Does Governance Travel Around the World? Evidence from Institutional Investors

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Abstract

We examine the role of institutional investors in affecting governance of companies by analyzing institutional holdings in firms from 23 countries during the period 2003-2008. We find that institutional investors play a role in improving firm-level governance over time. Most interestingly, our results suggest that it is changes in institutional ownership over time that drives changes in firm-level governance but the reverse does not hold. Foreign institutions are the drivers of governance improvement outside of the U.S., while domestic institutions play a predominant role for U.S. firms. The legal origin of the institution matters with institutions from common-law countries (i.e., high shareholder protection) being more effective in promoting governance improvements worldwide than institutions from civil-law countries (i.e., low shareholder protection). We also find that domestic institutions play the most important role in improving governance in common-law countries, but it is foreign institutions and institutions domiciled in common-law countries that play a crucial role in improving governance in civil-law countries. Our results suggest that institutional investors promote the convergence of corporate governance regimes around the world.

JEL: G32, G34, G38

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1. Introduction

Institutional holdings have been rising around the world but we know little about the influence of institutions in corporations worldwide. Gillan and Starks (2003) highlight the special role that institutional investors, in particular foreign institutions, play in prompting change in corporate governance practices in many countries. Ferreira and Matos (2008) find that foreign institutional ownership is positively associated with firm value and performance outside of the U.S., but there is no direct evidence that foreign investors are able to change the governance of a firm. Aggarwal, Erel, Stulz and Williamson (2009) find evidence of a good governance premium for non-U.S. firms, but the evidence so far has not supported the view that corporate governance regimes are converging worldwide (Doidge, Karolyi and Stulz (2007)).

In this paper, we investigate whether international portfolio investment can contribute to the convergence of corporate governance across countries. We examine the role of institutional investors from many different countries in affecting the governance structure of companies worldwide. We investigate the role of both domestic and foreign institutional investors. Particularly, we are interested in studying whether institutional investors export good governance internationally and whether they are responsible for the convergence in global governance mechanisms. We also analyze whether the type of institutional investors matter with a special focus on their legal origin in an attempt to address the question: Do institutional money managers from countries with better investor protection "export" good governance practices through their investment decisions overseas? Similarly, we also examine the country-level legal regime of the firm that receives institutional investment. Firms located in countries with a weak legal regime are likely to benefit more from institutional investment, particularly from institutions located in countries with strong legal regimes. For example, U.S. corporate boards

are relatively small and most firms had a majority of "independent" directors even before recent regulations made this a requirement. U.S. institutional investors could potentially influence firms overseas to move in this direction either directly by influencing the management and using voting rights ("voice"), or indirectly by their decisions to buy or threat to sell their shares ("voting with their feet").[1] Firm-level aspects that institutional money managers can affect include the adoption of financial disclosure and auditing standards as well as opposing the adoption of anti-takeover provisions.

To illustrate how the origin of the foreign institutional money manager can matter, consider a company based in a civil-law country, say Germany, which is owned by two institutional investors, one from France and the other one from the U.K. France scores lower than the U.K. according to most country governance indicators (investor protection, quality of institutions, etc). Presumably, the French institutional investor will be less willing to change the firm-level governance of that German firm than the U.K.-based investor. The Economist (2008) provides anecdotal evidence that foreign shareholders, in particular those based on the U.K., tend to lead the changes in governance of German firms. An example is that of TCI (The Children Investment Fund) that forced the management of Deutsche Börse in 2005 to abandon a takeover of the London Stock Exchange and led to the resignation of both its chief executive and the board of the supervisory board.[2] Becht, Franks, and Grant (2008) provide related evidence on the hedge-fund investor activism in Europe.

[1] In the theoretical model developed by Giannetti and Koskinen (2008), domestic and foreign investors' participation in the stock market should be lower in countries with weak investor protection. They also conclude that domestic portfolio investors are less likely to participate in the local market and will hold more foreign equity, when investor protection is weak.

[2] Another example, but for a different country, is TCI's role in the takeover of ABN AMRO, the Dutch Bank, which was initiated by an open letter to ABN AMRO proposing five resolutions aimed at forcing the bank to spin off its different lines of business and which then lead to bids by foreign banks (Economist (2007)).

We examine the relation between firm-level institutional holdings and corporate governance attributes in 23 countries between 2003 and 2008. The focus of our study is on non-U.S. companies, but we also repeat our analysis including U.S. companies. The sample includes about 2,000 non-U.S. firms and 5,000 U.S. firms in a given year. We use 41 governance attributes collected by RiskMetrics (formerly Institutional Shareholder Services). RiskMetrics is the leading proxy advisory firm in the world and its recommendations wield considerable influence in determining corporate voting outcomes (Alexander, Chen, Seppi and Spatt (2008)). Following prior literature (e.g., Gompers, Ishii and Metrick (2003) and Aggarwal, Erel, Stulz and Williamson (2009)) we create a governance (*GOV*) index that provides a firm-level governance measure that is comparable across countries. One can reasonably disagree both with the governance attributes included and the computation of the index. However, if the index were to convey no information, we would simply find that the index we use is not related to institutional ownership. We believe that our 41 firm-level governance attributes include most of the attributes studied in the literature.

We find a strong positive relation between firm-level governance and institutional ownership. We also provide evidence that foreign investors play a predominant role in helping to improve firm-level governance over time of non-U.S. corporations. U.S. institutions, and more generally institutions based in common-law countries (where there is strong protection of minority shareholder rights) are the main drivers of the improvement in governance outside of the U.S., while institutions based in civil-law countries are not.

The legal origin of the firm also matters. We find that domestic institutions play a significant role in improving governance of firms located in common-law countries, while in civil-law countries the main driver of better governance is foreign institutions. Likewise, we find

that domestic institutions have a predominant role in the sample of U.S. firms. Overall, our analysis shows that the legal environment of the institution and firm affects the efficacy of monitoring by institutional shareholders.

The relation between institutional ownership and firm-level governance raises a few issues that are typical in empirical studies of governance. First, institutional ownership might be related to some observed and unobserved firm characteristics that explain governance. To address this omitted-variable problem, we control for observed firm characteristics in our regressions. Also, we use a firm fixed-effects method that controls for unobserved sources of firm heterogeneity. The positive relation between institutional ownership and governance remains robust.

Another concern is the fact that institutions might be attracted to firms that have higher governance (the endogeneity problem). Investors domiciled in strong legal environment countries could systematically avoid firms with weak governance from countries with a poor legal environment (Kim, Sung and Wei (2008) and Leuz, Lins and Warnock (2008)). This issue can affect the functional convergence of governance across the world. If institutions from countries with good governance avoid firms from inefficient environments, in particular those firms with more governance problems, convergence will take a longer time to occur. To address this issue, we use three distinct approaches. First, we use a panel data set and lag all the explanatory variables, including institutional ownership, in explaining governance. Second, we use an instrumental-variable approach, which gives similar results. Finally, we directly examine the relation between changes in governance and changes in institutional ownership (also lagged), and vice versa. Our results suggest that it is changes in institutional ownership over time that

drive changes in firm-level governance, but the reverse does not hold. Thus, the direction of the effect is from institutions to governance and not from governance to institutional ownership.

Our paper contributes towards connecting two major strands of the literatures. The first strand of literature has focused on the governance role played by institutional investors. Gillan and Starks (2007) survey the evolution of shareholder activism in the U.S. from the value effect of shareholder proposals (Gillan and Starks (2003)) to the influence of institutional holdings on corporate events like CEO turnover (Parrino, Sias and Starks (2003)), executive compensation (Hartzell and Starks (2002)), antitakeover amendments (Brickley, Lease and Smith (1988)), executive compensation (Almazan, Hartzell and Starks (2005)), and M&As (Gaspar, Massa, and Matos (2005) and Chen, Harford and Li (2007)). Bushee, Carter and Gerakos (2008) find evidence of ownership by government-sensitive institutions to be associated with future improvements in shareholder rights. Recent papers look at activism by individual funds, such as pension funds or hedge funds (Brav, Jiang, Partnoy and Thomas (2008) and Klein and Zur (2008)). Outside of the U.S., there is little evidence on the governance role played by institutional investors. Ferreira and Matos (2008) find a positive association between foreign institutional ownership and firm value and performance. Ferreira, Massa and Matos (2008) find that international investors facilitate cross-border M&A. In a survey of institutional investors that invested in the U.S. and Netherlands, McCahery, Sautner, and Starks (2008) find that corporate governance is of importance to them and many of them are willing to engage in shareholder activism.[3]

[3] There are several studies that examine the revealed preference of institutional investors (but not their governance role): in a single destination country (Japan in Kang and Stulz (1997, Sweden in Dahlquist and Robertsson (2001) and Giannetti and Simonov (2006)); from a single origin country (the U.S. in Aggarwal, Klapper, and Wysocki (2005) and Leuz, Lins, and Warnock (2008)); using country-level institutional holdings or blockholdings (Chan, Covrig, and Ng (2005), Li, Moshirian, Pham and Zein (2006)); and using holdings from just one class of institutions (mutual funds in Covrig, Lau, and Ng (2006)).

The second strand focuses on the value relevance of firm-level corporate governance.[4] In the U.S., authors have shown that firm value is related to indices of firm-level governance (e.g., Gompers, Ishii, and Metrick (2003), Bebchuk and Cohen (2005), Bebchuk, Cohen, and Ferrell (2009)). Outside of the U.S., Aggarwal, Erel, Stulz and Williamson (2009) examine the relation between governance and firm value and conclude that minority shareholders benefit from governance improvements. Also, in an international setting, Doidge, Karolyi, and Stulz (2004) show that non-U.S. firms cross-listed on a U.S. exchange differ in governance from other firms in the same country and have higher value. Durnev and Kim (2005) use the CSLA corporate governance ratings and demonstrate that they are value relevant. Francis, Khurana, and Pereira (2005) find that disclosure-related governance attributes affect firms' cost of capital across the world. Dahya, Dimitrov, and McConnell (2008) present evidence that shows firm value is positively related to board independence for those firms located in countries with weak governance and with governance problems. M&A activity is larger in countries with better accounting standards and shareholder rights, while cross-border transactions frequently target companies in countries with low shareholder protection (Rossi and Volpin (2004), Bris and Cabolis (2008)).

Our paper provides new evidence of a direct link between institutional ownership, in particular by foreign institutions, and corporate governance practices in a large sample of countries. More importantly, our results suggest that institutional investment helps to improve firm-level governance and not the reverse. To our knowledge, we are the first to provide evidence that international portfolio investment promotes good governance and contributes to the convergence of corporate governance regimes across countries.

[4] See reviews by Becht, Bolton, and Roell (2003) and Dennis and McConnell (2003).

The paper proceeds as follows: In Section 2 we describe the firm-level corporate governance attributes, the institutional holdings data, and other firm-specific variables. In Section 3, we examine the relation between institutional investment and firm-level governance. Section 4 analyzes the relation between the role of institutions in common-law versus civil-law countries. Section 5 examines whether institutional investors drive changes in governance or vice versa. In Section 6, we present some alternative specifications and robustness checks. Finally Section 7 concludes and provides a discussion of the implications of our findings.

2. Data

In this section, we describe the sample of firms and data used in this study. We examine the relation between institutional ownership and governance for the 2003-2008 period. We are able to obtain firm-level institutional ownership, corporate governance, and control variables for firms from 23 countries. As shown in Table 1, the total number of non-U.S. firms with both governance and institutional ownership data varies from a minimum of 1,556 in 2004 to a maximum of 2,218 in 2006. In 2008, the 1,983 firms in our sample account for 71% of the market capitalization of the 22 non-U.S. countries in our sample. For the U.S., the number of firms with both governance and institutional ownership data varies from a minimum of 4,624 in 2008 to a maximum of 5,202 in 2005, accounting for approximately 96% of the U.S. market capitalization in 2008.

