

CONTROL PREMIUMS AND THE EFFECTIVENESS OF CORPORATE GOVERNANCE SYSTEMS

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The last decade has witnessed a tremendous increase of interest in corporate governance, which in turn has triggered a search for the key elements of an effective governance system. To evaluate the effectiveness of different corporate governance systems, it is necessary to develop an objective measure of effective corporate governance. The main gauge used by most economists and policy makers—the size of a nation's equity market—is generally considered too indirect to provide a useful guide for analysis or reform. In this paper, we begin by summarizing the findings of our recently published research that presents a more direct measure of the success of corporate governance systems. Then we use this newly constructed measure as a basis for identifying the most important elements of a well-functioning national governance system.

One useful definition of corporate governance is “the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.”¹ If we adopt this definition, then one measure of the *shortcomings* of a corporate governance system is the proportion of a company's value that does not accrue to all shareholders on a per share basis, but is instead captured by inside shareholders who control and sometimes manage the firm. Economists refer to this extra value captured by insiders as the “*private* benefits of control.” This name reflects the reality that effective control of a corporation confers the opportunity not only to improve performance and increase value, but also to divert wealth away from shareholders and other groups in favor of the controlling coalition.

* This article draws on and summarizes the findings of “Private Benefits of Control: An International Comparison,” which was published in the *Journal of Finance* earlier this year (2004).

1. For a broader definition, see Zingales (1998). Full citations for all studies mentioned in the text are supplied in the bibliography at the end of the article.

To illustrate the concept of private control benefits, take the case of company (or individual) A that buys a controlling interest in company B. One way for A to realize private benefits is simply to *transfer* value—say, by getting B to sell its product to A at below-market prices or getting B to buy inputs from A at above-market prices (whether or not such behavior is legal and the likelihood that if illegal it will be sanctioned depends on the domicile of both companies A and B). Another possibility, which does not involve an actual *transfer* of wealth, is for company A to profit from an investment opportunity that it learns about as a direct consequence of its involvement with B (and that might have instead been undertaken by B).

This kind of wealth diversion reduces what minority shareholders are willing to pay for shares, lowering the value of all companies where such behavior represents a real possibility. And by raising the cost of finance, it limits the ability of such firms to fund attractive investment projects. But how can we tell how much of this activity goes on within a national economy? By their nature, such private control benefits are difficult to observe and even more difficult to quantify in a reliable way. (After all, if such value transfers could be observed and quantified, it would be relatively easy, at least where such transfers are illegal, for non-controlling shareholders to stop them.)

Financial economists have come up with two methods of estimating the size of private benefits. One is to look at differences across firms and among nations in the size of premiums paid for voting stock relative to non-voting stock.² If superior voting stock trades at a premium while having equal or inferior dividend rights, this means that control is valuable. But such control should command additional value only if controlling shareholders expect to receive some benefits not available to minority shareholders. And thus large premiums can be viewed as an indication of inadequate protections for minority shareholders and a weak corporate governance system.

Cross-country studies of voting premiums suggest widespread weakness in corporate governance as well as significant variation among countries. The earliest, single-country studies concluded that voting

rights tend to be worth 10% to 20%, on average, of the value of common stock, with countries such as the United States (5.4%), Sweden (6.5%), and the United Kingdom (13.3%) reporting relatively low premiums, moderate premiums in Switzerland (20.0%) and Canada (23.3%), and much higher premiums in countries like Israel (45.5%) and Italy (82.0%).³ A more recent study of 18 countries by Nenova (2001), using a common methodology and for a common year, reported an average premium across all countries of 13%, with low levels in countries like the United States (2%) and Sweden (1%) and much higher premiums in countries like Italy (29.4%) and Mexico (36.4%). (These high average premiums, as well as the variation among countries, were evident even when the studies controlled for possible inter-country differences in economic rights and liquidity across voting and non-voting shares.)

