Shareholder Protection Laws and Corporate Boards: Evidence from Europe

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Abstract

Country-specific factors might have greater explanatory power than firm-specific factors in explaining corporate board structure. In particular, when a country's minority shareholder laws are strong, then minority shareholders should have more power to affect board structure. In empirical tests, we find that European firms in countries with stronger shareholder protection laws have (i) more independent directors and (ii) fewer directors.

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1. Introduction

The relationship between *country-level* governance (e.g., securities regulations and laws) and *firm-level* governance (e.g., boards of directors and incentive-based compensation) is a subject that is much discussed in the current academic literature.[1] On the one hand, some firm-level governance mechanisms might be *substitutes* for weak country-level governance. After all, in a country where investor protection laws are weak, its stockholders may have to rely on other means of protection (LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV hereafter) (1998)). For example, LLSV (1998) find that firms in countries with *poor* investor protection have *higher* ownership concentrations, suggesting that ownership concentration, a purported firm-level corporate governance mechanism, is a substitute for poor legal protection.[2] By analogy, does this mean that firms in countries with poor shareholder laws might have 'better' boards of directors? We think the answer is "no."

Our contentions are as follows. Minority shareholders in countries whose laws promote and protect shareholder rights are probably *more* likely to be able to have the kinds of boards that they desire. In addition, corporate boards in countries where the law supports board oversight and actions are probably *more* likely to be effective. For example, if a country has laws that give minority shareholders reasonable power to put their representatives on boards, then these minority shareholders are more likely to get the kinds of boards that they want. In turn, these elected boards can really only be effective if they have the legal power (such as the right to challenge management) to act in the shareholders' best interests. We hypothesize, therefore, that 'good' shareholder laws and 'good' boards go hand-in-hand, i.e., that they must be *complements*.

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[1] See Doidge, Karolyi, and Stulz (2004), Durnev and Kim (2004), Krishnamurti, Sevic, and Sevic (2004), and Klapper and Love (2004).

[2] While corporate governance can take on many forms, they could all be characterized in one of two ways: those at the firm level, such as large shareholders, compensation contracts, effective boards, and so forth, and those at the market or system level, such as strong legal environments, active markets for corporate control, and so forth. It is quite likely that any corporate governance mechanism, regardless of whether it is at the firm-level or market-level, can be substitutes or complements for one another.

Our contention that boards and shareholder laws must be complements is *not* contradictory to the LLSV (1998) hypothesis that ownership structure and shareholder laws are substitutes. Their story can co-exist with ours. To put it simply, LLSV contend that in countries with poor shareholder protection, shareholders may have to take it upon themselves to look out for their own best interests. In order for these shareholders to have the power and incentive to look out for themselves, they probably would have to become 'large' shareholders. That is, if the laws are weak in protecting minority shareholders, then these shareholders may have to become *majority* shareholders. The LLSV contention is straight-forward and they are able to empirically confirm a negative relationship between law quality and ownership concentration. We can take the LLSV argument one step further in order to incorporate corporate boards. A *majority* shareholder in the LLSV scenario can of course influence board structure, but the resulting board here likely aligns itself with the *large* shareholder, *not* with *minority* shareholders. Note that this implies that concentrated ownership and 'good' boards (one that is aligned with minority shareholders) might be negatively related. A negative relationship between concentrated ownership and board quality is entirely consistent with the LLSV "substitution hypothesis" between ownership concentration and country laws, and with our "complement hypothesis" between board quality and country laws.

We empirically examine and attempt to explain board independence and board size across 14 European countries with different qualities of shareholder laws. In our paper, we make two implicit assumptions. First, we assume that minority shareholders desire 'good' boards. Second, we assume that boards with few members and independent members are 'good' boards. There is little or no controversy in the first assumption, but there may be some controversy in the second assumption. The second assumption is based on prior research. Yermack (1996) finds that smaller boards are more effective monitors, probably because process losses increase with board size.[3] Weisbach (1988) finds that independent board members are more effective, probably because they are less susceptible to self-serving

[3] Of course, others have also argued and have empirically found that smaller boards are more effective than larger boards. We will discuss these papers later in our paper.

managerial influence.[4] Our paper's hypothesis is that minority shareholders can only get what they want (i.e., 'good' boards) when they have the empowerment and ability (i.e., strong minority shareholder laws) to do so. That is, board size and structure might be endogenous, and shareholder law quality might be one of the important determinants.

As noted by Lehn, Patro, and Zhao (2003), empirical papers that *attempt to explain* board independence and board size are scant. Therefore, treating corporate boards as endogenous represents a significant contribution to the corporate board literature, in and of itself. Lehn, et al. consider firm-specific factors (such as firms size, etc.), while we consider a country factor (i.e., the country's legal environment). However, we do recognize the potential importance of firm-specific factors. Therefore, we also incorporate into our study firm-specific variables, such as firm-risk, leverage, and growth potential, to see if they explain European corporate boards. Testing these firm-specific explanatory variables is important in and of themselves, but using them as control variables to study the relationship between law and boards improves the quality of evidence that the legal environment and firm-level governance are related. For example, if a firm's agency cost is low (e.g., low-risk firms), then it may *not* need strong legal protection *nor any other* governance mechanisms.

Two minor notes merit brief mentioning. In our paper, we also include ownership concentration in our empirical analyses. Our interest in ownership concentration is two-fold. First, we simply wish to reconfirm LLSV's hypothesis that strong country laws and concentrated ownership are substitutes. Second, we wish to see if the LLSV substitution hypothesis between laws and ownership concentration implies a substitution between ownership concentration and 'good' corporate boards. The other minor issue we wish to highlight is that we are focusing on European corporate governance. Compared to what academics know about U.S. corporate governance, relatively less is known about European corporate governance.[5]

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[4] Of course, many others have also argued and have empirically shown that boards that are more independent are more effective than boards that are less independent. We will discuss these papers later in our paper.

[5] There are papers that study corporate governance from various *individual* European countries, but few papers that study multiple European countries in a pooled cross-sectional setting to identify country-specific effects. Denis and

Overall, we find that ownership concentration and law quality are negatively related, consistent with LLSV. This finding holds even when we include firm-specific variables, which means that we are able to add to the existing evidence that laws and ownership concentration are substitutes. More importantly, we find that board quality and law quality are positively related, consistent with our contention. Specifically, in countries with high quality minority shareholder laws, corporate boards have (i) more independent directors and (ii) fewer directors. These findings also hold even when we incorporate firm-specific factors. We also find that board quality and ownership concentration are negatively related. Taken together, our findings importantly show how ownership concentration, boards, and shareholder laws interact.

Finally, we also provide some simple evidence showing that strong laws do empower shareholders, and we show that these empowered shareholders choose smaller and more independent boards. This final evidence serves two purposes. First, it reveals the causal link between laws and boards (albeit, it will be in a simple way). Second, it confirms our implicit assumption that shareholders want small boards and independent boards.

Papers most similar to ours come from two lines of research: those that conduct inter-country analysis (using country-wide factors) and those that conduct intra-country analysis (using firm-level factors). Papers from the first line of research use the governance, disclosure, and transparency ratings of Credit Lyonnais Securities Asia (CLSA) and Standard & Poors (S&P) (e.g., Durnev and Kim (2004), Doidge, Karolyi, and Stulz (2004), Krishnamurti, Sevic, and Sevic (2004), and Klapper and Love (2004)). Doidge et al. and Klapper and Love find that firms located in countries with better shareholder protection laws have higher CLSA and S&P governance ratings, which is entirely consistent with our contention that good laws leads to good firm-level governance. Doidge et al. highlight countries' economic and financial development as an important determinant to firm-level governance. One important difference between

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McConnell (2003) provide a most comprehensive international literature review on corporate governance, and the lack of cross-country European studies is quit evident. Faccio and Lang (2002) is one exception, as they examine ownership structure throughout Europe. Most empirical corporate governance studies use U.S data and, to some extent, data from Pacific-Asia due to the recent Asian financial crisis of 1997.

our analysis and this line of research is our use of board characteristics instead of governance ratings. Our board data represents specific governance variables, while governance ratings are aggregated measures of many characteristics (e.g., CLSA is based on 57 characteristics covering issues from discipline and transparency to fairness and social awareness). One advantage to using specific governance variables instead of an aggregate index is that it allows for narrower and more specific investigations. Our focus is on corporate boards in particular. In addition, our contention that ownership concentration is a substitute for shareholder laws while board quality is a complement to shareholder laws is not testable using an aggregate index.