2.1 *Firm-Level Governance*

The source of data for firm-level corporate governance attributes is RiskMetrics (formerly Institutional Shareholders Services) and our sample of governance attributes covers the

five-year period from 2004 to 2008. The information for non-U.S. companies is available starting in 2003 but our analysis begins in 2004 because the sample size gets larger and there are fewer missing observations starting in 2004. RiskMetrics compiles governance attributes for each firm by examining the firm's regulatory filings, annual reports, and companies' website. For each attribute, RiskMetrics has a minimally acceptable level of governance and we use these thresholds to evaluate whether a firm meets the minimal level.

The international coverage includes non-U.S. firms that are included in any of the following indices: (1) the MSCI EAFE index which covers 1000 stocks in 21 developed countries outside North America; (2) the FTSE All Share Index consists of the FTSE 100, FTSE 250 and FTSE SmallCap indices; (3) the FTSE All World Developed index includes the largest firms in the developed markets; and (4) the S&P/TSX index of the Toronto Stock Exchange. U.S. firms are covered if they are included in any of the following indices: the Standard and Poor's 500 index, the Standard and Poor's SmallCap 600 index, and the Russell 3000 index. The data is described in more detail in Aggarwal, Erel, Stulz and Williamson (2009).

We examine 41 firm-level governance attributes that are common to both U.S. and non-U.S. firms. These are the attributes that are common for both the U.S. and non-U.S. firms and that do not have significant number of missing observations across our sample period. These cover four broad sub-categories: (1) *Board* (24 attributes), (2) *Audit* (3 attributes), (3) *Anti-takeover* (6 attributes), and (4) *Compensation and Ownership* (8 attributes). *Board* attributes attempt to capture the aspects of the board of directors that relate to board independence, composition of committees, size, transparency and how work is conducted; *Audit* includes questions regarding independence of the audit committee and the role of auditors; *Anti-takeover* provisions are from the firm's charter and by-laws and refer to dual-class structure, role of shareholders, poison pill

and blank check preferred; and *Compensation and Ownership* deals with executive and director compensation on issues related to options, stock ownership and loans and how compensation is set and monitored.

Appendix A provides a list of the 41 governance attributes used in our study. The governance attributes are arranged by sub-categories. We use the 41 individual attributes to create a composite governance index, GOV_{41}, for each company. GOV_{41} assigns a value of one to each of the 41 governance attributes if the company meets minimally acceptable guidelines on that attribute and zero otherwise. It is common in the literature to use additive indices (see, for instance, Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen and Ferrell (2004), Bebchuk and Cohen (2005)). We express our index as a percentage. If a firm satisfy all 41 governance attributes, its GOV_{41} index would equal 100%. There were only a few missing observations for a few attributes in the data for the time period in our sample. We use the Boardex database to fill in the missing observations for board independence, board size, and chairman-CEO duality. BoardEx is the leading database on board composition and compensation of publicly listed firms, and includes detailed biographic information on individual executives and board members of approximately 10,000 firms in nearly 50 countries. These data have been used previously in Cohen, Frazzini, and Malloy (2008) to study educational links between CEOs and mutual fund managers in the U.S. and in Ferreira and Matos (2008b) to study board links between banks and firms worldwide. For the remaining few observations still missing, we use the same value as of the previous year.

As shown in Figure 1 and Table 2, on average, the countries with the highest level of governance based on GOV_{41} are Canada (72.8%), U.K. (59.3%) and Switzerland (56.6%). A GOV_{41} score of 72.8% for Canada implies that Canadian firms on average meet the minimum

acceptable criteria for 72.8% of the 41 governance attributes studied (i.e. about 30 of the 41 attributes). The countries with the lowest level of governance are Greece (35.9%), Portugal (36.2%), and Belgium (37.8%). The governance level in the U.S. is high at 62.2%.[5] The last column of Table 2 shows the average of the yearly percentage change in GOV_{41} for each country. For every country, except New Zealand, on average, the governance score has increased. Overall, corporate governance practices have improved around the world over our sample period. Some of the largest positive changes have been in the Sweden (4.9%), Netherlands (4.5%) and U.K. (4.3%). In the U.S. particular firm-level governance attributes were mandated after the Sarbanes-Oxley (SOX) Act of 2003.

2.2 *Institutional Ownership*

We use institutional ownership for the period 2003 to 2007 because we study the effect of institutional ownership (lagged) as pre-determined variable on the level of corporate governance from 2004 to 2008. Institutional holdings data are from the FactSet/LionShares database. The institutions covered in the database are professional money managers such as mutual funds, pension funds, bank trusts, and insurance companies. FactSet/LionShares collects ownership data directly from public sources such as national regulatory agencies, stock exchanges, industry directories, and company proxies and annual reports as described in detail in Ferreira and Matos (2008). In the calculation of institutional ownership, we include ordinary shares, preferred shares, American Depositary Receipts (ADR), Global Depositary Receipts (GDR), and dual listings.

IO_TOTAL is defined as the sum of the holdings of all institutions in a firm's stock divided by the stock's market capitalization at the end of each calendar year. Following Gompers

[5] It should be noted that the U.S. sample is extensive and includes both large and small firms.

and Metrick (2001), we set institutional ownership variables to zero if a stock is not held by any institution in FactSet/LionShares.[6] In addition, we define Domestic Institutional Ownership (*IO_DOMESTIC*) as the sum of the holdings of all institutions domiciled in the same country in which the stock is listed as a percentage of market capitalization. *IO_FOREIGN* is the sum of the holdings of all institutions domiciled in a country different from the country the stock is listed as a percentage of market capitalization. We also split institutional ownership according to the legal origin of the institution's home country. Institutional ownership is coded either as Common Institutional Ownership(*IO_COMM*) or Civil Institutional Ownership (*IO_CIVIL*), expressed as a percentage of total market capitalization of the firm.

The countries (other than the U.S.) with the highest average total institutional ownership in 2007 are Canada (61%), Sweden (39.3%), and U.K. (39.2%) as shown in Figure 2 and Table 3. On average, the lowest institutional ownership is for firms in New Zealand (9.5%), Portugal (11.1%) and Hong Kong (13.4%). The U.S. firms, on average, have the highest total institutional ownership at 62.3% as of 2007. The average total institutional ownership of non-US firms in our sample is 26% in 2007.[7] On average, institutional ownership per year has increased for firms in all 23 countries during 2003-2007. The average annual percentage change in total institutional ownership was 2.1% per year. The largest average annual increase in institutional ownership was for U.K. (5.1%), Canada (3.1%), and Netherlands (3.1%). The smallest percentage increase was for Italy, Norway and Portugal (0.7%).

Table 3 shows that domestic institutions account for more than half of institutional ownership in several countries including U.S. (87%), U.K. (70%), Canada (60%), Sweden (60%), and Denmark (53%). But in most countries, holdings of foreign-based investors exceed

[6] When we repeat the empirical analysis using only firms with positive holdings, our main results are not affected.
[7] Institutional ownership is slightly higher for our sample of firms compared to other studies (for example, Ferreira and Matos (2008)) because our sample covers larger firms for which governance data is available.

domestic institutions. The more extreme cases of large foreign ownership are for firms in small countries such as, Ireland (95%) and New Zealand (92%)**.** In 11 of the 22 international countries, institutions based in common-law countries hold more than 50% of the local stock market capitalization. This is true both for firms located in common-law countries such as, U.K, Canada, and U.S., and also for firms located in civil-law countries, such as the Netherlands, that seem to attract investment from institutions whose management companies are based in common-law countries.

2.3 *Firm Characteristics*

The data for firm characteristics for non-U.S. firms is obtained from Datastream/Worldscope, and the data for U.S. firms is obtained from Compustat. The variable definitions are provided in Appendix B. We use several firm-specific control variables in our regressions: log of total assets (*ASSET*), debt to assets (*LEV*), dividend yield (*DYIELD*), whether a firm is listed as an ADR (*ADR*), two-year annual sales growth (*SGROWTH*), cash holdings to assets (*CASH*), capital expenditure to assets (*CAPEX*), market to book (*MB*), R&D to assets (*R&D*), return on assets (*ROA*), property, plant and equipment to assets (*PPE*), foreign sales to total sales (*FXSALE*), number of analysts following a firm (ANALYST), and percentage of shares closely held (*CLOSE*). The variables that are defined as ratios (*LEV*, *SGROWTH*, *CAPEX*, *MB*, *R&D, ROA,* and *FXSALES*) are winsorized at the upper and lower 1% level. Appendix B provides a detailed description of the variables used in the study.

3. Institutional Ownership and Governance

The literature has documented a positive relation between governance and firm value (see, for example, Gompers, Ishii, and Metrick (2003) for U.S. evidence and Aggarwal, Erel, Stulz and Williamson (2009) for non-U.S. evidence). In an attempt to examine the determinants of better governance, as a first step, we examine the role played by institutional ownership.

We use the governance index, GOV_{41}, for each firm as the dependent variable. The explanatory variable of interest is institutional ownership. All independent variables are lagged by one year so that we can examine the relation between the explanatory variables and future governance. Therefore, if GOV_{41} is for period t then each of the independent variables is for period t-1. Consistent with the literature, we include several firm-level control variables that have been shown to be related to governance, as described in the previous section. As an example, *SIZE* is included because larger firms have been shown to have better governance. The argument is that there are economies of scale in investing in governance, therefore it is easier and less costly for larger to invest in governance compared to smaller firms. Industry and country characteristics have also been shown to affect the investment in firm-level governance. To account for industry and country sources of heterogeneity, we include industry and country fixed effects in every regression. Earlier we have shown a positive trend in governance over time. Therefore, we also include year fixed effects to account for the time trend. We correct standard errors for clustering of observations at the country level.

Table 4 reports the results of the panel regression of the governance index, GOV_{41}, as of t, on institutional ownership as of t-1, and control variables. Therefore, the governance index covers the period 2004-2008 while the institutional ownership and other firm-specific control

variables are for the period 2003-2007. Our focus is on non-U.S. companies.[8] The regression estimates in column (1) of Table 4 show a strong positive association between total institutional ownership and governance. In addition, firms that have ADRs, firms that are better performing (higher *ROA)*, growth firms (higher *MB*), firms that have higher leverage (higher *LEV*), and firms followed by more analysts have better governance. In contrast, the coefficient on the percentage of shares closely held is negative and significant. As expected, if a higher percentage of shares are closely held, the governance is weaker (Leuz, Lins and Warnock (2008)). In many countries, insiders hold a large fraction of the shares. These controlling shareholders have to trade off the private benefits of control versus the investment in firm-level governance which also benefits minority shareholders (Doidge, Karolyi, Lins, Miller and Stulz (2008)). The explanatory power of the model is high with an R^2 of 0.73.

Next, we examine whether the positive relation between governance and institutional ownership is being driven by the nationality of the institutional investor. The literature has found some evidence on the differential role of domestic versus foreign-based institutions. For example, Ferreira and Matos (2008) find that foreign institutional ownership, unlike domestic institutional ownership, is positively related to firm valuation and performance outside of the U.S. Column (2) uses institutional ownership by domestic investors (*IO_DOM*) as the main explanatory variable; Column (3) uses foreign ownership (*IO_FOR*); and (4) includes both domestic and foreign ownership in the same regression. The relation between domestic institutional ownership and governance is positive and significant as it is the relation between foreign institutional ownership and governance as can be seen in columns (2) and (3). However, when we include both domestic and foreign institutional ownership in the same model (column (4)), foreign institutional ownership is positive and significant while domestic institutional

[8] In Section 6 and Table 9, we also repeat the analysis including U.S. firms.

ownership is insignificant. These results establish a strong positive relationship between institutional ownership and governance. Outside of the U.S., foreign institutions seem to be particularly important in improving governance. Later we explore the role of foreign versus domestic institutions in more detail.