But this method of evaluating corporate governance systems clearly has limitations. One concern is the possibility that companies that choose to have multiple classes of stock are fundamentally different from other publicly traded companies in those countries. But perhaps even more limiting is the fact that the method cannot be applied to the governance systems of the many nations that prohibit multiple classes of stock.

The second method of estimating private control benefits, which was pioneered in a 1989 study by Michael Barclay and Cliff Holderness, focuses on differences in the price per share paid in a privately negotiated transfer of a controlling block and the price that can be observed in the market once investors have absorbed the fact that there will be a new controlling shareholder. The rationale for this method is that the price per share an acquirer pays for the controlling block reflects *both* the cash flow benefits it expects to receive as a shareholder (which include the value of any improvements it expects to make in the firm's performance) and any private benefits stemming from its controlling position. By contrast, the market price of a share just after the change in control is announced should reflect only the cash flow benefits that *all* shareholders expect to receive under the new management.

2. See, generally, L. Zingales, "The Value of the Voting Right: A Study of the Milan Stock Exchange Experience," *Rev. Fin. Stud.*, Vol. 7 (Spring 1994).

3. See R. Lease, J. McConnell, and W. Mikkelsen, "The Market Value of Control in Publicly Traded Corporations," *Journal of Financial Economics*, Vol. 7 (1983); K. Rydqvist, "Takeover Bids and the Relative Prices of Shares That Differ in Their Voting Rights," Stockholm School of Economics Working Paper (1992);

W. Megginson, "Restricted Voting Stock, Acquisition Premiums, and the Market Value of Corporate Control," *The Fin. Rev.*, Vol. 25 (1990); Homer, "The Value of the Corporate Voting Right," *J. Banking & Fin.*, Vol. 12 (1988); Robinson and White, "The Value of a Vote in the Market for Corporate Control," York University Working Paper (1990); Levy, "Economic Evaluation of Voting Power in Common Stock," *Journal of Finance*, Vol. 38 (1982); and Zingales (1995b).

Hence, as Barclay and Holderness have argued, the difference between the price per share paid by the acquiring party and the price per share prevailing on the market should reflect the differential payoff accruing to the controlling shareholder. And after some adjustments (discussed below), this difference can be used as a measure of the private benefits for the controlling shareholder.

In a study that was published this year in the *Journal of Finance*, we used the Barclay and Holderness method to infer the value of private benefits of control in companies representing 39 different countries. Based on 393 control transactions that took place between 1990 and 2000, we found that control premiums averaged 14% of the equity value of a firm. As in other studies, we found considerable cross-country variation in the premiums, with 14 countries having average premiums of less than 3% and 10 countries with premiums of 25% or more (including Brazil, with an average premium of 65%).

After performing a series of tests to convince ourselves that these estimates were in fact likely to be measures of private benefits, we then used this measure to explore the following question: What factors within a national economy work to limit such wealth transfers and thereby strengthen its corporate governance system? Perhaps the most common factor associated with lower private benefits is the presence of laws that protect minority shareholders from abuses by insiders. In fact, the extent of such legal protections is often taken to be the measure of the strength of a governance system. But although our study investigated the explanatory power of corporate law, our investigation was not limited to legal factors. Given significant gaps between the laws on a country's books and what takes place in practice, most systems develop less formal, non-contractual ways of limiting self-dealing by insiders. In exploring this possibility, our study considered a number of extralegal mechanisms and institutions that have been proposed by scholars as controlling private benefits—notably product market competition, labor pressures, and moral norms. To these well-known mechanisms, we added two of our own: public opinion and corporate tax enforcement. We hypothesized that in countries with many independent communications media, particularly a thriving business press, the desire of insiders to maintain their public reputation and of organizations to maintain a

reputation for fair treatment of minority stockholders should act to limit abuses by controlling shareholders.⁴ We also reasoned that, for most companies, governments represent in effect the largest minority shareholder as a result of their corporate income tax claim; and that the government and minority shareholders have a common interest in preventing insiders from “tunneling” income out of the firm. In this sense, the ability of a government to ensure compliance with tax claims can be viewed as a measure of the effectiveness of this additional monitor of corporate affairs. And, as we discuss below, our study showed that an independent and widely circulating press, high rates of tax compliance, and a high degree of product market competition are all associated with lower private benefits of control.