Related papers from a second line of research study the determinants of board structures (e.g., Hermalin and Weisbach (1988, 1998), Lehn, Patro, and Zhao (2003), and Coles, Daniel, and Naveen (2004)). However, these studies do not explicitly consider the role of country factors or shareholder protection laws as potential determinants of board structures. Our study could be viewed as a merging of these two streams of research.

The rest of our paper proceeds as follows. The next section briefly discusses the relevant literature and all of our variables. Section 3 describes our data. Section 4 presents and discusses our findings. The last section concludes.

2. The relevant literature and discussion of variables

This section provides a brief overview of the existing literature on firm-level corporate governance and its determinants. Though we recognize that the governance literature is large and continuously expanding, for the sake of brevity we only attempt to provide a succinct discussion that sufficiently satisfies our paper's needs.

2.1 Firm-level corporate governance

Ideally, the interests of managers and investors should be perfectly aligned, but firms likely suffer from the well-known agency problem (Jensen and Meckling, 1976). However, there are purported remedies (i.e., governance mechanisms) to mitigate the agency problem. In addition to effective laws,

which we discussed above, investors can be protected by several other means, such as incentive contracts, concentrated ownership, engaged boards of directors, disciplinary debt, and so forth. In our paper, we discuss three firm-level governance mechanisms: concentrated ownership, board independence, and board size.

Concentrated ownership. Concentrated ownership is commonly considered a governance mechanism in the academic literature. When a public firm's ownership is concentrated into the hands of a few large shareholders, then these large shareholders should have both the incentive and the power to monitor the firm effectively. Classic papers that discuss ownership concentration as a governance device include Demsetz and Lehn (1985) and Shleifer and Vishny (1986). For more contemporary findings, see Denis and McConnell's (2003) literature review. For our measure of ownership concentration, we calculate the total percent of shares held by the firm's five largest shareholders.

Board independence. Boards of directors are the ones that have the specific charge to monitor firms on behalf of the firm's shareholders (Kim and Nofsinger (2004)). Boards have two primary functions: to advise management on business strategy and to monitor management (Lehn, et al. (2003)). With regard to the latter function, it is contended that specific board structures are most effective at monitoring firms. In particular, when a board has a higher fraction of independent (i.e., outside) directors, then it is presumed to be more effective at monitoring management. There are *many* papers that contend and empirically support this contention.[6] The logic is pretty straight-forward. For example, one of the board's primary responsibilities is to fire poorly-performing CEOs. If the firm's CFO or a CEO's friend is on the board, then it is less likely that s/he will vote to fire the CEO for poor performance. Outside directors are more objective at evaluating management. To measure board independence, we calculate the percent of the firm's directors that are independent directors. Our definition of an independent director is someone who is not employed by the firm, nor is related to someone who is employed by the firm.

[6] For example, Fama (1980) and Fama and Jensen (1983) provide theoretical arguments and Dahya, McConnell, and Travlos (2002) and Weisbach (1988) offer empirical support.

Board size. Smaller boards (i.e., ones with fewer members) have been found to be better boards. We recognize that small boards are usually not thought of as a governance mechanism, but the academic literature hypothesizes, and finds, a negative relationship between board size and firm valuation.[7] Jensen (1983) is perhaps the most outspoken on this front. A simple explanation is as follows. With smaller boards, each board member may feel inclined to exert more effort, as they realize that there are only a few others monitoring the firm. With larger boards, it may be more difficult to reach consensus and thus to get anything meaningful done. In addition, with larger boards, members may simply assume that the many other members are monitoring. Therefore, smaller boards may be more dynamic and more active.

Measuring board size is not as straight forward as studies examining U.S. firms because firms from several European countries have a two-tier board system. German firms have a management board (*Vorstand*) and a supervisory board (*Aufsichtsrat*). Hopt and Leyens (2004) describe the responsibility of the management board as running the business. The supervisory board appoints and supervises the management board. The supervisory board controls the firm's compliance with the law and articles of the corporation, and its business strategies. Membership in the supervisory board is incompatible with simultaneous membership in the management board. The normal functions and responsibilities of boards in the U.K. or the U.S. are therefore divided into two boards in these two-tier board structures. The Netherlands also has a two-tier system with a *Raad van Bestuur* (management board) and a *Raad van Commissarissen* (supervisory board). In France, corporations have the choice between a one-tier board and a two-tier structure, but most choose the one-tier board. If the firm has only one board, board size is simply the number of directors that sit on that board. If the firm has a two-tier board structure, we measure board size (and also board independence) using directors from both boards.

[7] Examples of empirical papers include Huther (1996), Yermack (1996), and Eisenberg, Sundgren, and Wells (1998). Mak and Kusnadi (2004) also find a negative relationship between firm value and board size for firms in Malaysia and Singapore.

2.2 Determinants of firm-level governance mechanisms

This section describes some of the hypothesized determinants of the three firm-level governance mechanisms that we discussed above. We divide our discussion into two subsections. The first subsection describes country-wide legal environments that may lead firms in that country to either adopt or not adopt firm-level governance mechanisms on an aggregate (country-wide) level. The second subsection describes firm-specific variables that may lead *individual* firms to either adopt or not adopt governance mechanisms.

We treat firm-level governance as endogenous. While there are many papers that treat ownership concentration as endogenous, there are fewer papers that consider board size and board independence to be endogenous. Hermalin and Weisbach (1988, 1998) represent important early exceptions. Lehn, et al., (2003) and Coles, Daniel, and Naveen (2004) are recent exceptions. Perhaps the lack of empirical research treating board size and independence as endogenous outcomes is due to a belief that all boards could improve with decreased membership and increased independence, i.e., that "one size fits all." For example, our paper makes the implicit assumption that minority shareholders want 'good' boards. Because the prior research shows that boards with fewer members and independent members are representative of 'good' boards, the implication is that shareholders want boards with fewer members and independent members (before concluding our paper, we show some evidence that shareholders do desire independent boards and small boards, thus confirming the paper's implicit assumption that empowered shareholders opt for independent and small boards). However, independent and small boards might not be best for *all* firms, which is why we try to control for firm-specific factors in our empirical tests.

2.2.1 Country-wide variables: Quality and enforcement of shareholder laws

Our study's primary focus is the relationship between the legal environment and firm-level corporate governance. With respect to the legal environment, it can be thought of as comprising two components: (i) do the laws provide shareholders with strong legal rights, and (ii) are these laws well enforced? We discuss variables that proxies for each, in turn.

S*hareholder rights*. LLSV (1998) provides a measure of a country's overall quality of shareholder rights. They use the expression "minority shareholder rights" and "antidirector rights" interchangeably. An index is created to measure "how strongly the legal system favors minority shareholders against managers and dominant shareholders in the corporate decision-making process, including the voting process." Specifically, the quality of a country's laws to protect minority shareholders is determined by whether stockholders can (1) send proxies by mail, (2) sell their shares around shareholder meeting days, (3) allow others to vote their shares, (4) challenge perceived oppression by directors, (5) have preemptive rights to new issues, and (6) to call meetings. In total there are six attributes, where each is a discrete variable of either 0 or 1.[8] The overall minority shareholder rights index is determined by adding these numbers. We use their index to proxy for the quality of a country's law to protect minority shareholders. An index score of 6 (0), the maximum (minimum) score, means that the country's laws protect shareholders well (poorly).

LLSV find a negative relationship between a country's law quality and the firm's ownership concentration. We have no compelling reason to predict otherwise for our own investigation of ownership concentration. That is, we hypothesize that ownership concentration and law quality are substitutes for one another. However, this is not to say that any, or all, firm-level governance devices can be substitutes for law quality. We believe that some firm-level governance devices can only exist in countries where the laws assist investors. Having a good corporate board is one such example. For example, shareholders have stronger voices when it comes to board composition and board size when the law provides them the ability *and the power* to do so. Therefore, we predict that law quality and board quality are positively related. Doidge, Karolyi, and Stulz (2004) make a similar prediction, and they find empirical support. Specifically, they find that a firm's governance score is positively correlated to LLSV's shareholder's rights index. Klapper and Love (2004) and Krishnamurti, et al. (2004) report similar findings.