We isolate ownership by U.S.-based institutions and also find a strong positive relation with governance (column (5)). This is indicative of important played by institutions originating from the U.S., a country where the average governance score of firms is high (see Table 2). As a more general test, we condition institutional ownership on the legal regime of the country of origin of the institutional money managers. We classify institutional investors based on whether they are domiciled in common (*IO_COMMON*) or civil (*IO_CIVIL*) law countries. Column (6) (column (7)) uses ownership by institutions domiciled in common-law (civil-law) countries, while column (8) includes both. We see that coefficients for ownership by institutions from both common and civil-law countries are positive and significant. However, when *IO_COMMON* and *IO_CIVIL* are both included in the same regression, only the coefficient on common ownership is positive and significant. We conclude that there is a strong positive association between firm-level governance and the "governance at home" of institutional investors holding a firm's stock. This is indicative that institutions may be responsible in "exporting" good governance around the world. Foreign institutions, in particular those that come from countries with strong shareholder protection, seem to be the main vehicles of the convergence of corporate governance regimes around the world.

4. The Role of the Country's Legal Regime

The legal system of the country where a firm is headquartered can influence the role that institutional shareholders can play. For example, an institution's ability to monitor the firm by means of voting rights can be limited by certain features of the legal and regulatory environments (Gillan and Starks (2003)). La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) argue that investor protection and corporate governance are stronger where the legal system is based on common-law as opposed to civil-law. Therefore, we estimate our panel regressions with governance as the dependent variable, separately for firms located in common and civil-law countries. We expect to find that the role of institutions, especially foreign ones, in prompting governance changes is stronger in civil-law countries. Panel A (Panel B) of Table 5 reports the results for firms incorporated in civil-law (common-law) countries. All estimations include industry, country and year fixed effects and standard errors are corrected for country-level clustering.

As shown in Table 5, we find that the coefficient for total institutional ownership is positive for governance in firms based in both civil and common-law countries (columns (1) of Panel A and (5) of Panel B). The most interesting finding is that domestic institutional ownership is the main driver of better governance in common-law countries (column (8)), while in civil-law countries the main driver of governance improvement is foreign institutional ownership (column (4)). Indeed, the foreign institutional ownership coefficient is positive and significant in civil-law countries in column (4). In contrast, the domestic institutional ownership coefficient is even negative.

This is evidence that domestic institutions are associated with good corporate governance only if there is a strong overall legal environment in place. In civil-law countries, domestic institutions do not appear to be linked to good governance practices. This could happen because

domestic institutional money managers are more likely to have business ties to local corporations, to share the benefits of control, and to be more sympathetic to incumbent management (Gillan and Starks (2003), Stulz (2005), and Ferreira, Massa and Matos (2008)). In contrast, foreign institutions can better exert pressure over local management. [9]

5. Does Institutional Ownership Drive Changes in Governance?

The results so far show a strong positive association between institutional ownership and firm-level governance. We have also shown the differences in the role of foreign versus domestic institutional investors depending on the legal regime of the country in which the investment is made. However, one might be concerned that in the causality runs from institutional ownership to governance, but that firms with expected governance improvements attract this class of investors. In order to address the direction of causality, in this section, we study the relation between changes in institutional ownership and changes in governance.

Table 6 reports the results with changes in the governance index as the dependent variable and (lagged) changes in institutional ownership as main explanatory variable. The dependent variable ΔGOV_{41} is the change in the governance index from period t to t-1. The explanatory variable, ΔIO_TOTAL is the change in total institutional ownership from period t-2 to t-1. All the other independent variables are also expressed in terms of change and are lagged one period relative to the governance index.

The results show that the coefficient on total institutional ownership (column (1) of Table 6) is positive, but only significant at the 10% level implying that an increase in total institutional

[9] For example, mutual fund families may be reluctant to engage in activism at firms that they may take as future clients for corporate-sponsored pension plans (Davis and Kim (2007)). Also, recent evidence from Sweden suggests that domestic pension funds affiliated with controlling shareholders limit a firm's openness to the market for corporate control (Giannetti and Laeven (2007)).

ownership leads to an increase in firm-level governance. The positive relation is more significant for change in foreign institutional ownership, Δ*IO_FOR* (column (3)), and change in institutional holdings from U.S.-based money managers, Δ*IO_US* (column (4)) and common-law based money managers, Δ*IO_COMMON* (column (5)). Changes in domestic and civil ownership are also significant. However, the coefficient of Δ*IO_DOM* is only significant at the 10% level and the coefficient of Δ*IO_COMMON* is almost three times larger than the coefficient of Δ*IO_CIVIL*. Overall, these findings suggest that an increase in institutional ownership leads to improved governance. But foreign institutions and institutions domiciled in countries with strong legal regime seem to make more of a difference in improving governance.

In unreported regressions, we also run this analysis in the reverse direction with change in governance as the explanatory variable and change in institutional ownership as the dependent variable. For each model estimated, the coefficient on change in governance is not statistically different from zero.[10] These results combined with our earlier findings suggest that it is changes in institutional ownership over time that drives changes in firm-level governance, but the reverse does not hold. Thus, the direction of the effect is from institutions to governance and not from governance to institutional ownership. These results are consistent with the survey findings of McCahery, Sautner, and Starks (2008) that institutions play an active role in pushing firms to improve their governance. [11]

[10] Results are available from the authors upon request.

[11] In unreported regressions, as an alternative to yearly changes, we also split our sample period in two at regress changes in governance over 2006-2008 on changes in institutional ownership over the initial period 2003-2005. We find similar results that lagged changes in institutional ownership drive changes in governance and not in the reverse direction.

5. Robustness and Additional Tests

In this section, we present our efforts to address potential concerns associated with omitted-variables and endogeneity in our analysis. These problems are ubiquitous in empirical research on corporate governance. This problem is accentuated by recent findings showing that U.S. investors avoid firms with governance problem when investing overseas (Leuz, Lins and Warnock (2008)).

We first address the potential omitted-variables problem using firm fixed effects that control for unobserved sources of firm heterogeneity. Fixed-effects methods solve "joint determination" problems in which an unobserved time-invariant variable simultaneously determines both governance and institutional ownership. It is also equivalent to looking only at within-firm changes in institutional ownership.

Table 7 presents the firm fixed effects estimates (with t-statistics adjusted for country-level clustering) using our different proxies for institutional ownership. There is still evidence of a positive relation between governance and institutional ownership. Moreover, only foreign, U.S. and common-law institutional ownership are significant at the 5% level, which confirms our prior findings that these type of institutions are central to governance improvements outside of the U.S. Because only the effects of within-firm changes in governance are taken into account, firm-specific omitted variables cannot explain the observed relation between governance and institutional ownership. An issue here is whether there is enough variation in institutional ownership and governance over the short sample period in our study so that one can estimate this relation with precision. The short answer is yes; although t-statistics are usually lower, suggesting a lower precision in the estimates, they are still quite high by traditional standards.

As we discussed, in order to address issues related to the endogeneity of the institutional ownership, we have used lagged values as explanatory variables in Section 3. In addition, we have shown that the results hold when we uses changes in dependent and independent variables in the regressions as previously reported in this section. Further, we now employ an instrumental variables approach in order to alleviate any remaining concerns on the potential endogeneity of institutional ownership. Instrumental variables methods allow us to address omitted variables and reverse causality issues simultaneously. The caveat is that, unlike the fixed-effects method, it requires stronger assumptions that are usually not possible to test for. Under standard identification assumptions, we apply two-stage least squares (2SLS) methods to isolate the effect of institutional ownership on governance. To this end, we need instruments for institutional ownership: a variable that is correlated with institutional ownership, but uncorrelated with governance except indirectly through other independent variables.

We use Morgan Stanley Capital International (MSCI) World index membership as an instrumental variable for total, foreign and U.S.-based institutional ownership (*IO_FOR, IO_US*). This is a commonly used benchmark index for foreign portfolio investors. Indeed, Ferreira and Matos (2008) find that MSCI membership increases the probability that the firm attracts institutional investors. We use dividends as an instrumental variable for domestic institutional ownership (*IO_DOM*) as Ferreira and Matos (2008) find that domestic institutions prefer dividend-paying stocks. *MSCI* dummy membership and *Dividend Pay* dummy are used as instruments for total institutional ownership (*IO_TOTAL*). These variables should not drive firm governance practices directly, except through the effect these have on institutional ownership.

Columns (1)-(4) of Table 8 present the results of the first stage regressions that use alternatively total, domestic, foreign, and U.S.-based institutional ownership as the dependent

variable. The first-stage results support the conclusion that foreign and U.S.-based institutional ownership are positively associated to MSCI membership and domestic fund managers are attracted by dividend-paying stocks. F-tests indicating that the instruments can be excluded from the first stage regressions are strongly rejected.

Column (5)-(8) of Table 8 present the coefficients of the second-stage regression that uses governance GOV_{41} as the dependent variable. There is evidence of a positive relation between governance and foreign and U.S. institutional ownership after taking into account the possibility that institutional ownership is endogenous. Interestingly, we do not find a similar relation between governance and domestic institutional ownership. The evidence supports our previous findings that there is a causal link between institutional ownership and governance and that foreign institutions are the main force of governance improvement outside of the U.S.

Our conclusion here is twofold. Omitted variables are unlikely to explain the relation between institutional ownership, and in particular foreign-based ownership, and governance. And we also find evidence consistent with a causal effect from institutional ownership to governance.

Finally, in Table 9, we report our base results including also U.S. firms in our tests. Specifications in Panel A of Table 9 follow those of Table 4 where we have looked only at the sample of non-U.S. firms. Our sample increases more than three times in these regressions meaning that the sample is now largely drawn from U.S. firms. The results show that including U.S. firms significantly increases the importance of domestic institutional ownership (column (4)) as expected based on our results from common-law countries in Section 4. We find a similar pattern in Panel B of Table 9 where we implement tests on changes as those of Table 6 but now the sample includes U.S. firms. Overall, the results in Table 9 and in previous sections are

consistent with the idea that U.S.-based institutions are among the most active promoters of good governance practices, in particular, in their home market, but also around the world.

7. Conclusion

We find that institutional investors promote good governance practices around the world. In particular, foreign institutional investors and institutions from common-law countries are the main promoters of good governance outside of the U.S. The results are particularly strong for the sample of firms located in civil-law countries. Our results also suggest that it is changes in institutional ownership over time that drives changes in firm-level governance, but the reverse is not true. Our findings indicate that international portfolio investment contributes to the convergence of corporate governance regimes across countries. International portfolio investment is particularly effective in improving governance when the legal environment of the institution's origin country is better than the one of the firm's destination country.

To our knowledge, we are the first to establish a direct link between international portfolio investment and actual adoption of good corporate governance standards by companies that promote corporate accountability and empower shareholders. We also shed light on the issue of whether institutions are simply attracted to firms with stronger governance or whether they also play a role in improving governance. Our paper complements indirect evidence in previous studies that monitoring by institutional investors leads to higher company performance. We also extend previous studies of shareholder activism that focus on a single country, institutional investor, and class of investors by showing that activism travels beyond country borders. Foreign institutions take a role in shareholders activism that local institutions seem not to be able to take.

References

Aggarwal, R., I. Erel, R. Stulz, and R. Williamson, 2009, "Differences in Governance Practices between U.S. and Foreign Firms: Measurement, Causes, and Consequences," Review of Financial Studies, forthcoming.