HOW TO MEASURE PRIVATE BENEFITS

Consider a company whose stock trades at \$8 per share. One day a large block—say, 40%—changes hands (outside of the stock market) at a price of \$14 per share. The difference between \$8 and \$14 can be broken down into two components: (1) the increase in the value of the company expected under the new management team and (2) the private benefits the new shareholder expects from its control of the company. By observing a market price the day *after* the transfer of control has taken place—which gives the market the opportunity to assess the strength of the new management team—we can separate the expected increase in company value from the expected private benefit of control.

To illustrate, let's say that after the transfer has been announced, the stock jumps from \$8 to \$10. The \$2 increase reflects outsiders' expectation of improved corporate performance, presumably resulting from more effective oversight or better management by the buying firm (or individual). But what accounts for the difference between \$14 and \$10? In some cases, the \$4 difference will reflect buyers' greater confidence in, or better information about, their own ability to improve the firm's performance. But on average—and provided the market does a good job of capturing expected gains in its near-term price reactions—the new controlling shareholders must expect to receive the additional \$4 in *private* benefits—that is, benefits that do not accrue to outside minority shareholders (and may in fact come

4. Zingales (2000), Dyck and Zingales (2002).

TABLE I ■ TRANSACTION CHARACTERISTICS

This table presents the summary statistics of the specific characteristics of all the 412 transactions analyzed in this paper.

VARIABLE	Number of Observations	Mean	Std. Dev.	Min	Max
The difference between the security value of the buyer (market price at t+2) and of the seller (market price at t-30) normalized by the market price at t+2	412	0.06	0.24	-1.84	0.90
Buyers proportion of change in security value	412	0.02	0.09	-0.43	0.40
Initial shareholding as a percent of total shares	412	1.31	3.72	0.00	20.00
Size of control block as a percent of total shares	412	37.71	17.51	6.00	90.00
Fixed assets as a percentage of total assets (U.S. 3-digit SIC)	412	0.29	0.23	0.00	0.77
Indicator Variables					
Transactions with blocks greater than 20%	412	0.27			
Transactions with another large shareholder	412	0.16			
Financial distress in target in year of transaction (EPS<=0)	412	0.26			
Financial distress in target in year before transaction (EPS<=0)	412	0.22			
Domestic acquirer	412	0.62			
Control block created by issuing new shares	412	0.16			
Agriculture, forestry, & fishing (SIC 01-09)	412	0.05			
Mining (SIC 10-14)	412	0.04			
Construction (SIC 15-17)	412	0.01			
Manufacturing (SIC 20-39)	412	0.39			
Transportation & pub. utilities (SIC 40-49)	412	0.09			
Wholesale trade (SIC 50-51)	412	0.03			
Retail trade (SIC 52-59)	412	0.06			
Finance, insurance, & real estate (SIC 60-67)	412	0.23			
Services (SIC 70-89)	412	0.10			
Seller an individual (news stories)	412	0.18			
Seller government (news stories)	412	0.03			
Seller unidentified (news stories)	412	0.08			
Seller public company (news stories)	412	0.54			
Acquirer public company (SDC)	412	0.42			
Acquirer subsidiary (SDC)	412	0.13			
Acquirer private (SDC)	412	0.40			
Acquirer government (SDC)	412	0.01			
Acquirer unknown (SDC)	412	0.03			

at their expense). Since this premium has been paid only on 40% of the stock, we normalize it by the total value of the company $[0.4*((14-10)\div 10) = 0.16]$. Hence, in this case we estimate the value of control to be 16% of the value of the company. (Note that the control premium can also be negative even if the new buyer pays a premium over the existing stock price; this would happen if the price on the exchange rises above the negotiated price of the block sale.)