[8] In LLSV (1998), they measure the percentage of share capital that is required to call extraordinary meetings. If only 10 percent or less is required, then this shareholder rights variable is equal to 1, and 0 otherwise.

Enforcement. This variable pertains to how well a country enforces their shareholder laws. A strong system of legal enforcement makes strong laws more meaningful, or it could substitute for weak laws. Our measure of judiciary efficiency also comes from LLSV (1998). It is a ten-point scale, from 1 to 10, with 10 indicating strong legal enforcement. LLSV also have other measures of enforcement, but these other measures primarily pertain to the government's attitude toward business and about the business environment in general, not to the enforcement of laws per se (e.g., they have a measure of government corruption).

LLSV are unable to identify a relationship between a country's quality of law enforcement and their firms' ownership concentration. It appears that rules rather than enforcement are more relevant in affecting corporate and investor behavior. Nonetheless, to be consistent with our discussion of laws and corporate governance in the previous subsection, we predict a negative relationship between enforcement quality and ownership structure, and a positive relationship between enforcement quality and board quality.

2.2.2 Firm-specific variables

Due to differences in national laws, specific countries may find firm-level governance mechanisms to be more useful than other countries. There may also be instances when specific *firms* require firm-level governance mechanisms more than other firms, both across *and within* countries. With respect to choosing firm-specific explanatory variables, we draw on the existing ownership concentration literature and the existing board literature. Neither literature is particularly large (here, we are referring to the literatures that treat governance mechanisms as endogenous), which may make our choices of firm-specific variables appear ad hoc, but we believe there is sufficient reason to include our the following variables: (1) firm-specific risk, (2) leverage, (3) market-to-book ratio of assets, (4) R&D, and (5) firm size. A description and discussion of each of these variables, along with their hypothesized relationship with our firm-level governance variables, can be found in the Appendix.

2.3 Summary

We have discussed two aspects of the legal environment (quality of laws and quality of enforcement), three types of firm-specific governance mechanisms (ownership concentration, board independence, and board size), and several firm-specific determinants of firm-level governance mechanisms. To recap, we are testing to see whether firm-level governance mechanisms are substitutes or complements to national laws and/or to legal enforcement. Firm-level governance mechanisms are assumed to be concentrated ownership, small boards, and independent boards. As such, they represent our dependent variables. An additional question that we ask is: Are country's laws and firm's corporate governance related even after we control for other firm-specific variables? By including firm-specific determinants (such as firm size, firm growth potential, and firm risk) of firm-level governance, we provide a sharper test than one that aggregates firms by countries. For convenience, each table contains predicted signs on each of the explanatory variables.

3. The data

Our initial search for firms' ownership and board information comes from the Deminor universe of firms. Deminor is an independent consulting practice that provides information to assist minority shareholders in Europe. An advantage of using this database for board information, as opposed to the firm's own annual reports, is that it is more likely to be more objective when identifying a board member as being independent. Naturally, Deminor tracks the larger European firms. We are able to include 229 firms from 14 European countries for the year 2000. The law variables come from LLSV (1998). Financial statement data comes from Thomson Financial's Worldscope database. For the financial statement data, we use country-adjusted measures, where we subtract out the country's median value for each variable. This procedure eliminates firm-specific country factors (e.g., a 'big' company in one country may not be deemed a 'big' company in another country). However, our main results are robust regardless of whether or not we make these country adjustments. The financial statement data is all U.S. dollar denominated.

Table 1 shows the law and enforcement indices for our 14 European countries. A higher index denotes better laws and enforcement. Table 1 also shows summary statistics on our firm-level corporate governance variables. A few observations of the firm-level governance variables are noteworthy. For example, note that U.K.'s boards are quite independent. Three out of every four U.K. board members are outsiders. However, this observation may not be surprising. Since 1992, the U.K. has had a *Code of Best Practice* pertaining to corporate boards (Dahya, et al. (2002)). The *Code* recommends that U.K. firms to have at least three outside directors on their boards. The London Stock Exchange requires that listed-firms reveal whether or not they are *Code* compliant. This point underscores our contention that country-level governance policies and laws aimed at protecting shareholders lead to good boards.

[Insert Table 1 Here]

The German firms in our sample have no independent directors and large board sizes. However, it is well known that Germany's governance system is a bank-based system. Franks and Mayer (1998) provide an excellent illustration of how German laws might favor banks rather than minority shareholders. In their study, they find that banks had the power to influence takeover decisions without much regard to minority shareholder desires. The firms from the Netherlands also have few independent directors. The larger Dutch firms fall under the structural regime (*structuurregeling*) regulation. These firms must set up a supervisory board which consists of at least three members. New board members are appointed by existing members (called cooptation) and at least one of them are to be government appointees. Jong et al. (2001) conclude that the structural regime gives minority shareholders very little say in the appointment or removal of board members.

Some countries, such as Belgium, have large ownership concentrations. Belgium's public ownership is significantly family-oriented (Bauwhede, Willekens, and Gaermynck (2003)). LLSV find that countries where family ownership of public corporations is significant (e.g., Korea), then their ownership concentration is high.

From Table 1, we can also detect some patterns among the law and firm-specific governance variables consistent with our discussions above. For example, countries with strong shareholder laws, as

revealed by its high shareholder rights index such as the UK, seem to have lower ownership concentrations but more independent directors and smaller boards. These observations suggest that when a country has strong shareholder laws, then they rely less on ownership concentration, and they are able to create 'good' boards. These observations are consistent with our hypotheses. However, these observations should be interpreted with caution. For example, it could be that firms in the UK specifically require good firm-level governance due their unique business operations and not due to their strong legal environment, which means that any correlation between law quality and firm-level corporate governance could be spurious. Our regression analyses that control for firm-specific factors should provide more reliable empirical evidence into the relationship between country law and firm-level corporate governance.

We also observe unequal sample sizes across countries, which potentially creates problems in empirical tests. Obviously, we have no say in Deminor's coverage of firms, just as prior papers using CLSA governance scores could not dictate CLSA's coverage of firms, but we acknowledge the potential problem and we will address it later in the paper when we conduct our empirical tests.

Table 2 shows descriptive statistics for the firm-specific control variables used in our study. Risk is the standard deviation of each firm's annual stock returns from the period 1997-2000. Leverage is the firm's total leverage to total assets ratio. M-to-B is the firm's market-to-book value of total assets. R&D is the firm's R&D expenditures to total assets ratio. Firm Size is the firm's book value of total assets. A casual look at this data suggests that they may not subsume our prior preliminary findings that laws and firm-level corporate governance are related. For example, firms in our U.K. sample do not have a particularly high level of risk, leverage, or growth potential. That is, country law might explain firm-level corporate governance more than firm-specific factors.

[Insert Table 2 Here]

Table 3 presents some additional preliminary evidence on the relationship between law quality and firm-level corporate governance. We sort firms into three groups based on country shareholder rights index and also by country enforcement index. The subgroups represent firms that operate in the highest,

mid-level, and lowest law quality environments. For each group, we identify the mean ownership concentration, mean board independence percentages, and mean board sizes. The results are reported in Table 3.

[Insert Table 3 Here]

From Table 3, we see that firms from countries with the strongest (weakest) shareholder rights have the lowest (highest) ownership concentrations, highest (lowest) percent of independent directors, and smallest (largest) board sizes. These results provide preliminary evidence that countries with strong shareholder rights have low ownership concentrations, but 'better' boards. For the enforcement rights groups, a pattern between enforcement rights and firm-level governance is less obvious. However, all of these results should be viewed cautiously, as they do not consider important confounding factors. We discuss regression findings subsequently.

4. Empirical methodology and results

4.1 Methodology

Each of our firm-level corporate governance variables is a dependent variable in a regression model. For each firm-level governance variable, we test three regression models. Model 1 simply tests firm-level corporate governance as a function of the country's shareholder rights and enforcement quality. Model 2 essentially repeats Model 1, but includes firm-specific control variables added to ensure the robustness of Model 1 findings. Finally, Model 3 contains only the firm-specific variables, and the firm-level governance variable not being used as the dependent variable. The inclusion of the "other governance variable" in Model 3 tests the hypothesis that ownership concentration and 'good' boards are substitutes for one another. When testing this last hypothesis, we do not include country law variables which would induce multicollinearity, as laws and firm-level governance are hypothesized to be related.