Aggarwal, R., L. Klapper, and P.D. Wysocki, 2005, "Portfolio Preferences of Foreign Institutional Investors," Journal of Banking and Finance, 29, 2919-2946.

Alexander, C.R., M.A. Chen, D.J. Seppi, and C.S. Spatt, 2008, "The Role of Advisory Services in Proxy Voting", Working Paper, Yale Law School.

Almazan, A., J.C. Hartzell, and L.T Starks, 2005, "Active Institutional Shareholders and Costs of Monitoring: Evidence from Executive Compensation," Financial Management, 34, 5-34.

Bebchuk, L.A., and A. Cohen, 2005, "The Costs of Entrenched Boards," Journal of Financial Economics, 78, 409-433.

Bebchuk, L.A., A. Cohen, and A. Ferrell, 2009, "What Matters in Corporate Governance?" Review of Financial Studies, 22, 783-827.

Becht, M., P. Bolton and A. Roell, 2003, "Corporate Governance and Control," in G. Constantinides et al (eds.), Handbook of the Economics of Finance, Amsterdam, North Holland.

Becht, M., J. Franks, J. Grant, 2008, "The Returns to Public and Private Activism in Europe", working paper

Becht, M., J. Franks, C. Mayer, and S. Rossi, 2008, "Returns to Shareholder Activism: Evidence from a Clinical Study of the Hermes U.K. Focus Fund," Review of Financial Studies, forthcoming.

Brav, A., W. Jiang, F. Partnoy, and R. Thomas, 2008, "Hedge Fund Activism, Corporate Governance, and Firm Performance," Journal of Finance, 63, 1729-1775.

Brickley, J.A., R.C. Lease, and C.W. Smith Jr., 1988, "Ownership Structure and Voting on Antitakeover Amendments," Journal of Financial Economics, 20, 267-291.

Bris, A., and C. Cabolis, 2008, "The Value of Investor Protection: Firm Evidence from Cross-Border Mergers," Review of Financial Studies, forthcoming.

Bushee, B., M.E. Carter, and J. Gerakos, 2008, "Institutional Investor Preferences for Corporate Governance Mechanisms," Working Paper, Wharton School, University of Pennsylvania.

Chan, K., V.M. Covrig, and L. Ng, 2005, "What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide," Journal of Finance, 60, 1495-1534.

Chen, X., J. Harford, and K. Li, 2007, "Monitoring: Which Institutions Matter?," Journal of Financial Economics, 86, 279-305.

Covrig, V.M., S.T. Lau, and L. Ng, 2006, "Do Domestic and Foreign Fund Managers Have Similar Preferences for Stock Characteristics? A Cross-Country Analysis", Journal of International Business Studies, 37, 407-429.

Dahlquist, M., and G. Robertsson, 2001, "Direct Foreign Ownership, Institutional Investors, and Firm Characteristics," Journal of Financial Economics, 59, 413-440.

Dahya, J., O. Dimitrov, and J.J. McConnell, 2008, "Dominant Shareholders, Corporate Boards, and Corporate Value: A Cross-Country Analysis," Journal of Financial Economics, 87, 73-100.

Davis, G.F., and E.H. Kim, 2007, "Business Ties and Proxy Voting by Mutual Funds," Journal of Financial Economics, 85, 552-570.

DeFond, M.L., and M. Hung, 2004, "Investor Protection and Corporate Governance: Evidence from Worldwide CEO Turnover," Journal of Accounting Research, 42, 269-312.

Doidge, C., G.A. Karolyi, and R.M. Stulz, 2004, "Why are Foreign Firms Listed in the U.S. Worth More?" Journal of Financial Economics, 71, 205-238.

Doidge, C., G.A. Karolyi, and R.M. Stulz, 2007, "Why Do Countries Matter so Much for Corporate Governance," Journal of Financial Economics, 86, 1-39.

Doidge, C., G. A. Karolyi, K. Lins, D. Miller, and R. M. Stulz, 2008, "Private Benefits of Control, Ownership, and the Cross-Listing Decision," Journal of Finance, forthcoming.

Durnev, A., and E.H. Kim, 2005, "To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation," Journal of Finance, 60, 1461-1493.

McCahery, J., Sautner, and L. Starks, 2008, "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors", Working Paper, University of Amsterdam.

Ferreira, M., M. Massa, and P. Matos, 2007, "Shareholders at the Gate? Institutional Investors and Cross-Border Mergers and Acquisitions," Working Paper, University of Southern California.

Ferreira, M.A., and P. Matos, 2008, "The Colors of Investors' Money: The Role of Institutional Investors around the World," Journal of Financial Economics, 88, 499-533.

Francis, J., I. Khurana, and R. Pereira, 2005, "Disclosure Incentives and Effects on Cost of Capital Around the World," The Accounting Review, 80, 1125-1162.

Gaspar, J., M. Massa, and P. Matos, 2005, "Shareholder Investment Horizons and the Market for Corporate Control," Journal of Financial Economics, 76, 135-165.

Giannetti, M., and Y. Koskinen, 2008, "Investor Protection, Equity Returns, and Financial Globalization," Journal of Financial and Quantitative Analysis, forthcoming.

Giannetti, M., and A. Simonov, 2006, "Which Investors Fear Expropriation? Evidence from Investors' Portfolio Choices," Journal of Finance, 61, 1507-1547.

Gillan, S.L., and L.T. Starks, 2003, "Corporate Governance, Corporate Ownership, and the Role of Institutional Investors: A Global Perspective," Journal of Applied Finance, 13, 4-22.

Gillan, S.L, and L.T. Starks, 2007, "The Evolution of Shareholder Activism in the United States," Journal of Applied Corporate Finance, 19, 55-73.

Gompers, P., J. Ishii, and A. Metrick, 2003, "Corporate Governance and Equity Prices," The Quarterly Journal of Economics, 118, 107-155.

Hartzell, J.C., and L.T. Starks, 2003, "Institutional Investors and Executive Compensation," Journal of Finance, 58, 2351-2374.

Kang, J., and R. Stulz, 1997, "Why is There A Home Bias? An Analysis of Foreign Portfolio Equity Ownership in Japan," Journal of Financial Economics, 46, 3-28.

Kim, W., T. Sung, and S. Wei, 2008, "How does Corporate Governance Risk at Home Affect Investment Choices Abroad?" Working Paper, NBER.

Klein, A., and E. Zur, 2009, "Entrepreneurial Shareholder Activism: Hedge Funds and Other Private Investors," Journal of Finance, forthcoming.

Leuz, C., K.V. Lins, and F.E. Warnock, 2008, "Do Foreigners Invest Less in Poorly Governed Firms?" Review of Financial Studies, forthcoming.

Li, D., F. Moshirian, P.K. Pham, and J. Zein, 2006, "When Financial Institutions Are Large Shareholders: The Role of Macro Corporate Governance Environments," Journal of Finance, 61, 2975-3007.

Parrino, R., R.W. Sias, and L.T. Starks, 2003, "Voting with Their Feet: Institutional Ownership Changes around Forced CEO Turnover," Journal of Financial Economics, 68, 3-46.

Rossi, S., and P.F. Volpin, 2004, "Cross-Country Determinants of Mergers and Acquisitions," Journal of Financial Economics, 74, 277-304.

The Economist, 2007, "Leader of the Swarn", July 12th edition

The Economist, 2008, "German Corporate Governance: Raising their Voices", March 19th edition

Figure 1
Governance Index by Country and Over Time

Values on the vertical axis represent the mean of the firm level governance index (GOV_{41}) for a particular country. GOV_{41} is the percentage of 41 governance attributes listed in Appendix A that a firm meets based on the attributes. A score of 100% means a firm has adopted all 41 governance provisions. Mean governance scores are shown for firms based in each of the 23 countries for each year from 2004 to 2008.

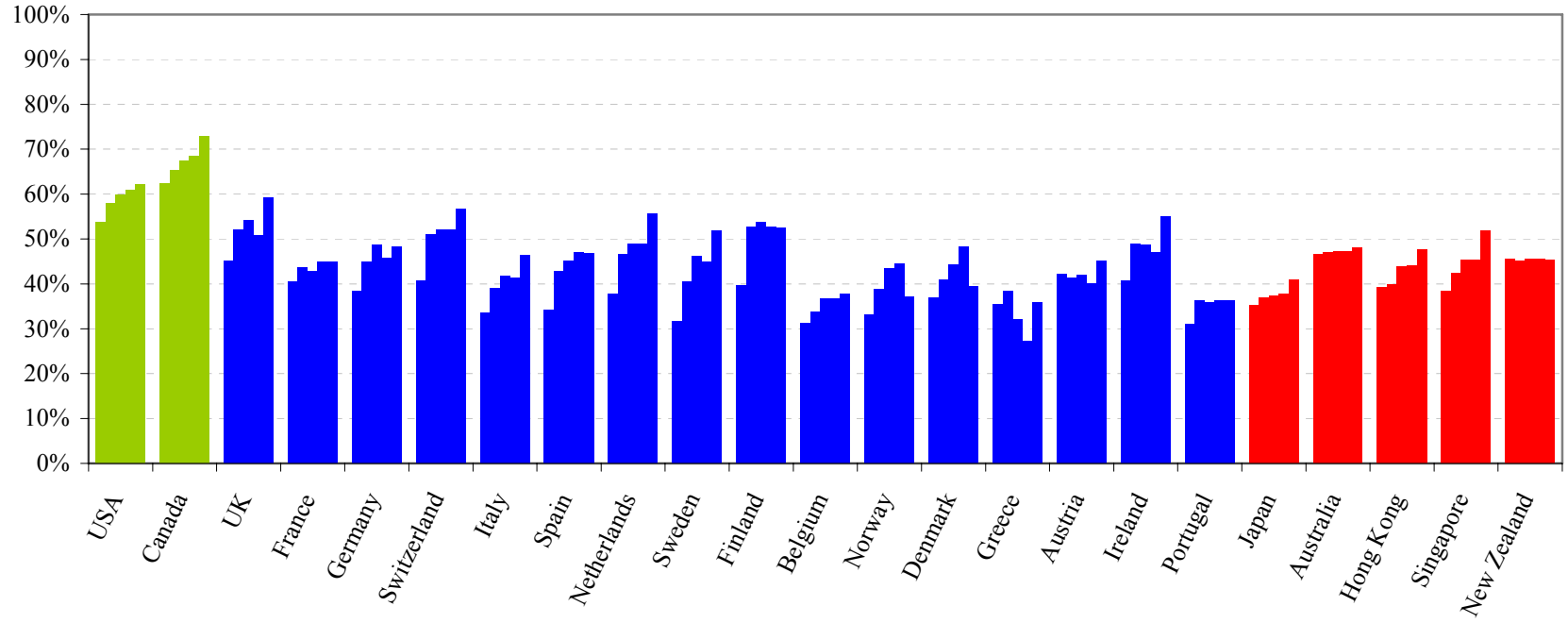


Figure 2
Total Institutional Ownership by Country and Over Time

The figure shows the average total institutional ownership for firms based in each country for the time period 2003 to 2007. Institutional ownership is defined as the sum of the holdings of all institutions in a firm's stock divided by market capitalization at the end of each calendar year.

