfolio restrictions. This variable is calculated individually for banks and insurance companies in their respective regressions, and for the regression involving fund managers, it is calculated as the average investment limit across mutual funds and pension funds. As institutions in categories (4) and (5) are usually not subject to investment restrictions, *Investment Limits* is not included in their regressions. *Anti-Director Index*, *% Multiple-Class Firms*, *WEF Disclosure* are country-level corporate governance measures. *Inst Equity Investment* is total institutional equity investments scaled by stock market capitalization. *Bank (Fund) Concentration* measures the concentration of the banking (fund management) industry. Heteroskedasticity-consistent standard errors are reported in parentheses.

	Dependent Variable: Mean IBH					Dependent Variable: % Firms with IBH				
	Banks	Insurance Companies	Fund Managers	Investment Banks	Others	Banks	Insurance Companies	Fund Managers	Investment Banks	Other
Intercept	2.338 (1.596)	-1.459 ^c (0.785)	-5.423 ^c (3.089)	2.467 ^b (1.237)	-1.123 (1.457)	5.631 (7.835)	-15.914 ^b (7.379)	-44.142 ^b (17.533)	8.857 (8.525)	-11.547 ^c (6.819)
Log GDP	0.150 (0.120)	-0.084 (0.066)	0.083 (0.353)	-0.199 ^b (0.088)	-0.173 (0.200)	1.137 (1.166)	-0.692 (0.734)	-0.866 (1.882)	-1.397 ^c (0.739)	-0.727 (0.906)
Market cap/GDP	-0.426 ^b (0.209)	-0.212 (0.165)	0.179 (0.529)	-0.016 (0.213)	0.110 (0.375)	-2.842 ^b (1.340)	-2.682 ^c (1.459)	-0.265 (2.707)	-1.436 (1.527)	-1.069 (1.620)
Log median size	0.534 ^b (0.247)	0.265 ^b (0.134)	0.029 (0.388)	0.270 (0.167)	-0.067 (0.189)	4.329 ^a (1.381)	2.009 (1.288)	2.576 (2.318)	3.395 ^b (1.632)	0.843 (1.073)
Ownership disclosure	0.347 ^c (0.200)	-0.178 (0.177)	-0.686 (0.517)	-0.036 (0.175)	0.498 ^b (0.233)	2.174 ^b (1.051)	-0.888 (1.446)	-1.237 (2.977)	0.100 (1.243)	1.572 (1.057)
Investment limits	-0.460 (0.287)	-0.016 (0.157)	-1.036 ^b (0.504)			-3.897 ^b (1.545)	0.450 (1.510)	-4.692 (2.944)		

(continued)

Table VI—Continued

	Dependent Variable: Mean IBH					Dependent Variable: % Firms with IBH				
	Banks	Insurance Companies	Fund Managers	Investment Banks	Others	Banks	Insurance Companies	Fund Managers	Investment Banks	Other
Anti-director index	0.054 (0.217)	-0.014 (0.149)	0.798 ^b (0.314)	0.209 ^c (0.108)	0.037 (0.176)	1.297 (1.035)	-0.009 (1.399)	3.427 ^c (1.812)	1.977 ^b (0.944)	0.522 (0.822)
% Multiple-class firms	-2.104 ^c (1.163)	-0.774 ^c (0.463)	-0.177 (1.279)	-1.135 (0.719)	-0.108 (0.584)	-14.917 ^b (5.865)	-6.740 (4.137)	-4.429 (6.927)	-8.979 ^c (5.456)	-5.748 ^c (3.099)
WEF disclosure	-0.732 ^a (0.272)	0.385 ^a (0.142)	1.149 ^b (0.541)	-0.324 (0.214)	0.709 ^b (0.305)	-4.380 ^a (1.593)	3.879 ^a (1.263)	9.426 ^a (3.079)	-1.927 (1.588)	4.012 ^a (1.316)
Inst equity investment	-0.621 (0.473)	0.300 (0.273)	4.239 ^b (1.711)	-0.536 ^c (0.320)	0.464 (0.971)	-1.119 (3.994)	3.566 (2.901)	24.249 ^b (10.765)	-2.773 (3.366)	1.372 (3.812)
Bank concentration	1.357 (1.278)					8.904 (6.574)				
Fund concentration			13.329 ^b (5.729)					113.357 ^a (33.236)		
Adjusted- R^2	0.219	0.058	0.507	0.100	0.169	0.336	0.066	0.538	0.103	0.247

^a, ^b, and ^c denote significance at the 1%, 5%, and 10% levels, respectively.

explanatory power of governance variables in the regression involving fund managers suggests that since they invest on a more arms-length basis than the other institutions, governance factors appear to be particularly important when making large ownership decisions.