All models include industry dummies, but all results are robust regardless of whether or not industry dummies are used.[9]

4.2 Regression results on ownership concentration

Table 4 reports regression results when ownership concentration is the dependent variable. The parameter coefficients are estimated using the Tobit regression method, as our dependent variable, ownership concentration, is a censored variable from 0 to 100 percent.[10] Model 1 shows a negative relationship between a country's shareholder rights and its firms' ownership concentration. However, there does not seem to be a statistically significant relationship between a country's enforcement quality and its firms' ownership concentration. Both results are consistent with those of LLSV. Our findings suggest that when a country has weak shareholder laws, then their firms have large shareholders. That is, a large shareholder that presumably has the power and the incentive to oversee the firm is a substitute monitor for the country's weak laws. Also like LLSV, we find that enforcement does *not* seem to be a statistically significant factor in explaining ownership concentration.

[Insert Table 4 Here]

Model 2 is a repeat of Model 1, but it includes firm-specific explanatory variables. We want to make sure that we are capturing country factors while controlling for firm-specific factors. From the results, we see that countries with strong shareholder rights have lower ownership concentrations even after we include firm-specific control variables. Therefore, our findings here improve upon the quality of findings in Model 1. For the firm-specific variables, we see some weak evidence that high market-to-book firms have higher ownership concentrations. Surprisingly, R&D-intensive firms have lower ownership concentrations.

Model 3 shows the firm-specific variables and it includes board independence and board size as explanatory variables. Firm size is statistically significant, indicating that it is more difficult (i.e., more

[9] Our industries include the following (with sample sizes reported in parentheses): Financial (57), Industrial (30), Consumer Cyclical (46), Basic Materials & Energy (22), Technology (26), Consumer Non-Cyclical (31), and Utilities (17).
[10] OLS yields the same qualitative findings.

costly) to be a large shareholder of a larger company. However, the most interesting finding in Model 3 is that board independence and ownership concentration are negatively related. Thus, these two governance mechanisms are substitutes for one another. Note that if ownership concentration is a governance device in countries with poor laws, then this finding suggests that board independence is a governance device in countries with strong laws. We will explore this contention further in the board regression models.

Before moving on to the board regressions, we address a potential concern with our empirical tests. Unequal samples sizes across countries may be affecting our findings. Because some countries have more firms than others in our test sample, we randomly eliminate firms until we are left with three firms from each country to leave us with a total of 41 firms (Denmark has 2 firms to begin with). Regression results on the reduced sample yield qualitatively similar results (though statistical significance is reduced). Further, other cuts to the data (e.g., eliminating the large U.K. sample, etc.) yield the same findings. Therefore, we believe our reported findings are not due to a sample selection nor sample size issue. As such, we continue to use our entire sample (in part, for the sake of statistical power) when reporting our results.

4.3 Regression results on board independence

Table 5 reports results where board independence is the dependent variable. As before, the parameter coefficients are estimated using the Tobit regression method, as our dependent variable, board independence, is a censored variable from 0 to 100 percent. Model 1 shows a positive relationship between a country's shareholder rights and its firms' board independence ratio (measured as the percent of the firm's directors that are independent directors). This finding suggests that it is more likely for firms to have 'good' boards (assuming that independent boards are better than non-independent boards) in countries with good laws. Laws can help shareholders get the boards that they want. The enforcement variable is also positively related to board independence. Shareholder-influenced boards can be more effective when laws back their actions. In fact, it might be worth knowing that when we used OLS to

estimate these parameter coefficients, the adjusted R^2 of this model was an economically significant 58 percent. Overall, 'good' boards and good laws and enforcement appear to go hand-in-hand, i.e., they are complements.

[Insert Table 5 Here]

Model 2 shows that Model 1's main findings are robust even after the inclusion of firm-specific explanatory variables. In fact, law quality appears to be more important than the firm-specific factors in explaining board composition, because none of the firm-specific variables are statistically significant. Of particular note is the fact that the inclusion of the firm-specific explanatory variables does not improve the model much. That is, the log-likelihood statistic is very different between the two models. When we estimate this model using OLS, the adjusted-R^2 is again 58 percent as it was with Model 1. Country factors seem to be more important than firm-specific factors in explaining a firm's board composition. Doidge, et al. (2004) similarly find that country factors explains firm-level governance scores more than firm-specific factors. Finally, the statistically significant ownership concentration variable in Model 3 confirms that ownership concentration and board independence are substitute firm-level governance mechanisms.

As we did before, we make sure that unequal samples sizes and a censored dependent variable do not lead to misleading findings. Various cuts to the data to address the unequal sample size issue, and subsequent regression tests, yield qualitatively similar results to the reported results. Thus, we believe our reported board independence findings are not due to a sample selection (nor sample size) issue.

4.3.1 Are our findings due to country-specific board regulations?

Along with the passage of the Sarbanes Oxley Act of 2002 in the United States, many markets around the world also assessed or reassessed their governance regulations and made various changes. Note that these new or revised regulations do not affect our analysis because we use data from the year 2000. Nevertheless, we conduct a thorough review of European rules and regulations pertaining to corporate boards. Do some countries have independent directors simply because their government

mandates it? Complete country-specific governance task-force studies, proposals, and regulations are available in English from the European Corporate Governance Institute (www.ecgi.org).

The U.K. is probably most similar to the U.S. in its emphasis on independent directors. The U.K.'s *Combined Code on Corporate Governance*, released in July 2003, states that "Except for smaller companies, at least half the board, excluding the chairman, should comprise non-executive directors determined by the board to be independent." Before the passage of the Combined Code, the Cadbury Committee issued a *Code of Best Practice* recommending that each firm should have at least three independent directors. For our U.K. sample, an average of nine independent directors sits on a board of 12 total directors.

The governance codes in most European countries, even today, do not explicitly require a specific number or fraction of independent directors. Instead, they make "recommendations" or "suggestions" pertaining to independent directors. For example, the 1998 Cardon Report, commissioned by the Brussels Stock Exchange suggests that "The number of independent directors should be sufficient for their views to carry significant weight in the board's decisions." In the most recent version of Belgium's *Corporate Governance Act*, it states, "the composition of the board should be determined on the basis of the necessary diversity and complementarily." For France, the Viénot report of July 1999 recommends that at least a third of the directors be independent. French firms do not seem to embrace this recommendation as our French sample only has an average 15% of their board being independent directors. Later, an October 2003 report released by the French Association of Private Enterprise "suggests" that for widely-held firms, at least half of its directors be independent. Italy's *Corporate Governance Code* of 2002 states that "an adequate number of non-executive directors shall be independent." The Code seems to define an "adequate number" as being one, or in some cases two, independent directors. Spain's *Aldama Report* of 2003 suggests "a very significant number of independent directors, considering the company's ownership structure and the capital represented on the Board."

Clearly, the wide attention on director independence is a recent phenomenon, furthermore the recommendations pertaining to director independence with regard to their number and/or fraction are vague, and finally they are not explicit regulations. We also find that these regulations and codes do *not* speak to board size. Therefore, we do not think our findings reported in Table 5 are due to country-specific board regulations. Nonetheless, we did try to create an index based on board regulations. We approached this task with the idea that the more 'teeth' a country's policy or commission recommendation had with regard to improving board structure, the higher should be its index value. However, as we studied every country's policies and commissioned reports, we found that all countries generally fell into only one of two categories: it either recommended that there be more board independence, or it did not. Therefore, instead of an index, we then decided to create a Board Law Dummy variable which we set equal to 1 if the country's policy report recommends greater board independence, and equal to 0 if it did not.[11] This dummy variable is included in Models 1, 2, and 3 and reported in Panel B of Table 5. The predicted sign on this dummy variable is not necessarily straight-forward. On the one hand, the coefficient could be positive indicating that countries where board independence is advocated have more independent boards. On the other hand, the coefficient could be negative indicating that countries that do not have independent boards are the ones whose policy reports are now trying to advocate them. And finally, as these recommendations are new, the coefficient may not even be significant because firms may not have had the time to react to them.