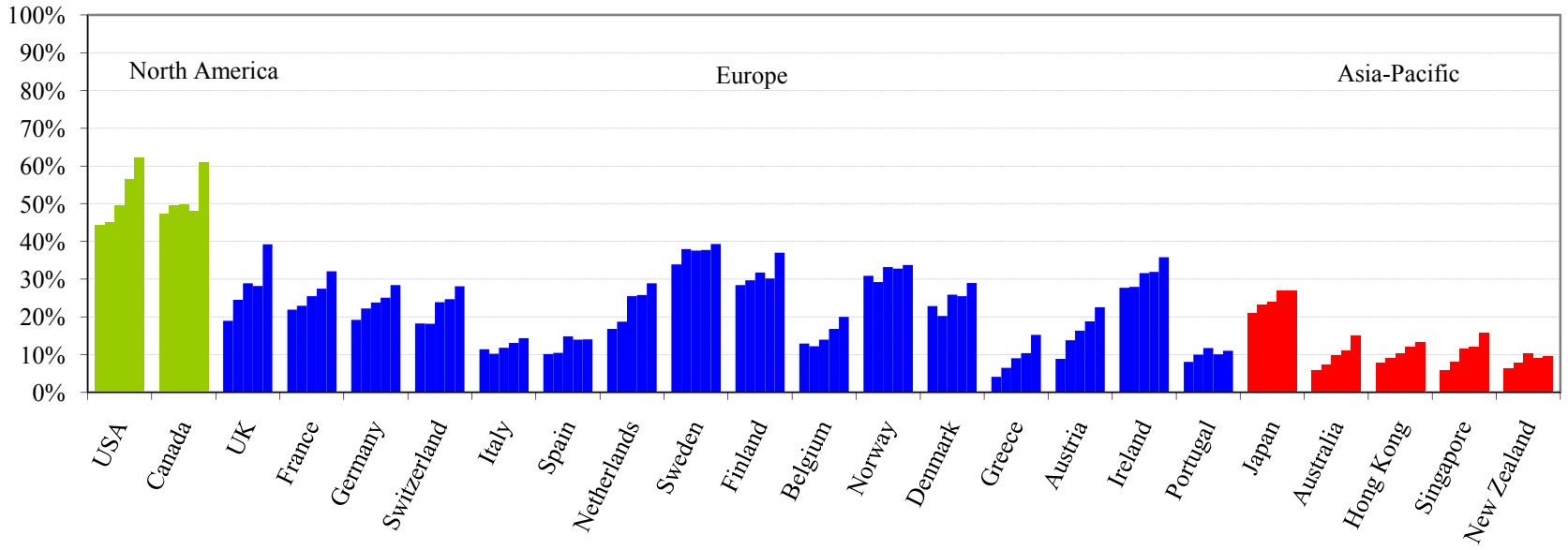
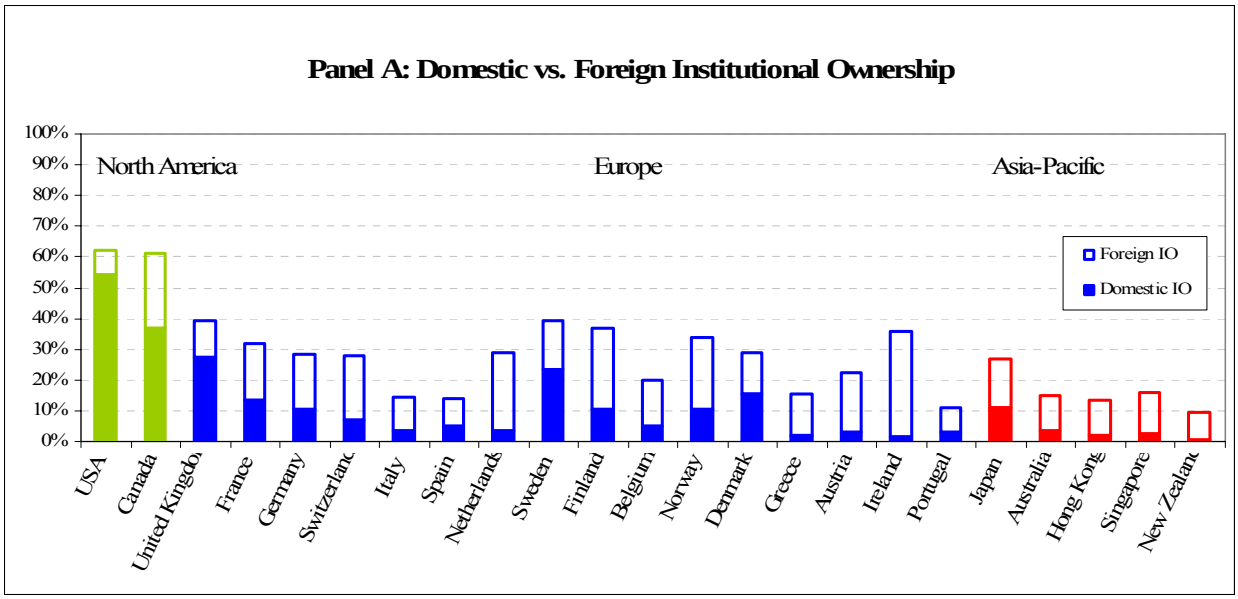


Figure 3
Institutional Ownership in Based on Location and Legal Origin

Panel A shows the average institutional ownership by domestic and foreign institutions as of December 2007. Domestic (foreign) institutional ownership is the sum of the holdings of all institutions domiciled in the same country (in a different country) in which the stock is issued as a percentage of market capitalization. Panel B shows the average institutional ownership by the institution's country of legal origin Common (Civil) is the sum of the holdings of all institutions domiciled in countries that have Common (Civil) law, expressed as a percentage of total market capitalization for the firm.



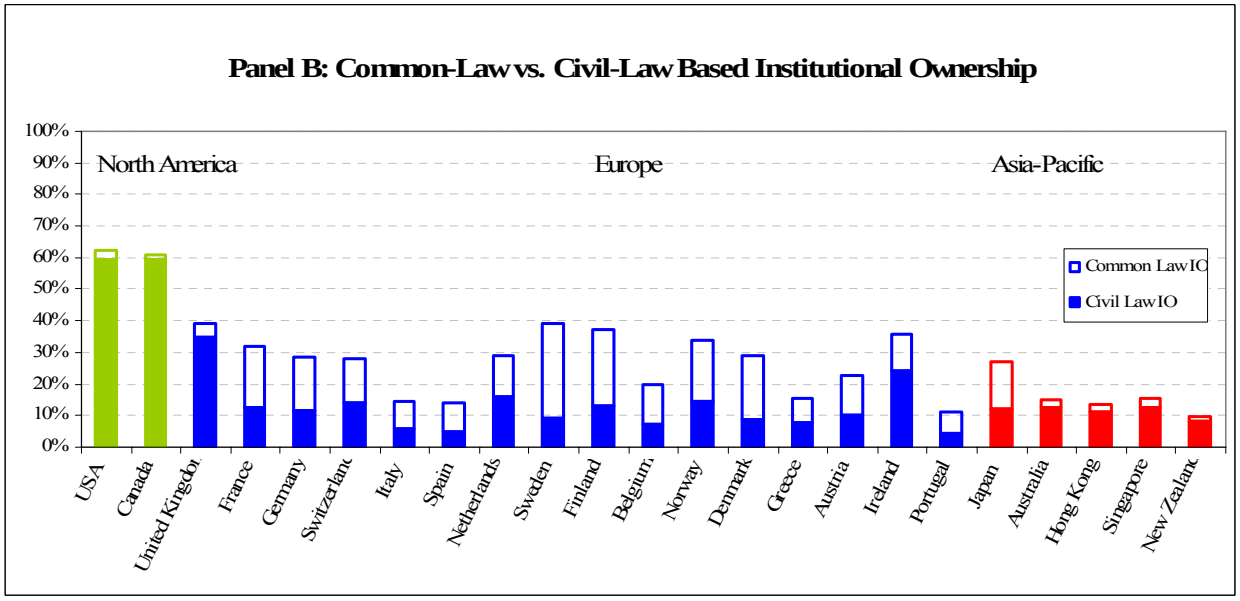


Table 1
Countries and Number of Firms

The table presents the number of firms with both firm-level governance and institutional ownership data in the sample for each of the 23 countries for the period 2004-2008. The "Total ex U.S." row refers to the number of non-U.S. firms, which constitute our sample in the main regressions.

Country	*2004*	*2005*	*2006*	*2007*	*2008*	*% WScope by Marketcap.*
Australia	72	117	118	117	83	75%
Austria	16	17	18	18	18	56%
Belgium	19	24	27	27	27	79%
Canada	161	164	188	188	127	75%
Denmark	21	21	22	22	21	78%
Finland	27	28	30	30	27	85%
France	72	83	87	87	80	71%
Germany	80	83	90	90	86	82%
Greece	42	43	43	43	31	70%
Hong Kong	32	65	65	65	56	93%
Ireland	15	15	16	16	15	81%
Italy	41	69	73	72	70	86%
Japan	491	584	598	598	581	39%
Netherlands	44	43	44	44	33	66%
New Zealand	14	17	18	18	18	72%
Norway	20	21	23	23	22	81%
Portugal	13	14	14	14	14	88%
Singapore	53	59	60	60	54	70%
Spain	35	53	57	56	55	83%
Sweden	40	40	47	46	46	78%
Switzerland	54	56	61	61	59	81%
U.K.	194	514	519	518	460	84%
U.S.	4,776	5,202	5,152	4,853	4,624	96%
Total ex U.S.	1,556	2,130	2,218	2,213	1,983	71%

Table 2
Firm-Level Governance over Time

Mean governance percentage scores (GOV_{41}) are reported for each country for each year from 2004 to 2008. The governance score attributes are described in Appendix A. The last column shows the average annual change in GOV_{41} during the period 2004-2008.

Country	*2004*	*2005*	*2006*	*2007*	*2008*	*Average Yearly Change*
Australia	46.6%	47.0%	47.2%	47.3%	48.0%	0.3%
Austria	42.2%	41.3%	42.0%	40.0%	45.1%	0.7%
Belgium	31.2%	33.8%	36.8%	36.7%	37.8%	1.8%
Canada	62.4%	65.4%	67.4%	68.5%	72.8%	2.5%
Denmark	37.0%	41.0%	44.3%	48.2%	39.4%	0.7%
Finland	39.6%	52.8%	53.7%	52.7%	52.5%	3.1%
France	40.6%	43.7%	42.8%	44.8%	44.9%	1.1%
Germany	38.4%	44.9%	48.7%	45.8%	48.2%	2.6%
Greece	35.5%	38.4%	32.1%	27.3%	35.9%	0.2%
Hong Kong	39.3%	39.8%	43.9%	44.2%	47.7%	2.1%
Ireland	40.8%	48.9%	48.8%	47.0%	55.0%	3.7%
Italy	33.6%	39.1%	41.8%	41.4%	46.4%	3.5%
Japan	35.2%	37.0%	37.4%	37.7%	40.9%	1.5%
Netherlands	37.7%	46.5%	49.0%	49.0%	55.7%	4.5%
New Zealand	45.6%	45.2%	45.7%	45.7%	45.4%	-0.1%
Norway	33.0%	38.8%	43.4%	44.4%	37.3%	1.1%
Portugal	31.1%	36.2%	35.9%	36.2%	36.2%	1.4%
Singapore	38.5%	42.5%	45.2%	45.4%	51.8%	3.3%
Spain	34.2%	42.8%	45.1%	47.0%	46.8%	3.5%
Sweden	31.6%	40.4%	46.2%	44.9%	51.9%	4.9%
Switzerland	40.7%	51.0%	52.1%	52.2%	56.6%	3.9%
UK	45.2%	52.1%	54.1%	50.8%	59.3%	4.3%
USA	53.8%	58.1%	59.9%	60.9%	62.2%	2.2%

Table 3
Institutional Ownership by Country

The table shows the average total institutional ownership for firms in each country for the time period 2003 to 2007. Institutional ownership is defined as the sum of the holdings of all institutions in a firm's stock divided by market capitalization at the end of each calendar year. Domestic (foreign) institutional ownership is percentage of total institutional holdings of all institutions domiciled in the same country (in a different country) in which the stock is issued as a percentage of market capitalization. Common (civil) is the percentage of total institutional holding of all institutions domiciled in countries that have common (civil) law expressed as a percentage of total market capitalization for the firm. Values are reported for December 2007.