The impact of other explanatory variables also differs across the institution categories. Stock market characteristics appear to play a more important role in the regression models involving “banks,” “insurance companies,” and “investment banks.” For example, in the “banks” regressions, the coefficients of *Market Cap/GDP* are significantly negative, indicating that consistent with the anecdotal examples highlighted in Black (1990) and Roe (1990), bank block holdings are more prevalent in bank-centered economies such as Japan and Continental Europe. In contrast, fund manager block holdings are more strongly related to investment regulations and characteristics of the institutional investment industry (e.g., size and concentration).²⁶

Overall, using cross-country institutional ownership data, we find evidence consistent with previous firm-level results (Brickley et al. (1988), Van Nuys (1993)), which document variations in monitoring-related behavior across different types of institutions.

B. Institutional Block Holdings in the Presence of Other Controlling Shareholders

We also perform additional analyses on the extent of institutional block holdings among firms in which another shareholder has effective control. Controlling shareholders often employ nonvoting shares, pyramids, and cross-shareholdings, which increase incentives for expropriation of minority interests and create difficulties for institutions to monitor effectively. Across the sample countries, we find that large shareholdings by institutions are more prevalent among widely held rather than closely held firms, differentiated by the presence of a shareholder controlling at least 20% of voting rights.²⁷ Among the latter group, institutions are less likely to hold large ownership stakes if the ultimate controlling shareholder is an individual (or family) and if control is maintained through a pyramid structure.²⁸ This evidence indicates that institutions avoid becoming large shareholders in firms in which control structures are

²⁶ It is important to note that the *Investment Limits* variable is less significant in the category regressions than in the all-institution regressions. This reflects the fact that investment regulations are often fund-specific, while our study examines block holdings at the manager level. In the United States, for example, it is still unclear whether the restrictions contained in the Investment Company Act of 1940 apply to individual funds or to the entire fund family (Edwards and Hubbard (2000)).

²⁷ This finding is unlikely to be entirely due to the lack of free float shares in closely held firms (Dahlquist, Pinkowitz, Stulz, and Williamson (2003)). We carry out the test using both the *Mean IBH* and *% Firms with IBH* variables (the latter being less sensitive to the variations in free float shares), and find similar results.

²⁸ Similar to Claessens, Djankov, and Lang (2000) and Faccio and Lang (2002), we identify ultimate controlling shareholders and pyramid structures by investigating who controls the largest controlling shareholder in each firm, defining control using the 20% of voting rights threshold. This is repeated until we reach the top of the chain of control.

unfavorable to minority shareholders, in the same way that they avoid taking large ownership blocks in countries with poor macro governance environments.

The above findings also highlight the possibility that the prevalence of institutional block holdings is not directly related to governance environments, but rather is a result of closely held and family-controlled firms being fewer in countries with strong shareholder protection (La Porta et al. (1999)). To address this issue, we repeat the analysis of Table III for individual categories of firms with different control structures. Even when calculated based on only closely held firms, both *Mean IBH* and *% Firms with IBH* are still significantly higher in countries with stronger macro governance environments. The same results also hold for separate subgroups of firms controlled by individuals (or families), nonfamily-controlled firms, directly controlled firms, and those controlled through a pyramid structure.²⁹ Therefore, even in the presence of another controlling shareholder, a strong governance environment still encourages institutions to hold large ownership stakes. Overall, the relation between macro governance characteristics and institutional ownership concentration observed in our study cannot be attributed simply to cross-country variation in the control structure across firms.³⁰

IV. Conclusion

This study examines the macro environmental factors that affect institutional ownership decisions. Using ownership data from 19,883 firms across 45 countries, we find that countries with strong shareholder rights, effective legal enforcement, and extensive financial disclosure tend to have a greater extent of large institutional shareholdings. In countries with weak macro governance characteristics, instances of institutional block holdings are significantly less prevalent, and in cases in which institutions do become large shareholders, a very large (often controlling) interest is acquired. Further, large shareholdings of institutions are also determined by investment portfolio regulations, as suggested by Roe (1990), and the size and concentration of the institutional investment industry. Economic and stock market conditions, however, do not seem to significantly influence ownership patterns of institutions.