From Panel B of Table 5, we see that the Board Law Dummy variable is significantly positive, suggesting that some countries might have greater board independence simply because their countries' policy study advocates it. Therefore, we acknowledge that the Board Law Dummy variable is an important control variable. More importantly, however, note that the Shareholder's Rights Index and Enforcement Index are still statistically significant, indicating their sustained importance in explaining board independence. That is, even when explicit (and apparently effective) policy recommendations

[11] Board Law Dummy is equal to 1 for the following countries: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, and the U.K.

pertaining to board independence exist, shareholder rights still plays a significant role in ensuring board independence. That is, explicit board regulations and/or policy recommendations do not subsume our paper's main findings – strong shareholders rights can lead to 'better' boards.

4.4 Regression results on board size

Table 6 shows regression results when board size is the dependent variable. We use the OLS regression method to estimate the parameter coefficients. From Model 1, we see that countries with strong laws have firms with *fewer* directors. This result again shows that countries with strong laws are the ones whose firms have better boards (assuming that small boards are better than large boards). Countries with better law enforcement also have firms with smaller boards. Model 2 includes firm-specific explanatory variables. Overall, the main findings are robust. Countries with good laws have firms with fewer directors. We also see that larger firms have *more* directors. This result confirms the hypothesis that larger firms need more 'eyes to mind the business.' Finally, Model 3 reveals that board size and ownership concentration are not related. It appears that when it comes to boards, only board independence (not board size) is a substitute for governance via large shareholders. A battery of data cuts and subsequent re-running of regressions confirms that unequal sample sizes across countries do not drive our findings.

[Insert Table 6 Here]

Could board regulations affect our board size regression findings? When we reviewed each country's policy recommendations, we never came across a recommendation explicitly advocating smaller boards. However, there were five countries whose policy reports recommended either a maximum number of board members or that boards not be too large.[12] A dummy variable capturing this potential influence (the variable is equal to one for these five countries) is significantly positive in our board size regressions, which is somewhat surprising, but it probably reveals that countries with large boards are the ones whose policy reports are trying to curb board size. More importantly, the importance

[12] These countries include Belgium, France, Germany, Greece, and Spain.

of shareholder rights is sustained in these new regressions (i.e., they remain statistically significant negative). Therefore, the potential existence of a board size regulation or policy recommendation does not subsume our main finding that board size is a function of shareholder rights. Due to the marginal information contained in these additional regressions, we do not report them.

4.5 Additional robustness checks: Testing other country-specific factors

In this subsection, we consider other country-specific factors that might explain, or subsume, our primary findings. Recent research finds that a country's accounting standards (LLSV (1998)), reliance on foreign capital (Doidge, et al., (2004)), cultural factors measured by religion and language (Stulz and Williamson (2003), and degree of economic development (Doidge, et al. (2004)) might play important roles in a firm's corporate governance, financial, and investment policy. In regard to the influence of culture, our firms are from countries that each speaks its own language. So language is not an effective measure of culture for this sample. In addition, the degree of economic development is not an issue as our sample includes only developed countries. Therefore, as we consider additional factors in this subsection, we focus on accounting standards, reliance on foreign capital, and religion.

Making ex ante predictions for each of these additional country factors is not straightforward. How might accounting standard quality impact the ability and the desire for minority shareholders to create good boards? On one hand, better country accounting standards could create the incentive for shareholders and firms to adopt good governance practices (consistent with stories offered by Doidge, et al. (2004) and our own "complementary hypothesis" contention). Alternatively, better country accounting standards could partially eliminate the need for good firm-level governance (consistent with a substitution hypothesis of LLSV (1998)). Without a clear ex-ante prediction for the impact of accounting standards on firm-level governance, we consider this to be an empirical matter.

If a country's economy has a strong reliance on foreign public capital, then there may be a greater need for better governance. Foreign investors may require good firm-level corporate governance and minority shareholder protection as a prerequisite for providing capital (Lins and Warnock (2004)). For

religion, Stulz and Williamson (2003) find that protestant countries protect creditors better than other countries, but we are not sure if religion plays a role in determining corporate boards. In our examination of these additional country factors, we only focus on the following: "Do the inclusions of these additional country-factors subsume our overall finding that law quality and boards are related?"

Table 7 reports summary statistics of our additional country-factors. Accounting standards come from LLSV (1998). A higher number indicates better standards, as indicated by the firms' disclosure quality. Our information on foreign public capital comes from Doidge, et al. (2004). The variable shows the percentage of public foreign capital that is raised outside the home country for the years 1995-2000. We also report each country's primary religion, which is information we get from Stulz and Williamson (2003).

[Insert Table 7 Here]

Ownership structure, board independence, and board size are dependent variables in a regression analysis. Because ownership concentration and board independence are censored dependent variables from 0 to 100 percent, we use Tobit regression models to estimate their parameter coefficients. The board size model uses the OLS regression estimation. Both the shareholder rights index and the enforcement index are explanatory variables, and they represent our key variables of interest. The additional country-specific variables are accounting standards, percent of foreign public capital, and a dummy variable equal to one if the primary religion in the country is protestant. We also include industry dummies, though our findings are invariant to whether or not we include industry dummies. Table 8 reports the results.

[Insert Table 8 Here]

From Table 8, we see that the shareholder rights index still has a strong influence on ownership concentration (first column of results) and on board independence (second column of results). With regard to the board size regression, all of our variables are statistically significant. Countries with good accounting standards have smaller boards. Countries with greater reliance on outside capital and countries whose primary religion is Protestant have larger boards. However, the most important result from Table 8 is that the inclusions of these additional country variables do not subsume our law variable

findings (though, for the board independence model the enforcement variable is no longer statistically significant). That is, higher quality shareholder rights lead to smaller ownership concentrations, more board independence, and smaller board sizes, consistent with the evidence presented earlier, even after we incorporate other differences among countries. Of course, our models in Table 8 could suffer from multicollinearity, as prior papers have shown that many of our explanatory variables in Table 8 are correlated. Therefore, we execute one-factor regression models for each of our explanatory variables, but the results (not shown) come out qualitatively the same. Additionally, the inclusion of firm-specific control variables (not shown) does not change the main findings of this subsection either.

4.6 Linking laws and firm-level governance: A simple test

We have been arguing that if a country has good shareholder protection laws, then their shareholders should have the ability to get the board that they desire. We've also contended that these empowered shareholders will select independent and small boards. In this subsection, we show some simple evidence on how laws empower shareholders, and we also show that these empowered shareholders choose smaller and more independent boards. In other words, we will illustrate one mechanism for how 'good' laws lead to 'good' boards.

In our sample, there are two primary ways directors can get elected to boards. Directors can be elected via a shareholder meeting or they can be appointed by top management or other employees. Directors that get selected by the shareholders are likely to be more representative of minority shareholders' desires and interests as opposed to directors that get selected by management. If good laws lead to empowered shareholders, which, in turn, leads to independent and small boards (i.e., the link in question), then we should observe the following: (1) countries with good laws should have more directors that were selected by shareholders rather than by management, and (2) when shareholders do select directors, they select independent directors and smaller boards.

For the firms in our study sample, Table 9 shows the percent of directors that were selected by shareholders within each country. Note that Denmark, Germany, and the Netherlands have the lowest

fraction of directors that were appointed by shareholders. These three countries have weak shareholder rights and they have no independent directors (see Table 1). In other countries, particularly where shareholder rights are stronger, they have more shareholder-selected directors, and they tend to be independent directors.

[Insert Table 9 Here]

Panel B of Table 9 shows non-parametric (Spearman) correlation coefficients between key variables. The statistically significant positive correlation between the percent of shareholder-selected directors and the shareholders' rights index suggests that good laws do give shareholders more power to affect board composition. The positive correlation between the percent of shareholder-selected directors and director independence shows that shareholders elect independent directors as opposed to insiders. The negative correlation between the percent of shareholder-selected directors and board size suggests that empowered shareholders opt for smaller boards. These simple results show one process by which strong shareholder laws might lead to good firm-level governance. These results also confirm that shareholders do desire independent and small boards, which was an implicit assumption that we made throughout the paper.

5. Conclusions

LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (1998) argue that firm-level governance may be a substitute for weak shareholder laws. Similar to LLSV, we find that in countries with poor laws, firms are more likely to have large shareholders. Thus, ownership concentration and laws are substitutes. If laws can't help the shareholders, then the shareholders must help themselves. However, for other firm-level governance devices, it might be difficult for them to exist and to operate when laws are weak. For example, corporate boards of directors represent another firm-level governance mechanism. Without strong laws to help minority shareholders get the boards that they want, and without strong laws to help these boards be effective, countries with weak laws may have firms with 'weak' boards. In other words,

we think board quality and law quality are complements. In our paper, we simply define a 'good' board as one that has more independent directors and fewer directors.