	Total Institutional Ownership					***Domestic vs. Foreign***		***Common vs. Civil***	
	2003	***2004***	***2005***	***2006***	***2007***	***Domestic 2007***	***Foreign 2007***	***Common 2007***	***Civil 2007***
Australia	6.0%	7.3%	9.7%	11.0%	15.0%	22%	78%	85%	15%
Austria	8.9%	13.8%	16.4%	18.9%	22.6%	13%	87%	45%	55%
Belgium	12.9%	12.2%	14.0%	16.8%	20.0%	26%	74%	37%	63%
Canada	47.2%	49.4%	49.8%	48.2%	61.0%	60%	40%	97%	3%
Denmark	22.9%	20.2%	25.9%	25.5%	29.0%	53%	47%	30%	70%
Finland	28.5%	29.7%	31.8%	30.2%	37.1%	28%	72%	35%	65%
France	22.0%	23.0%	25.5%	27.5%	32.1%	41%	59%	39%	61%
Germany	19.2%	22.2%	23.9%	25.1%	28.4%	37%	63%	42%	58%
Greece	4.1%	6.5%	9.0%	10.4%	15.2%	12%	88%	51%	49%
Hong Kong	7.8%	9.0%	10.4%	12.2%	13.4%	16%	84%	83%	17%
Ireland	27.7%	28.0%	31.6%	32.0%	35.9%	5%	95%	68%	32%
Italy	11.4%	10.3%	11.9%	13.1%	14.4%	23%	77%	39%	61%
Japan	20.9%	23.1%	24.1%	26.9%	27.1%	41%	59%	44%	56%
Netherlands	16.9%	18.8%	25.5%	25.8%	28.9%	13%	87%	55%	45%
New Zealand	6.3%	8.0%	10.5%	9.1%	9.5%	8%	92%	87%	13%
Norway	30.9%	29.2%	33.2%	32.8%	33.7%	32%	68%	43%	57%
Portugal	8.1%	10.0%	11.7%	10.1%	11.1%	26%	74%	41%	59%
Singapore	5.8%	8.2%	11.5%	12.2%	15.7%	17%	83%	79%	21%
Spain	10.2%	10.5%	14.9%	14.0%	14.1%	35%	65%	34%	66%
Sweden	34.0%	37.9%	37.6%	37.7%	39.3%	60%	40%	23%	77%
Switzerland	18.2%	18.2%	23.9%	24.7%	28.1%	25%	75%	51%	49%
UK	18.9%	24.6%	28.9%	28.2%	39.2%	70%	30%	89%	11%
USA	44.3%	45.1%	49.7%	56.5%	62.3%	87%	13%	96%	4%

Table 4
Corporate Governance and Institutional Ownership

The table shows estimates of regressions of corporate governance on institutional ownership and other control variables. Our sample is non-US. firms. The dependent variable in each regression is the governance index (GOV_{41}) for each firm. The independent variables are five different proxies for institutional ownership: total institutional ownership in the company (*IO_TOTAL*), ownership by domestic institutions (*IO_DOM*) and foreign institutions (*IO_FOR*), ownership of U.S. institutions (*IO_US*), ownership by institutions domiciled in common-law countries (*IO_COMMON*) and civil-law countries (*IO_CIVIL*). The firm-specific variables are as described in Appendix B. All explanatory variables are lagged by one period. Therefore, GOV_{41} is as of time t and the explanatory variables are at time t-1. Robust t-statistics adjusted for country-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IO_TOTAL	0.026							
	(4.12)***							
IO_DOM		0.025		0.012				
		(3.16)***		(0.81)				
IO_FOR			0.035	0.030				
			(5.70)***	(4.19)***				
IO_US					0.045			
					(6.16)***			
IO_COMMON						0.036		0.034
						(7.70)***		(6.88)***
IO_CIVIL							0.023	0.006
							(3.15)***	(0.75)
SIZE	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.000	-0.000
	(0.04)	(0.05)	(0.25)	(0.12)	(0.28)	(0.04)	(0.22)	(0.03)
SGROWTH	-0.002	-0.002	-0.003	-0.003	-0.003	-0.002	-0.002	-0.002
	(0.65)	(0.54)	(0.70)	(0.69)	(0.67)	(0.64)	(0.58)	(0.65)
LEV	0.012	0.012	0.013	0.013	0.013	0.012	0.013	0.012
	(3.52)***	(3.48)***	(3.53)***	(3.61)***	(3.40)***	(3.40)***	(3.50)***	(3.40)***
CASH	-0.007	-0.006	-0.009	-0.008	-0.009	-0.007	-0.008	-0.007
	(1.24)	(1.13)	(1.31)	(1.42)	(1.38)	(1.15)	(1.22)	(1.16)
CAPEX	-0.039	-0.038	-0.039	-0.039	-0.038	-0.038	-0.038	-0.039
	(1.35)	(1.31)	(1.32)	(1.33)	(1.29)	(1.33)	(1.31)	(1.34)
MB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(2.70)**	(2.74)**	(2.50)**	(2.60)**	(2.39)**	(2.69)**	(2.59)**	(2.68)**
ROA	0.019	0.020	0.020	0.020	0.020	0.019	0.020	0.019
	(1.77)*	(1.88)*	(1.82)*	(1.83)*	(1.87)*	(1.76)*	(1.89)*	(1.76)*
R&D	-0.032	-0.034	-0.029	-0.030	-0.028	-0.032	-0.032	-0.032
	(0.86)	(0.91)	(0.75)	(0.79)	(0.71)	(0.81)	(0.88)	(0.82)
PPE	0.001	0.002	0.000	0.001	0.001	0.002	0.001	0.001
	(0.27)	(0.34)	(0.08)	(0.17)	(0.12)	(0.33)	(0.16)	(0.31)
FXSALE	0.002	0.003	0.002	0.002	0.002	0.003	0.003	0.002
	(0.69)	(0.95)	(0.54)	(0.59)	(0.69)	(0.79)	(0.80)	(0.75)
ANALYST	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(4.92)***	(5.27)***	(4.90)***	(4.87)***	(5.09)***	(5.01)***	(5.28)***	(4.99)***
CLOSELY	-0.032	-0.034	-0.033	-0.033	-0.034	-0.033	-0.034	-0.033
	(2.45)**	(2.44)**	(2.44)**	(2.48)**	(2.40)**	(2.39)**	(2.45)**	(2.43)**
ADR	0.022	0.024	0.021	0.021	0.020	0.021	0.024	0.021
	(5.29)***	(6.79)***	(5.11)***	(5.31)***	(4.86)***	(4.95)***	(6.83)***	(4.99)***
Constant	0.405	0.406	0.414	0.409	0.415	0.405	0.412	0.405
	(12.33)***	(12.46)***	(14.58)***	(12.06)***	(14.46)***	(12.35)***	(14.66)***	(12.20)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	7,576	7,576	7,576	7,576	7,576	7,576	7,576	7,576
R-squared	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73

Table 5
Corporate Governance, Institutional Ownership, and Legal Origin

The relation between corporate governance and institutional ownership is examined separately for civil-law (Panel A) and common-law countries (Panel B). Our sample is non-US. firms. The dependent variable in each regression is the governance index GOV_{41}. The independent variables are different proxies for institutional ownership: total institutional ownership in the company (*IO_TOTAL*), ownership by domestic institutions (*IO_DOM*) and foreign institutions (*IO_FOR*). The firm-specific variables are as described in Appendix B. All explanatory variables are lagged by one period. Robust t-statistics adjusted for country-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

	Panel A: Civil-law Countries				Panel B: Common-law Countries			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IO_TOTAL	0.018				0.044			
	(2.73)**				(6.15)***			
IO_DOM		0.010		-0.023		0.047		0.043
		(2.03)*		(2.42)**		(5.43)***		(4.74)***
IO_FOR			0.031	0.044			0.039	0.031
			(2.79)**	(3.31)***			(2.87)**	(2.04)*
SIZE	-0.002	-0.002	-0.002	-0.002	0.008	0.008	0.007	0.008
	(2.13)*	(2.33)**	(2.22)**	(2.42)**	(4.67)***	(5.04)***	(4.00)***	(4.86)***
SGROWTH	0.000	0.001	-0.000	-0.000	-0.010	-0.010	-0.010	-0.010
	(0.16)	(0.37)	(0.00)	(0.11)	(1.81)	(1.86)	(1.77)	(1.82)
LEV	0.014	0.014	0.014	0.014	0.011	0.010	0.013	0.011
	(1.88)*	(1.85)*	(1.89)*	(1.91)*	(2.83)**	(2.69)**	(3.28)**	(2.63)**
CASH	-0.003	-0.003	-0.003	-0.003	-0.006	-0.003	-0.012	-0.006
	(0.58)	(0.51)	(0.55)	(0.54)	(0.67)	(0.37)	(1.41)	(0.69)
CAPEX	-0.033	-0.032	-0.034	-0.032	-0.014	-0.011	-0.017	-0.013
	(1.41)	(1.33)	(1.43)	(1.36)	(0.26)	(0.21)	(0.28)	(0.24)
MB	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
	(0.36)	(0.32)	(0.29)	(0.15)	(2.43)*	(2.57)**	(2.43)*	(2.69)**
ROA	0.007	0.008	0.007	0.007	0.041	0.040	0.041	0.041
	(0.96)	(1.07)	(0.96)	(0.95)	(3.74)***	(3.84)***	(3.38)**	(3.72)***
R&D	0.020	0.020	0.022	0.024	0.028	0.027	0.029	0.030
	(0.58)	(0.55)	(0.62)	(0.65)	(0.84)	(0.91)	(0.81)	(0.86)
PPE	-0.004	-0.004	-0.003	-0.003	-0.005	-0.004	-0.006	-0.005
	(0.67)	(0.72)	(0.65)	(0.63)	(0.52)	(0.36)	(0.63)	(0.52)
FXSALE	0.002	0.003	0.002	0.002	-0.003	-0.002	-0.004	-0.003
	(0.59)	(0.76)	(0.51)	(0.56)	(0.82)	(0.51)	(0.95)	(0.77)
ANALYST	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(4.06)***	(4.00)***	(4.09)***	(3.95)***	(1.81)	(2.21)*	(1.82)	(1.77)
CLOSELY	-0.015	-0.016	-0.015	-0.015	-0.057	-0.060	-0.060	-0.058
	(1.47)	(1.42)	(1.53)	(1.51)	(8.48)***	(11.01)***	(8.05)***	(8.58)***
ADR	0.029	0.029	0.028	0.027	0.005	0.010	0.007	0.006
	(4.75)***	(4.70)***	(4.70)***	(4.49)***	(1.82)	(3.25)**	(2.18)*	(1.92)
Constant	0.371	0.374	0.373	0.377	0.373	0.372	0.402	0.374
	(21.71)***	(24.63)***	(21.92)***	(22.65)***	(11.84)***	(13.23)***	(13.04)***	(13.01)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4,133	4,133	4,133	4,133	3,443	3,443	3,443	3,443
R-squared	0.52	0.52	0.52	0.52	0.68	0.67	0.67	0.68