These results can be understood within the framework of the well-documented trade-off between the benefits and costs of shareholder monitoring. In countries with strong macro governance environments, strengthened intervention ability and reduced monitoring costs can increase the propensity of institutions to monitor. Our empirical results suggest that this manifests itself in a greater extent of large institutional shareholdings observed at the country level. In contrast, a weak governance environment makes monitoring by large minority shareholders less attractive, and as a result, institutions are

²⁹ For the sake of brevity, the results in this section are not tabulated, but are available upon request.

³⁰ In an unreported check, we find that the regression results in Table IV remain unchanged after including another control variable constructed by Dahlquist et al. (2003), which measures the extent of closely held shares in a country.

compelled to either diversify or hold a controlling interest to ensure that monitoring is effective.

This relation can differ across types of financial institutions. We find that the impact of governance environments on large shareholding decisions is most observable in the case of professional fund managers and least significant in the case of banks. These additional findings are consistent with our argument that ownership decisions are influenced by the relative balance of the costs and benefits of monitoring, which can differ across institutions. Finally, we also find that while institutions appear to be less willing to become large shareholders in firms in which control is closely held and the risk of expropriation is high, the impact of macro governance variables on institutional block holdings among such firms remains robust.

Overall, our findings suggest a link between the “Law and Finance” and “Institutional Activism” streams of literature by showing that large institutional block holdings, which are associated with a greater incentive to monitor, are more prevalent in strong macro governance environments. While La Porta et al. (1999) find lower insider ownership concentration in markets with strong shareholder protection, we show that a significant degree of ownership in such markets is attributable to minority block holdings by financial institutions, which provides them an incentive to monitor insiders. This highlights another benefit of strong shareholder protection in addition to those already documented in La Porta et al. (1997, 1998) and La Porta et al. (1999).

Our work also contributes to the ongoing discussion regarding policy responses to many governance problems in the current corporate environment. With internal control mechanisms failing and hostile takeover pressures dampening, the growth of institutional investment has been viewed as a promising development in combating widespread agency problems. However, our results emphasize that increased institutional investment does not by itself lead to greater incentives to monitor, as can be observed through the differing shareholding patterns of institutions across countries. Other environmental factors that support intervention also play an important role. Recognizing this, policy makers and regulators have recently refocused on the need to improve institutional monitoring capabilities. For example, in response to the Asian economic crisis, Korea abolished barriers previously imposed on institutional investors’ voting rights. In Australia, new regulations have also been introduced to remove voting restrictions on unit trust managers. However, examples of this kind are still few and far between. By documenting large differences in institutional ownership concentration across countries, our study highlights the importance of a strong macro governance environment and provides a rationale for further accelerating the process of improving infrastructures that support institutional activism.

REFERENCES

- Admati, Anat R., Paul Pfleiderer, and Josef Zechner, 1994, Large shareholder activism, risk sharing, and financial market equilibrium, *Journal of Political Economy* 102, 1097–1130.
- Aggarwal, Reena, Leora Klapper, and Peter D. Wysocki, 2005, Portfolio preferences of foreign institutional investors, *Journal of Banking and Finance* 29, 2919–2946.