We study a sample of 229 firms from 14 European countries with a high degree of variation in shareholder law quality. We find that in countries with strong laws and enforcement, firms have more independent directors and fewer directors. This result confirms that board quality and law quality are complements. These results hold even when we incorporate firm-specific factors such as firm size, firm risk, and the firm's growth potential. We also find that board independence and ownership concentration are substitutes. This finding makes sense if law quality is driving each of these governance mechanisms in different directions. Finally, for illustrative purposes, we document one explicit link between laws and corporate boards by showing that countries with strong laws have more shareholder-elected directors than management-appointed directors, and that these shareholder-elected directors are independent directors, not insiders.

Our findings have policy implications. If countries want their firms to get better oversight and monitoring from corporate boards, then these countries should consider re-evaluating and/or possibly strengthening their shareholder protection laws to empower shareholders so that they can effectively influence corporate board composition and structure.

Appendix
Hypothesized Firm-Specific Determinants of Firm-Level Governance

Firm-specific risk. If the firm's operations are risky, then there is more to be gained by monitoring this firm (Demsetz and Lehn (1985) and Grossman and Hart (1986)). Therefore, riskier firms should employ an active governance mechanism. Many ownership structure papers find empirical evidence consistent with this hypothesis. For example, Demsetz and Lehn (1985), Holderness, Kroszner, and Sheehan (1999) and Himmelberg, Hubbard, and Palia (1999) find a positive relationship between ownership concentration and firm risk. It is optimal for a riskier firm to have large shareholders monitoring it.

The recent board literature, however, primarily discusses firm size and firm growth opportunities as the key determinants to board size and composition.[13] Larger firms need more directors because they need more individuals to monitor the greater scope of their activities, and growth firms need more *inside*-directors because they need more monitors with specialized knowledge and expertise. Because neither hypothesis speaks directly to the relationship between firm-specific risk and boards, we do not know what to expect, but we could make cursory predictions. Riskier firms could conceivably require engaged and active directors, but also directors with intimate knowledge of the firm's activities. This implies that risky firms could benefit from having smaller boards, but with *fewer* outside directors.

In short, the extant governance literature hypothesizes a positive relationship between firm risk and ownership concentration, but there is no pre-existing hypothesis on the relationship between boards and firm risk (at least none that we are aware of). We conjecture a negative relationship between firm risk and board size, and a negative relationship between firm risk and board independence. Our measure of firm-specific risk is the standard deviation of annual stock returns from 1997 to 2000.

Leverage. Leverage potentially plays a significant role in firm-level governance, but its hypothesized effect is not necessarily straight-forward. On the one hand, firms with more debt in their capital structure are riskier. As such, highly levered firms might require effective governance. Consistent

[13] For example, see Lehn, et al. (2003). These variables will be discussed shortly.

with this contention, the prior empirical literature finds a positive relationship between a firm's ownership concentration and its debt ratio (e.g., Agrawal and Mandelker (1987)). As for board structure, if smaller boards and independent boards are supposed to be better at monitoring, then we might expect firms with more leverage to have fewer directors and more outside directors.[14] However, Coles et al. (2003) and Klein (1998) offer a different view regarding optimal board size for highly-levered firms. They suggest that firms with more debt need *more* directors. Specifically, a firm with more debt relies on more external contracts, which requires more monitors. Thus, firms with more debt may optimally have larger boards.

However, Jensen (1986) argues that leverage can mitigate the agency problems associated with free cash flow. Here, leverage in and of itself can be viewed as a firm-level governance mechanism. Therefore, firms with more debt may be less reliant on boards for governance. In summary, while debt is a potentially important factor in determining board structure, we cannot be unambiguously sure of the relationship, ex ante. We use an industry-adjusted leverage ratio. For each firm, this ratio is the firm's total debt to its total assets, less the median debt-to-assets ratio for the industry in that firm's country.

Market-to-book ratio of total assets. Some researchers (e.g., Morck, Shleilfer, and Vishny (1988), and more recently, Coles, et al., (2004), but there are others as well) believe that certain governance structures and governance mechanisms can lead to greater firm value (i.e., firm value is endogenous to the firm's governance), while other scholars believe that governance structures are endogenous (Demsetz and Lehn (1985) and more recently, Lehn, et al., (2003)). Cho (1998) tackles this issue using a simultaneous systems approach and finds that ownership concentration is endogenous to a market-to-book ratio, not the other way around. Firms with high market-to-book ratios have greater ownership concentration. While we do not address this debate here, we cannot ignore a potential positive empirical relationship between the market-to-book ratio and ownership concentration.

With respect to the recent board literature, the market-to-book ratio is viewed as either a standardized measure of firm value (as in Coles, et al. (2004)), or as a proxy for growth opportunities (as in Lehn et al. (2003)). Despite the slightly different views on what the market-to-book ratio measures,

[14] There is evidence that bankers on boards benefit debt-dependent firms (e.g., Booth and Deli, (1999)).

both Coles et al. and Lehn et al. make similar predictions with regard to the market-to-book ratio and boards. Firms with more growth opportunities need smaller boards (i.e., smaller boards are nimbler, which is necessary for young growing companies), but they also need more inside (not outside) directors (i.e., growing firms have greater information asymmetry, so insiders are potentially better monitors than outsiders). That is, the market-to-book ratio is negatively related to board size and board independence. Our market-to-book ratio of total assets comes from the year 2000. The ratio's numerator is the market value of equity plus the book value of debt (market value of debt is unavailable) and the denominator is the book value of total assets.

R&D. In papers that study firms' corporate governance scores, growth opportunities is often considered one of the most important firm-specific factors in whether or not a firm adopts good governance (e.g., Durnev and Kim (2004), and Doidge, Karolyi, and Stulz (2004)). Firms that rely more on research and development, as compared to other firms, can be viewed as growth firms. This, in and of itself, implies that R&D intensive firms require significant monitoring (see our discussion of market-to-book ratio of assets above). Note also that R&D represents discretionary spending. Such expenditures require monitoring. Himmelberg, Hubbard, and Palia (1998) find a positive relationship between a firm's ownership concentration and the firm's R&D spending, consistent with this hypothesis. With regard to board size and structure, Lehn et al. (2003) suggest that growth firms need smaller boards that act nimbly. However, they also feel that growth firms benefit from *inside* directors, *not* independent outside directors, as growth firms need those familiar to its growth prospects to effectively monitor the firm. Coles et al. make the same predictions with regard to board size and composition. Finally, another way of looking at R&D intensive firms is that they are riskier firms that require specialized knowledge to monitor them (Klein (1998)). As such, inside-directors may be better than outside directors. Note that this argument is similar to those that contend that inside-*ownership* can benefit risky firms (a la Demsetz and Lehn (1985)). R&D-to-total assets is our measure of a firm's R&D intensity.

Firm size. The larger the firm, the greater is the cost of obtaining a given fraction of ownership. Therefore, a negative relationship between firm size and ownership concentration simply reveals wealth

constraints. Thus, firm size could be viewed as an important control variable for regressions on ownership concentration. For board size and composition, however, firm size may be a key firm-specific explanatory variable. For board size, Lehn, et al. (2003) contend that larger firms need more, not fewer, directors because larger firms are engaged in higher volume and more diverse activities. That is, they need more eyes to mind the store. Others have previously made similar arguments (e.g., Booth and Deli (1996)). For board composition, Lehn, et al. (2003) contend that larger firms need more, not less, board independence, as larger firms have fewer large shareholders and greater cash flows, both of which potentially causes agency costs to be quite significant. We use the log of total assets for our firm size measure.

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Table 1
Corporate Governance Variables

This table reports the countries used in our study, the number of firms for each country, and the country's shareholder rights index and enforcement index. The indices measure country-level corporate governance. The source of the law indices data is LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (1998). This table also presents within-country summary statistics of firm-level corporate governance variables for the year 2000. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. Board independence is a percentage of the firm's directors that are independent directors. Board size is the firm's number of board members. Means and (standard deviations) are reported.