Table 6
Changes in Corporate Governance and Institutional Ownership

Change in corporate governance from t-2 to t-1 is regressed on change in institutional ownership from t-1 to t and change in other control variables. Our sample is non-US. firms. The independent variables are (lagged) changes in: total institutional ownership (Δ*IO_TOTAL*), domestic ownership (Δ*IO_DOM*), foreign ownership (ΔIO_FOR), ownership U.S.-based institutions (Δ*IO_US*), and ownership by institutions domiciled in common-law (Δ*IO_COMMON*) and civil-law (Δ*IO_CIVIL*) countries. The other firm-specific variables are also in (lagged) changes. Robust t-statistics adjusted for country-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
ΔIO_TOTAL	0.016					
	(1.91)*					
ΔIO_DOM		0.020				
		(1.68)*				
ΔIO_FOR			0.011			
			(2.72)**			
ΔIO_US				0.020		
				(2.61)**		
ΔIO_COMMON					0.025	
					(2.65)**	
ΔIO_CIVIL						0.009
						(2.12)**
ΔSIZE	-0.007	-0.007	-0.007	-0.007	-0.007	-0.007
	(2.62)**	(2.59)**	(2.66)**	(2.67)**	(2.62)**	(2.64)**
ΔSGROWTH	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004
	(1.15)	(1.15)	(1.20)	(1.20)	(1.18)	(1.19)
ΔLEV	0.007	0.007	0.007	0.007	0.007	0.007
	(0.74)	(0.71)	(0.72)	(0.68)	(0.71)	(0.71)
ΔCASH	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014
	(1.44)	(1.42)	(1.43)	(1.44)	(1.43)	(1.43)
ΔCAPEX	-0.020	-0.020	-0.021	-0.021	-0.021	-0.021
	(1.00)	(0.99)	(1.05)	(1.06)	(1.03)	(1.04)
ΔMB	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.51)	(0.46)	(0.56)	(0.56)	(0.56)	(0.52)
ΔROA	-0.004	-0.005	-0.004	-0.004	-0.004	-0.004
	(0.31)	(0.33)	(0.25)	(0.24)	(0.25)	(0.27)
ΔR&D	-0.006	-0.004	-0.005	-0.004	-0.005	-0.004
	(0.11)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)
ΔPPE	-0.011	-0.011	-0.010	-0.010	-0.011	-0.010
	(0.91)	(0.90)	(0.82)	(0.82)	(0.91)	(0.81)
Δ FXSALE	-0.003	-0.002	-0.002	-0.002	-0.003	-0.002
	(0.39)	(0.35)	(0.33)	(0.35)	(0.42)	(0.31)
ΔANALYST	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.28)	(0.25)	(0.26)	(0.25)	(0.30)	(0.25)
ΔCLOSELY	-0.013	-0.014	-0.014	-0.014	-0.014	-0.014
	(2.90)***	(2.99)***	(2.96)***	(2.97)***	(2.96)***	(2.98)***
ΔADR	0.021	0.021	0.021	0.021	0.021	0.022
	(2.76)**	(2.80)**	(2.79)**	(2.76)**	(2.76)**	(2.80)**
Constant	0.051	0.052	0.052	0.052	0.051	0.052
	(6.57)***	(6.52)***	(6.44)***	(6.45)***	(6.53)***	(6.42)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5,677	5,677	5,677	5677	5,677	5,677
R-squared	0.20	0.20	0.20	0.20	0.20	0.20

Table 7
Corporate Governance and Institutional Ownership: Firm Fixed Effects

The table shows estimates of regressions of corporate governance on institutional ownership and other control variables using firm fixed effects. Our sample is non-US. firms. Variables are defined as in Table 4 and described in Appendix B. All explanatory variables are lagged by one period. Robust t-statistics adjusted for country-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
IO_TOTAL	0.025					
	(2.39)**					
IO_DOM		0.031				
		(1.94)*				
IO_FOR			0.021			
			(3.78)***			
IO_US				0.026		
				(3.65)***		
IO_COMMON					0.035	
					(3.41)***	
IO_CIVIL						0.018
						(1.87)*
SIZE	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
	(1.68)	(1.66)	(1.73)*	(1.75)*	(1.68)	(1.72)*
SGROWTH	-0.001	-0.001	-0.001	-0.002	-0.001	-0.002
	(0.53)	(0.52)	(0.56)	(0.58)	(0.52)	(0.57)
LEV	0.007	0.006	0.007	0.006	0.006	0.007
	(0.84)	(0.74)	(0.88)	(0.81)	(0.74)	(0.87)
CASH	-0.015	-0.014	-0.015	-0.015	-0.015	-0.014
	(1.36)	(1.33)	(1.34)	(1.35)	(1.40)	(1.31)
CAPEX	-0.031	-0.031	-0.032	-0.032	-0.032	-0.031
	(1.75)*	(1.77)*	(1.75)*	(1.77)*	(1.78)*	(1.75)*
MB	0.000	0.000	0.000	0.000	0.000	0.000
	(0.59)	(0.70)	(0.46)	(0.50)	(0.54)	(0.56)
ROA	0.019	0.019	0.019	0.019	0.019	0.019
	(3.11)***	(3.09)***	(3.29)***	(3.34)***	(3.27)***	(3.18)***
R&D	0.035	0.038	0.036	0.038	0.039	0.036
	(0.60)	(0.67)	(0.61)	(0.64)	(0.67)	(0.62)
PPE	-0.003	-0.004	-0.003	-0.003	-0.003	-0.003
	(0.30)	(0.35)	(0.26)	(0.26)	(0.26)	(0.30)
FXSALE	0.000	0.001	0.001	0.001	0.000	0.001
	(0.06)	(0.12)	(0.13)	(0.12)	(0.00)	(0.19)
ANALYST	0.000	0.001	0.001	0.001	0.000	0.001
	(0.89)	(0.95)	(0.93)	(0.96)	(0.89)	(0.95)
CLOSELY	-0.012	-0.013	-0.013	-0.013	-0.013	-0.013
	(2.28)**	(2.53)**	(2.39)**	(2.51)**	(2.39)**	(2.49)**
ADR	0.020	0.022	0.021	0.021	0.020	0.022
	(0.99)	(1.04)	(1.00)	(1.00)	(0.97)	(1.04)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	Yes	Yes
Firm FEs	0.479	0.479	0.482	0.484	0.480	0.482
Year FEs	(9.58)***	(9.60)***	(9.84)***	(9.88)***	(9.53)***	(9.91)***
Obs.	7,576	7,576	7,576	7576	7,576	7,576
R-squared	0.87	0.87	0.87	0.87	0.87	0.87

Table 8
Corporate Governance and Institutional Ownership: 2SLS

The table shows estimates of 2SLS regressions of corporate governance on institutional ownership and other control variables. Our sample is non-US. firms. The dependent variable in the second stage regressions is the governance index GOV_{41} for each firm. The first-stage regressions dependent variables are : total institutional ownership in the company (*IO_TOTAL*), ownership by domestic institutions (*IO_DOM*), foreign institutions (*IO_FOR*) and U.S.-based institutions (*IO_US*). The firm-specific variables are as described in Appendix B. All explanatory variables are lagged by one period. Robust t-statistic adjusted for firm-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	IO_TOTAL	*IO_DOM*	*IO_FOR*	*IO_US*	GOV_{41}	GOV_{41}	GOV_{41}	GOV_{41}
IO_TOTAL					0.086			
					(1.29)			
IO_DOM						0.108		
						(1.22)		
IO_FOR							0.314	
							(3.75)***	
IO_US								0.696
								(3.20)***
SIZE	-0.023	-0.022	-0.005	-0.002	0.001	0.001	0.001	0.001
	(7.19)***	(10.20)***	(2.61)***	(1.94)*	(0.70)	(0.80)	(0.55)	(0.44)
SGROWTH	0.018	0.003	0.017	0.011	-0.003	-0.002	-0.007	-0.010
	(1.62)	(0.34)	(2.18)**	(2.25)**	(1.21)	(0.84)	(2.04)**	(2.05)**
LEV	0.025	0.034	-0.013	-0.001	0.012	0.010	0.016	0.013
	(1.22)	(2.30)**	(1.04)	(0.08)	(1.94)*	(1.57)	(2.41)**	(1.42)
CASH	-0.026	-0.060	0.029	0.029	-0.005	-0.001	-0.018	-0.029
	(0.81)	(2.39)**	(1.57)	(2.38)**	(0.66)	(0.11)	(1.87)*	(2.28)**
CAPEX	0.081	0.033	0.071	0.036	-0.044	-0.041	-0.058	-0.061
	(1.04)	(0.60)	(1.33)	(1.13)	(2.19)**	(2.04)**	(2.34)**	(2.16)**
MB	-0.001	-0.002	0.000	0.001	0.001	0.001	0.000	-0.000
	(1.33)	(3.69)***	(0.68)	(2.12)**	(1.91)*	(2.02)**	(0.60)	(0.52)
ROA	0.026	0.004	0.020	0.008	0.016	0.018	0.015	0.015
	(0.63)	(0.10)	(0.93)	(0.64)	(2.02)**	(2.30)**	(1.73)*	(1.50)
R&D	0.022	0.063	-0.078	-0.085	-0.032	-0.037	-0.003	0.032
	(0.21)	(0.72)	(1.28)	(2.08)**	(1.11)	(1.30)	(0.09)	(0.70)
PPE	-0.012	-0.026	0.019	0.009	0.002	0.004	-0.005	-0.005
	(0.60)	(1.86)*	(1.46)	(1.20)	(0.36)	(0.65)	(0.70)	(0.69)
FXSALE	3.905	0.735	3.918	2.114	-0.002	0.253	-1.017	-1.258
	(2.97)***	(0.80)	(4.36)***	(3.67)***	(0.00)	(0.78)	(1.89)*	(1.82)*
ANALYST	0.004	0.000	0.003	0.001	0.001	0.001	0.000	0.000
	(5.72)***	(1.20)	(5.49)***	(3.23)***	(3.19)***	(6.42)***	(0.66)	(0.47)
CLOSELY	-11.127	-3.810	-5.397	-2.379	-2.587	-3.128	-1.662	-1.700
	(6.40)***	(3.40)***	(4.44)***	(3.00)***	(2.94)***	(5.40)***	(2.07)**	(1.80)*
ADR	0.084	0.007	0.080	0.078	0.017	0.024	-0.003	-0.032
	(6.20)***	(0.88)	(7.53)***	(9.35)***	(2.64)***	(6.57)***	(0.34)	(1.71)*
MSCI	0.001		0.031	0.014				
	(0.06)		(5.26)***	(3.90)***				
Dividend Pay	0.043	0.032						
	(3.61)***	(3.88)***						
Constant	0.329	0.318	0.059	0.022	0.394	0.388	0.406	0.410
	(6.06)***	(8.94)***	(1.71)*	(1.06)	(15.67)***	(12.76)***	(24.20)***	(21.36)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	7,576	7,576	7,576	7,576	7,576	7,576	7,576	7,576
R-squared	0.33	0.35	0.26	0.34				

Table 9
Corporate Governance and Institutional Ownership: All Firms

The table shows estimates of regressions of corporate governance on institutional ownership and other control variables. Specifications in Panel A (Levels) follow those of Table 4 but now the sample is All firms (i.e. U.S. and non-US. firms). Specifications in Panel B (Changes) follow those of Table 6 but now the sample is All firms. Robust t-statistics adjusted for country-level clustering are reported in parenthesis. *, **, *** reflects significance at the 10%, 5% and 1% levels.