- Anand, Vineeta, 1993, 93 proxy season quiet but effective, *Pensions and Investment Age* 21, May 31, 3.
- Berkowitz, Daniel, Katharina Pistor, and Jean-Francois Richard, 2003, Economic development, legality, and the transplant effect, *European Economic Review* 47, 165–195.
- Bhide, Amar, 1994, Efficient markets, deficient governance: U.S. securities regulations protect investors and enhance market liquidity. But do they alienate managers and shareholders? *Harvard Business Review* 72, 128–140.
- Black, Bernard S., 1990, Shareholder passivity reexamined, *Michigan Law Review* 89, 520–608.
- Black, Bernard S., and John C. Coffee, Jr., 1994, Hail Britannia?: Institutional investor behavior under limited regulation, *Michigan Law Review* 92, 1997–2087.
- Brickley, James A., Ronald C. Lease, and Clifford W. Smith, Jr., 1988, Ownership structure and voting on antitakeover amendments, *Journal of Financial Economics* 20, 267–291.
- Bushman, Robert M., Joseph D. Piotroski, and Abbie J. Smith, 2004, What determines corporate transparency? *Journal of Accounting Research* 42, 207–252.
- Chan, Kalok, Vicentiu M. Corvig, and Lilian K. Ng, 2005, What determines the domestic bias and foreign bias? Evidence from mutual fund equity allocations worldwide, *Journal of Finance* 60, 1495–1534.
- Claessens, Stijn, Simeon Djankov, and Larry H.P. Lang, 2000, The separation of ownership and control in East Asian corporations, *Journal of Financial Economics* 58, 81–112.
- Coffee, John C., Jr., 1991, Liquidity versus control: The institutional investor as corporate monitor, *Columbia Law Review* 91, 1277–1368.
- Dahlquist, Magnus, Lee Pinkowitz, René M. Stulz, and Rohan Williamson, 2003, Corporate governance and the home bias, *Journal of Financial and Quantitative Analysis* 38, 87–110.
- Denis, Diane K., and John J. McConnell, 2003, International corporate governance, *Journal of Financial and Quantitative Analysis* 38, 1–36.
- Dyck, Alexander, and Luigi Zingales, 2004, Private benefits of control: An international comparison, *Journal of Finance* 59, 537–600.
- Edwards, Franklin R., and Glenn R. Hubbard, 2000, The growth of institutional stock ownership: A promise unfulfilled, *Journal of Applied Corporate Finance* 13, 92–104.
- Faccio, Mara, and Larry H.P. Lang, 2002, The ultimate ownership of Western European corporations, *Journal of Financial Economics* 65, 365–395.
- Gelos, Gaston, and Shang-Jin Wei, 2005, Transparency and international portfolio holdings, *Journal of Finance* 60, 2987–3020.
- Gompers, Paul A., and Andrew Metrick, 2001, Institutional investors and equity prices, *Quarterly Journal of Economics* 116, 229–259.
- Gordon, Jeffrey N., 1994, Institutions as relational investors: A new look at cumulative voting, *Columbia Law Review* 94, 124–181.
- Gorton, Gary B., and Mathias Kahl, 2002, The scarcity of effective monitors and its implications for corporate takeovers and ownership structures, Working paper, Anderson Graduate School of Management.
- International Corporate Governance Network, 2003, Cross border proxy voting: Case studies from the 2002 proxy voting season.
- Kahn, Charles, and Andrew Winton, 1998, Ownership structure, speculation and shareholder intervention, *Journal of Finance* 53, 99–129.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi, 2003, Governance matters III: Governance indicators for 1996–2002, Working paper, The World Bank.
- Khorana, Ajay, Henri Servaes, and Peter Tufano, 2005, Explaining the size of the mutual fund industry around the world, *Journal of Financial Economics* 78, 145–185.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, 1999, Corporate ownership around the world, *Journal of Finance* 54, 471–517.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, 2006, What works in securities laws, *Journal of Finance* 61, 1–32.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1997, Legal determinants of external finance, *Journal of Finance* 52, 1131–1150.

- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1998, Law and finance, *Journal of Political Economy* 106, 1115–1155.
- Maug, Ernst, 1998, Large shareholders as monitors: Is there a trade-off between liquidity and control? *Journal of Finance* 53, 65–98.
- McConnell, John J., and Henri Servaes, 1990, Additional evidence on equity ownership and corporate value, *Journal of Financial Economics* 27, 595–612.
- Nenova, Tatiana, 2003, The value of corporate voting rights and control: A cross-country analysis, *Journal of Financial Economics* 68, 325–351.
- Noe, Thomas H., 2002, Institutional activism and financial market structure, *Review of Financial Studies* 15, 289–318.
- Pagano, Marco, and Paolo Volpin, 2005, Political economy of corporate governance, *American Economic Review* 95, 1005–1030.
- Parrino, Robert, Richard W. Sias, and Laura T. Starks, 2003, Voting with their feet: Institutional ownership changes around forced CEO turnover, *Journal of Financial Economics* 68, 3–46.
- Pound, John, 1991, Proxy voting and the SEC: Investor protection versus market efficiency, *Journal of Financial Economics* 29, 241–286.
- Roe, Mark J., 1990, Political and legal restraints on ownership and control of public companies, *Journal of Financial Economics* 27, 7–41.
- Shleifer, Andrei, and Robert W. Vishny, 1986, Large shareholders and corporate control, *Journal of Political Economy* 94, 461–488.
- Van Nuys, Karen, 1993, Corporate governance through the proxy process: Evidence from the 1989 Honeywell proxy solicitation, *Journal of Financial Economics* 34, 101–132.

Copyright of Journal of Finance is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.