		Country-Level Governance		Firm-Level Governance		
Country	n	Shareholder Rights Index	Enforcement Index	Ownership Concentration	Board Independence	Board Size
Belgium	7	0	9.50	45.21 (13.8)	18.63 (11.2)	18.29 (5.4)
Denmark	2	2	10.00	17.55 (10.7)	0.00 (0.0)	13.50 (3.5)
Finland	4	3	10.00	21.48 (27.5)	0.00 (0.0)	9.00 (1.8)
France	39	3	8.00	26.96 (26.7)	14.98 (19.4)	15.00 (4.2)
Germany	23	1	9.00	27.85 (22.2)	0.00 (0.0)	26.13 (3.8)
Greece	3	2	7.00	0.00 (0.0)	0.00 (0.0)	13.67 (4.7)
Ireland	4	4	8.75	4.88 (5.8)	64.41 (11.7)	13.50 (1.3)
Italy	22	1	6.75	31.43 (24.8)	4.84 (10.37)	15.59 (4.5)
Netherlands	19	2	10.00	23.33 (22.5)	0.03 (0.1)	12.68 (3.5)
Portugal	3	3	5.50	18.38 (22.9)	0.00 (0.0)	12.67 (4.7)
Spain	9	4	6.25	12.39 (22.5)	22.90 (20.1)	21.33 (7.1)
Sweden	12	3	10.00	32.48 (23.1)	0.00 (0.0)	11.25 (1.0)
Switzerland	13	2	10.00	20.06 (25.2)	0.00 (0.0)	10.08 (2.2)
UK	69	5	10.00	10.43 (17.5)	76.05 (29.2)	12.36 (2.9)

Table 2
Firm-Specific Control Variables

This table presents summary statistics of firm-specific variables. Risk is the standard deviation of the firm's stock annual stock returns from the years 1997-2000. Leverage is the firm's total debt to total assets ratio during the year 2000. M-to-B is the firm's market-to-book ratio during the year 2000. R&D is the firm's ratio of R&D expenditures to the total book value of assets for the year 2000. Firm size is the firm's book value of total assets (in millions of U.S. dollars) during the year 2000. Means and (standard deviations) are reported.

Country	n	Risk	Leverage	M-to-B	R&D	Firm Size
Belgium	7	0.29 (0.18)	0.23 (0.22)	1.13 (0.77)	0.02 (0.03)	6.22 (1.72)
Denmark	2	0.46 (0.10)	0.32 (0.35)	2.36 (2.43)	0.07 (0.09)	10.02 (2.80)
Finland	4	1.27 (1.18)	0.32 (0.22)	3.86 (5.12)	0.03 (0.06)	7.78 (0.36)
France	39	0.43 (0.30)	0.27 (0.14)	1.28 (1.56)	0.01 (0.02)	5.73 (1.55)
Germany	23	0.39 (0.23)	0.25 (0.20)	1.24 (1.45)	0.03 (0.05)	10.12 (1.80)
Greece	3	0.72 (0.34)	0.14 (0.16)	1.33 (1.54)	0.00 (0.00)	3.09 (1.81)
Ireland	4	0.46 (0.18)	0.31 (0.08)	1.08 (0.87)	0.01 (0.02)	10.37 (1.26)
Italy	22	0.72 (0.62)	0.32 (0.17)	1.46 (1.62)	0.00 (0.01)	2.73 (1.59)
Netherlands	19	0.55 (0.50)	0.29 (0.17)	1.88 (1.27)	0.02 (0.03)	8.98 (1.82)
Portugal	3	0.33 (0.20)	0.36 (0.06)	0.96 (0.30)	0.00 (0.00)	4.68 (0.86)
Spain	9	0.41 (0.16)	0.39 (0.07)	0.91 (0.25)	0.00 (0.00)	5.46 (1.41)
Sweden	12	0.46 (0.31)	0.27 (0.18)	1.65 2.34)	0.01 (0.01)	8.60 (1.98)
Switzerland	13	0.37 (0.19)	0.26 (0.17)	1.40 (1.11)	0.02 (0.03)	10.52 (1.62)
UK	69	0.37 (0.20)	0.30 (0.20)	1.65 (1.65)	0.01 (0.04)	9.62 (1.61)

Table 3
Law Sorted Evidence

This table presents governance summary statistics by law quality. Panel A shows subsample means when the sample is separated into three groups based on the Shareholders Rights Index. Panel B shows subsample means when the sample is separated into three groups based on the Enforcement Index. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. Board independence is a percentage of the firm's directors that are independent directors. Board size is the firm's number of board members. F-values indicating statistically significant differences among the three subsamples are also reported. ** indicates statistical significance at the 1 percent level.

	Ownership Concentration	Board Independence	Board Size
Panel A: Shareholder Rights Index			
Highest Shareholder Rights Index (n=69)	10.43	76.05	12.36
Medium Shareholder Rights Index (n=71)	24.13	14.76	14.65
Lowest Shareholder Rights Index (n=89)	26.83	2.67	16.99
F- value	11.43**	269.55**	14.18**
Panel B: Enforcement Index			
Highest Enforcement Index (n=119)	16.26	44.10	11.96
Medium Enforcement Index (n=34)	28.72	11.41	23.03
Lowest Enforcement Index (n=76)	25.12	11.80	15.78
F-value	5.72**	25.65**	90.36**

Table 4
Ownership Concentration Regressions

This table shows Tobit regression results when Ownership Concentration is the dependent variable. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. The shareholder rights index and enforcement index come from LLSV (1998) (or see our Table 1). Firm Risk is the standard deviation of the firm's annual stock returns from the years 1997-2000, less the country's median firm risk. Firm's industry-adjusted leverage is the firm's total debt to total assets ratio during the year 2000, less the industry median leverage ratio, less the country's median industry-adjusted leverage ratio. Market-to-book ratio is the firm's market-to-book ratio during the year 2000, less the country's median market-to-book ratio. Firm size is the firm's book value of total assets (in U.S. dollars) during the year 2000, less the country's median firm size. Board independence is a percentage of the firm's directors that are independent directors. Board size is the firm's number of board members. Industry dummy variables are also included in the regression models. The regressions' parameter estimates and (standard errors) are presented. ** and * denote statistical significance at the 1 and 5 percent levels, respectfully.

	Prediction	Model 1	Model 2	Model 3
Intercept		31.00**	27.70**	26.73**
		(10.44)	(10.24)	(5.85)
Shareholder Rights Index	(-)	-5.17**	-5.05**	
		(1.01)	(1.00)	
Enforcement Index	(-)	0.21	0.91	
		(1.22)	(1.21)	
Firm Risk	(+)		5.28	4.43
			(4.63)	(4.66)
Firm's Industry-Adjusted Leverage	(?)		0.30	3.30
			(8.56)	(8.60)
Firm's Market-to-Book Ratio	(?,+)		2.06	1.71
			(1.13)	(1.13)
Firm's R&D	(+)		-156.45**	-126.27*
			(51.52)	(51.49)
Firm Size	(-)		-1.85	-2.35*
			(1.22)	(1.20)
Board Independence	(-)			-19.18**
				(4.05)
Board Size	(-)			0.06
				(0.27)
Industry Dummies		yes	yes	yes
# of Observations		229	229	229
Log Likelihood		5.05	4.60	4.48

Table 5
Board Independence Regressions

This table shows Tobit regression results where Board Independence is the dependent variable. Board independence is a percentage of the firm's directors that are independent directors. The shareholder rights index and enforcement index come from LLSV (1998) (or see our Table 1). Firm Risk is the standard deviation of the firm's annual stock returns from the years 1997-2000, less the country's median firm risk. Firm's industry-adjusted leverage is the firm's total debt to total assets ratio during the year 2000, less the industry median leverage ratio, less the country's median industry-adjusted leverage ratio. Market-to-book ratio is the firm's market-to-book ratio during the year 2000, less the country's median market-to-book ratio. Firm size is the firm's book value of total assets (in U.S. dollars) during the year 2000, less the country's median firm size. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. Industry dummy variables are also included in the regression models. The regressions' parameter estimates and (standard errors) are presented in Panel A. Panel B shows the same models as Panel A but includes an additional explanatory variable Board Law Dummy, which is equal to 1 if the country is Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, and the U.K, and 0 otherwise. ** and * denote statistical significance at the 1 and 5 percent levels, respectfully.