DATA AND DESCRIPTIVE STATISTICS

One limitation of this method is that it can be applied only to publicly traded companies that experience a transfer of a controlling block. In performing our study of such transactions, we started by compiling a list of all control block transactions reported by Securities Data Corporation for the period 1990–2000. After imposing a set of criteria to ensure homogeneity, we were left with a sample of 393 observations from 39 countries.⁵

Table I presents the characteristics of the deals in our sample, while Table II reports descriptive statistics of the block premiums from our sample according to the country in which the acquired firm is located. The sample includes more than 40 observations each from active equity markets such as the United Kingdom and the United States. For some countries, we have relatively few observations as a result of the combination of weak coverage by Datastream, few reported prices for control sales, and limited observability of control premiums as a result of laws regulating tender offers in the case of control sales. The rank ordering of countries by control premium is very similar using mean and median values, suggesting that our results are not driven by a few outliers.

The first column of Table II presents the average control premium by country, computed as the coefficient of fixed country effects in a regression where the dependent variable is the control premium as defined in section I. Overall, the average control premium was 14% when each country was given an equal weighting, but only 10% when each transaction received equal weight (which means that countries with smaller control premiums tend to have more transactions). In 10 of our 39 sample countries, the average control premium exceeded

25% of equity value. The countries in our sample with the highest private benefits (bad governance) were Argentina, Austria, Colombia, the Czech Republic, Israel, Italy, Mexico, Turkey, Venezuela, and Brazil, which had the highest estimated value of 65%. At the other extreme were 14 countries for which private benefits were estimated at 3% or less. These countries were Australia, Canada, Finland, France, Hong Kong, Japan, Netherlands, New Zealand, Norway, Singapore, South Africa, Taiwan, the United Kingdom, and the United States.

Of course, control premiums differ across firms for a variety of reasons related to specifics of the deal and characteristics of the firm. If such variation were more pronounced in some countries than others, this would make country averages misleading indicators of the underlying strength or weakness of national governance systems. To address this concern we next produced revised estimates of how control premiums differ across countries that were based on a regression that controlled for company and transaction characteristics.

(1) Differences in the Extent to Which the Block Conveys Control

First of all, in calculating our initial control premiums, we assumed that all transactions in our sample transfer absolute control. But this is probably incorrect because the transfer of, say, a 20% block does not carry the same amount of control as the transfer of a 51% block. Similarly, the transfer of a 30% block when there is another shareholder controlling 20% likely carries less control than the transfer of the same block when the rest of the shares are dispersed. Thus, control blocks above 50% are likely to fetch a higher price. Similarly, the presence of another large shareholder (a stake in excess of 20%) should reduce the premium.⁶

As shown in Table III (column 2), for our sample of 393 transactions, an absolute majority of votes, all other things equal, had the effect of increasing the value of a controlling block by 9.5% of the total value of equity (with statistical significance at the 5% level). But contrary to our prediction, the presence of another large shareholder also had a small positive (though not statistically significant) effect on the control premium.