Panel A: Level Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IO_TOTAL	0.051							
	(4.03)***							
IO_DOM		0.054		0.053				
		(3.45)***		(3.40)***				
IO_FOR			0.045	0.017				
			(7.02)***	(1.56)				
IO_US					0.054			
					(3.08)***			
IO_COMMON						0.054		0.054
						(3.40)***		(3.38)***
IO_CIVIL							0.049	0.009
							(5.98)***	(1.10)
SIZE	0.015	0.015	0.018	0.015	0.015	0.015	0.019	0.015
	(3.16)***	(3.03)***	(3.85)***	(3.07)***	(2.79)**	(2.94)***	(3.90)***	(2.96)***
SGROWTH	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
	(1.02)	(0.89)	(0.83)	(0.92)	(0.93)	(0.95)	(0.82)	(0.97)
LEV	-0.012	-0.012	-0.014	-0.012	-0.012	-0.012	-0.014	-0.012
	(3.75)***	(3.55)***	(6.55)***	(3.55)***	(3.35)***	(3.57)***	(6.62)***	(3.57)***
CASH	-0.010	-0.009	-0.006	-0.010	-0.010	-0.010	-0.005	-0.010
	(6.89)***	(6.70)***	(2.75)**	(7.18)***	(4.58)***	(6.50)***	(2.51)**	(6.59)***
CAPEX	0.034	0.034	0.051	0.034	0.035	0.033	0.052	0.033
	(2.04)*	(2.02)*	(3.41)***	(2.00)*	(2.08)**	(1.99)*	(3.38)***	(1.98)*
MB	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(7.20)***	(6.78)***	(6.99)***	(6.89)***	(8.33)***	(7.85)***	(6.53)***	(7.89)***
ROA	-0.008	-0.008	-0.004	-0.008	-0.007	-0.008	-0.004	-0.008
	(1.19)	(1.23)	(0.51)	(1.23)	(1.11)	(1.22)	(0.52)	(1.22)
R&D	0.003	0.003	0.001	0.003	0.003	0.003	0.001	0.003
	(0.14)	(0.18)	(0.02)	(0.18)	(0.15)	(0.14)	(0.03)	(0.14)
PPE	-0.003	-0.002	-0.005	-0.003	-0.003	-0.003	-0.005	-0.003
	(1.12)	(0.89)	(1.81)*	(0.95)	(1.08)	(1.03)	(1.70)	(1.04)
FXSALE	0.010	0.011	0.013	0.011	0.011	0.011	0.013	0.011
	(2.29)**	(2.47)**	(2.02)*	(2.31)**	(2.27)**	(2.29)**	(2.14)**	(2.29)**
ANALYST	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(2.63)**	(2.69)**	(2.33)**	(2.37)**	(2.82)***	(2.74)**	(2.45)**	(2.64)**
CLOSELY	-0.057	-0.057	-0.067	-0.057	-0.058	-0.057	-0.068	-0.057
	(5.25)***	(5.38)***	(6.57)***	(5.48)***	(5.32)***	(5.23)***	(6.65)***	(5.27)***
ADR	0.001	0.006	-0.006	0.004	0.000	0.001	-0.001	0.001
	(0.17)	(0.83)	(0.71)	(0.55)	(0.07)	(0.20)	(0.18)	(0.20)
Constant	0.305	0.307	0.277	0.307	0.311	0.308	0.275	0.308
	(6.01)***	(5.91)***	(4.90)***	(5.95)***	(5.47)***	(5.78)***	(4.90)***	(5.77)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	25,098	25,098	25,098	25,098	25,098	25,098	25,098	25,098
R-squared	0.62	0.62	0.60	0.62	0.62	0.62	0.60	0.62

Panel B: Change Regressions

	(1)	(2)	(3)	(4)	(5)	(6)
ΔIO_TOTAL	0.013					
	(1.96)*					
ΔIO_DOM		0.015				
		(1.89)*				
ΔIO_FOR			0.002			
			(0.72)			
ΔIO_US				0.011		
				(3.76)***		
ΔIO_COMMON					0.015	
					(1.87)*	
ΔIO_CIVIL						0.009
						(1.66)*
ΔSIZE	0.002	0.002	0.002	0.002	0.002	0.002
	(0.86)	(0.84)	(1.07)	(0.91)	(0.82)	(1.07)
ΔSGROWTH	0.002	0.002	0.002	0.002	0.002	0.002
	(2.08)**	(2.09)**	(2.10)**	(2.08)**	(2.07)*	(2.12)**
ΔLEV	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
	(1.87)*	(1.86)*	(2.25)**	(1.98)*	(1.91)*	(2.19)**
ΔCASH	-0.002	-0.002	-0.001	-0.001	-0.002	-0.001
	(0.42)	(0.42)	(0.19)	(0.38)	(0.43)	(0.20)
ΔCAPEX	-0.003	-0.003	-0.003	-0.003	-0.004	-0.003
	(0.84)	(0.83)	(0.67)	(0.82)	(0.87)	(0.66)
ΔMB	0.000	0.000	0.000	0.000	0.000	0.000
	(1.35)	(1.38)	(1.35)	(1.31)	(1.29)	(1.37)
ΔROA	0.002	0.002	0.002	0.002	0.002	0.002
	(1.35)	(1.33)	(1.34)	(1.33)	(1.36)	(1.31)
ΔR&D	-0.005	-0.005	-0.004	-0.005	-0.005	-0.004
	(0.72)	(0.70)	(0.62)	(0.70)	(0.73)	(0.62)
ΔPPE	0.006	0.006	0.006	0.006	0.006	0.006
	(0.61)	(0.61)	(0.66)	(0.64)	(0.62)	(0.64)
Δ FXSALE	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004
	(1.37)	(1.34)	(1.32)	(1.35)	(1.37)	(1.32)
ΔANALYST	0.000	0.000	0.000	0.000	0.000	0.000
	(0.15)	(0.15)	(0.32)	(0.20)	(0.13)	(0.32)
ΔCLOSELY	-0.010	-0.011	-0.011	-0.011	-0.010	-0.011
	(4.21)***	(4.10)***	(4.08)***	(3.96)***	(4.22)***	(4.08)***
ΔADR	0.024	0.024	0.024	0.024	0.024	0.024
	(2.96)***	(3.00)***	(2.98)***	(2.97)***	(2.98)***	(2.98)***
Constant	0.045	0.045	0.046	0.046	0.045	0.046
	(24.75)***	(24.69)***	(22.73)***	(23.34)***	(24.89)***	(22.93)***
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	18966	18966	18966	18966	18966	18966
R-squared	0.11	0.11	0.11	0.11	0.11	0.11

Appendix A
Firm-Level Governance Attributes

The 41 governance attributes in the GOV_{41} index are divided into four sub-categories: *Board*, *Audit*, *Anti-takeover*, and *Compensation & Ownership*. The data source is RiskMetrics (formerly Institutional Shareholder Services).

	BOARD
1	All directors attended 75% of board meetings or had a valid excuse
2	CEO serves on the boards of two or fewer public companies
3	Board is controlled by more than 50% independent outside directors
4	Board size is at greater than five but less than 16
5	CEO is not listed as having a related-party transaction
6	Compensation committee composed solely of independent outsiders
7	Chairman and CEO are separated or there is a lead director
8	Nominating committee composed solely of independent outsiders
9	Governance committee exists and met in the past year
10	Shareholders vote on directors selected to fill vacancies
11	Governance guidelines are publicly disclosed
12	Annually elected board (no staggered board)
13	Policy exists on outside directorships (four or fewer boards is the limit)
14	Shareholders have cumulative voting rights
15	Shareholder approval is required to increase/decrease board size
16	Majority vote requirement to amend charter/bylaws (not supermajority)
17	Board has the express authority to hire its own advisers
18	Performance of the board is reviewed regularly
19	Board-approved succession plan in place for the CEO
20	Outside directors meet without CEO and disclose number of times met
21	Directors are required to submit resignation upon a change in job
22	Board cannot amend bylaws without shareholder approval or can do so only under limited circumstances
23	Does not ignore shareholder proposal
24	Qualifies for proxy contest defenses combination points
	AUDIT
25	Consulting fees paid to auditors are less than audit fees paid to auditors
26	Audit committee composed solely of independent outsiders
27	Auditors ratified at most recent annual meeting
	ANTI-TAKEOVER
28	Single class, common
29	Majority vote requirement to approve mergers (not supermajority)
30	Shareholders may call special meetings
31	Shareholder may act by written consent
32	Company either has no poison pill or a pill that was shareholder approved.
33	Company is not authorized to issue blank check preferred
	COMPENSATION & OWNERSHIP
34	Directors are subject to stock ownership requirements
35	Executives are subject to stock ownership guidelines
36	No interlocks among compensation committee members
37	Directors receive all or a portion of their fees in stock
38	All stock-incentive plans adopted with shareholder approval
39	Options grants align with company performance and reasonable burn rate
40	Officers' and directors' stock ownership is at least 1% but not over 30% of total shares outstanding
41	Repricing prohibited

Appendix B
Variables Definitions

Variable		Definition
Total institutional ownership	*IO_TOTAL*	Holdings (end-of-year) by all institutions as a percentage of market capitalization (FactSet/LionShares)
Domestic institutional ownership	*IO_DOM*	Holdings (end-of-year) by institutions located in the same country in which the stock is issued as a percentage of market capitalization (FactSet/LionShares)
Foreign institutional ownership	*IO_FOR*	Holdings (end-of-year) by institutions located in a different country from the where the stock is issued as a percentage of market capitalization (FactSet/LionShares)
U.S. institutional ownership	*IO_US*	Holdings (end-of-year) by U.S. institutions as a percentage of market capitalization (FactSet/LionShares)
Common-law institutional ownership	*IO_COMMON*	Holdings (end-of-year) by institutions located in common-law countries as a percentage of market capitalization (FactSet/LionShares)
Civil-law institutional ownership	*IO_CIVIL*	Holdings (end-of-year) by institutions located in civil-law countries as a percentage of market capitalization (FactSet/LionShares)
Firm size	*SIZE*	Log of total in thousands of USD (WorldScope (WS) item 02999)
Sales growth	*SGROWTH*	Two-year geometric average of annual growth rate in net sales in USD (WS 01001)
Leverage	*LEV*	Total debt (WS item 03255) divided by total assets (WS item 02999)
Cash	*CASH*	Cash and short term investments (WS item 02001) divided by total assets (WS item 02999)
Capital expenditures	*CAPEX*	Capital expenditures (WS 04601) divided by total assets (WS item 02999)
Market-to-book	*MB*	Market value of equity (WS 02999) divided by book value of equity (WS item 03501)
Return on assets	*ROA*	Ratio of net income before extraordinary items (WS item 01551) plus interest expenses (WS item 01151) to total assets (WS item 02999)
Research & development expenditures	*R&D*	Research and development expenditures (WS item 01201) divided by total assets (WS item 02999)
Property, plant and equipment	*PPE*	Property, plant and equipment (WS item 02501) divided by total assets (WS item 02999)
Foreign sales	*FXSALE*	International annual net sales (WS item 07101) as a proportion of net sales (WS 01001)
Insider ownership	*CLOSELY*	Closely-held shares. Number of shares held by insiders (shareholders who hold 5% or more of the outstanding shares like officers & directors and immediate families, other corporations or individuals) as a proportion of the number of shares outstanding (WS item 08021)
Cross-listing dummy	*ADR*	U.S. cross-listing dummy, which equals one if a firm is cross-listed on a U.S. exchange through an American Depositary Receipts program (source: major depository institutions) or direct listing of ordinary shares (source: U.S. stock exchanges)
Analyst coverage	*ANALYST*	Number of analysts following a firm (IBES)
Dividend Payment Dummy	*DIVIDEND PAY*	Dummy equals one if Dividend yield (WS item 09404) is positive, zero otherwise
MSCI member dummy	*MSCI*	MSCI member dummy, which equals one if a firm is a member of the MSCI All-country World Index