Panel A:

	Prediction	Model 1	Model 2	Model 3
Intercept		-0.52**	-0.50**	0.30**
		(0.12)	(0.12)	(0.06)
Shareholder Rights Index	(+)	0.17**	0.17**	
		(0.01)	(0.01)	
Enforcement Index	(+)	0.03**	0.03**	
		(0.01)	(0.01)	
Firm Risk	(?,-)		-0.06	-0.06
			(0.05)	(0.08)
Firm's Industry-Adjusted Leverage	(?)		0.14	0.08
			(0.10)	(0.14)
Firm's Market-to-Book Ratio	(-)		-0.01	0.01
			(0.01)	(0.02)
Firm's R&D	(-)		1.03	-0.22
			(0.59)	(0.86)
Firm Size	(+)		-0.02	0.02
			(0.01)	(0.02)
Ownership Concentration	(-)			-0.01**
				(0.00)
Industry Dummies		yes	yes	yes
# of Observations		229	229	229
Log Likelihood		40.49	25.52	3.61

Panel B:

	Prediction	Model 1	Model 2	Model 3
Intercept		-1.05**	-1.03**	0.04
		(0.13)	(0.13)	(0.08)
Shareholder Rights Index	(+)	0.15**	0.16**	
		(0.01)	(0.01)	
Enforcement Index	(+)	0.07**	0.07**	
		(0.01)	(0.01)	
Firm Risk	(?,-)		-0.06	-0.07
			(0.05)	(0.07)
Firm's Industry-Adjusted Leverage	(?)		0.08	0.02
			(0.09)	(0.14)
Firm's Market-to-Book Ratio	(-)		-0.01	0.02
			(0.01)	(0.02)
Firm's R&D	(-)		0.58	-0.46
			(0.54)	(0.83)
Firm Size	(+)		-0.02	0.02
			(0.01)	(0.02)
Ownership Concentration	(-)			-0.01**
				(0.00)
Board Law Dummy	(?)	0.33**	0.33**	0.30**
		(0.05)	(0.05)	(0.07)
Industry Dummies		yes	yes	yes
# of Observations		229	229	229
Log Likelihood		48.39	31.66	5.10

Table 6
Board Size Regressions

This table shows OLS regression results where Board Size is the dependent variable. Board size is the firm's number of board members. The shareholder rights index and enforcement index come from LLSV (1998) (or see our Table 1). Firm Risk is the standard deviation of the firm's annual stock returns from the years 1997-2000, less the country's median firm risk. Firm's industry-adjusted leverage is the firm's total debt to total assets ratio during the year 2000, less the industry median leverage ratio, less the country's median industry-adjusted leverage ratio. Market-to-book ratio is the firm's market-to-book ratio during the year 2000, less the country's median market-to-book ratio. Firm size is the firm's book value of total assets (in U.S. dollars) during the year 2000, less the country's median firm size. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. Industry dummy variables are also included in the regression models. The regressions' parameter estimates and (standard errors) are presented. ** and * denote statistical significance at the 1 and 5 percent levels, respectfully.

	Prediction	Model 1	Model 2	Model 3
Intercept		25.84**	25.96**	15.97**
		(2.46)	(2.41)	(0.96)
Shareholder Rights Index	(-)	-1.10**	-1.21**	
		(0.24)	(0.24)	
Enforcement Index	(-)	-0.64*	-0.81**	
		(0.29)	(0.29)	
Firm Risk	(?,-)		1.07	1.25
			(1.09)	(1.20)
Firm's Industry-Adjusted Leverage	(?)		0.68	1.18
			(2.02)	(2.22)
Firm's Market-to-Book Ratio	(-)		-0.11	-0.32
			(0.27)	(0.29)
Firm's R&D	(-)		10.28	15.72
			(12.15)	(13.44)
Firm Size	(+)		0.95**	0.51
			(0.29)	(0.31)
Ownership Concentration	(-)			0.03
				(0.02)
Industry Dummies		yes	yes	yes
# of Observations		229	229	229
Adj. R^2		0.20	0.24	0.08
F-Statistic		8.00**	6.39**	2.61**

Table 7
Other Country-Wide Characteristics

This table shows various characteristics for the countries in our sample. Accounting Standards reflects the disclosure quality of the firms in each country (source: LLSV (1998)). % of Foreign Public Capital is the percent of total pubic capital raised outside the country (source: Doidge, Karolyi, and Stulz (2004)). The Primary Religion of each country is reported (source: Stulz and Williamson (2003)).

Country	Accounting Standards	% of Foreign Public Capital	Primary Religion
Belgium	61	72.2	Catholic
Denmark	62	54.9	Protestant
Finland	77	62.2	Protestant
France	69	69.8	Catholic
Germany	62	45.4	Protestant
Greece	55	63.5	Greek Orthodox
Ireland	n/a	68.6	Catholic
Italy	62	34.3	Catholic
Netherlands	64	92.0	Catholic
Portugal	36	31.0	Catholic
Spain	64	43.4	Catholic
Sweden	83	59.3	Protestant
Switzerland	68	57.5	Catholic
UK	78	68.70	Protestant

Table 8
Additional Country Factors: Regression Evidence

This table shows regression results when Ownership Concentration, Board Independence, and Board Size are dependent variables. Tobit is used to estimate parameter coefficients for the Ownership Concentration and Board Independence models. OLS is used to estimate the parameter coefficients for the Board Size model. Ownership Concentration is the percent of shares held by the firm's five largest shareholders. Board independence is a percentage of the firm's directors that are independent directors. Board size is the firm's number of board members. The Shareholder Rights Index and Enforcement Index come from LLSV (1998) (or see our Table 1). Accounting Standards comes from LLSV (1998) (or see out Table 7). % of Foreign Public Capital comes from Doidge, Karolyi, and Stulz (2004) (or see our Table 7). Protestant Dummy is a dummy variable equal to if the country's primary religion is Protestant, otherwise it is equal to zero. The country's primary religion information comes from Stulz and Williamson (2003) (or see our Table 7). Industry dummy variables are also included in the regression models. The regressions' parameter estimates and (standard errors) are presented. ** and * denote statistical significance at the 1 and 5 percent levels, respectfully.

	Ownership Concentration	Board Independence	Board Size
Intercept	-9.63	-0.13	46.79**
	(27.72)	(0.17)	(3.81)
Shareholder Rights Index	-10.79**	0.11**	-1.91**
	(2.51)	(0.02)	(0.35)
Enforcement Index	-1.99	0.001	-3.14**
	(4.05)	(0.02)	(0.57)
Accounting Standards	0.91	-0.001	-0.14*
	(0.49)	(0.003)	(0.07)
% of Foreign Public Capital	0.12	0.000	0.15**
	(0.28)	(0.002)	(0.04)
Protestant Dummy	-0.10	0.06	10.03**
	(8.76)	(0.05)	(1.24)
Industry Dummies	yes	yes	yes
# of Observations	225	225	225
Log Likelihood	-758.56	44.70	
Adj. R^2			0.41
F-Statistic			14.87**

Table 9
Percent of Directors Selected by Shareholders Meeting

For each country, Panel A of this Table reports the mean percent of directors that were elected by a shareholders meeting. Standard deviations are reported in parenthesis. Panel B reports Spearman correlations coefficients between the percent of directors elected by shareholders meetings with the following variables: the firm's country shareholder rights index, the firm's ownership concentration, the firm's percent of independent directors to total directors, and the firm's board size. ** denotes statistical significance at the 1 percent level.

Panel A: Summary Statistics

Country	n	% of Directors Elected by Shareholders Meeting (std. dev. in parentheses)	
Belgium	7	100.0	(0.0)
Denmark	2	67.6	(7.2)
Finland	4	100.0	(0.0)
France	39	95.8	(13.9)
Germany	23	51.7	(10.7)
Greece	3	100.0	(0.0)
Ireland	4	100.0	(0.0)
Italy	22	98.1	(5.5)
Netherlands	19	36.8	(49.6)
Portugal	3	100.0	(0.0)
Spain	9	100.0	(0.0)
Sweden	12	78.3	(12.5)
Switzerland	13	98.3	(6.2)
UK	69	96.4	(15.2)

Panel B: Correlation Coefficients

	Shareholders Rights Index	Board Independence	Board Size
Percent of Directors Elected by Shareholders Meeting	0.32**	0.41**	-0.23**