5. For a complete descriptions of the criteria imposed and their justification, see Dyck and Zingales (2004).

6. In Canada and Australia, we used 15% since exceeding 20% would trigger a mandatory offer for remaining shares.

TABLE II ■ BLOCK PREMIUM AS PERCENT OF FIRM EQUITY

Country	Mean	Median	Standard Deviation	Minimum	Maximum	Number of Observations	Number of Positive Observations
Argentina	0.27	0.17	0.26	0.05	0.66	5	5
Australia	0.02	0.01	0.04	-0.03	0.11	13	9
Austria	0.58	0.38	0.19	0.25	0.52	2	2
Brazil	0.65	0.49	0.83	0.06	2.99	11	11
Canada	0.01	0.01	0.04	-0.02	0.06	4	2
Chile	0.15	0.12	0.18	-0.08	0.51	9	8
Colombia	0.27	0.15	0.34	0.06	0.87	5	5
Czech Republic	0.58	0.35	0.80	0.01	2.17	6	6
Denmark	0.08	0.03	0.11	-0.01	0.26	5	3
Egypt	0.04	0.04	0.05	0.01	0.07	2	2
Finland	0.02	0.01	0.06	-0.07	0.13	14	9
France	0.02	0.01	0.10	-0.10	0.17	5	3
Germany	0.10	0.10	0.13	-0.24	0.32	18	15
Hong Kong	0.01	0.03	0.05	-0.12	0.05	9	7
Indonesia	0.07	0.07	0.05	-0.05	0.09	2	2
Israel	0.27	0.21	0.32	-0.01	0.89	9	8
Italy	0.37	0.16	0.57	-0.09	1.64	8	7
Japan	-0.04	-0.01	0.09	-0.34	0.09	21	5
Malaysia	0.07	0.05	0.10	-0.08	0.39	41	31
Mexico	0.34	0.47	0.35	-0.04	0.77	5	4
Netherlands	0.02	0.03	0.05	-0.07	0.06	5	4
New Zealand	0.03	0.03	0.09	-0.17	0.18	19	14
Norway	0.01	0.01	0.05	-0.05	0.13	14	9
Peru	0.14	0.17	0.11	0.03	0.23	3	3
Philippines	0.13	0.08	0.32	-0.40	0.82	15	11
Poland	0.11	0.08	0.11	0.02	0.28	5	5
Portugal	0.20	0.20	0.14	-0.11	0.30	2	2
Singapore	0.03	0.03	0.03	-0.01	0.06	4	3
South Africa	0.02	0.00	0.03	0.00	0.07	4	2
South Korea	0.16	0.17	0.07	0.04	0.22	6	6
Spain	0.04	0.02	0.06	-0.03	0.13	5	4
Sweden	0.06	0.02	0.08	-0.01	0.22	13	12
Switzerland	0.06	0.07	0.04	-0.01	0.15	8	8
Taiwan	0.00	0.00	0.01	-0.01	0.00	3	2
Thailand	0.12	0.07	0.19	0.08	0.64	12	11
Turkey	0.30	0.09	0.55	-0.03	1.41	6	5
United Kingdom	0.02	0.01	0.05	-0.06	0.17	43	23
United States	0.02	0.02	0.10	-0.20	0.40	47	28
Venezuela	0.27	0.28	0.21	0.04	0.47	4	4
Average/Number	0.14	0.11	0.18	-0.04	0.48	412	300

(2) Differences in the Extent of the Seller's Bargaining Power

In estimating the private benefits of control, we assumed that the seller's bargaining power is constant across all deals. But in cases where sellers have greater-than-average bargaining power, control premiums should be higher. And the converse is also true—namely, that for a given amount of private benefits of control, the lower the seller's bargaining power, the lower our estimates of control premiums.

We tried to control for these differences in bargaining power with three proxies:

First, if the selling company is in financial distress, it is more likely to be forced to sell and hence to have less bargaining power. As a proxy for financial distress, our study created a dummy variable that takes the value 1 when earnings per share are zero or negative in the year of the block trade or the year preceding the block trade.⁷ As expected, companies in financial distress exhibited a control premium that is 5.4 percentage points lower than otherwise identical companies that are not.

Similarly, when the acquisition of a controlling block takes the form of an equity infusion this probably indicates that a company needs to raise equity, a sign of a weak bargaining position. We inserted a dummy if the block was formed by newly issued equity. Contrary to expectations, the creation of a block through a new equity offering had a positive (though not statistically significant) effect on the premium.

This method was particularly common in Japan, where in a majority of cases control was transferred by financially distressed companies through private placements of new equity. The concentration of such transactions in Japan underscores the importance of controlling for company and deal characteristics rather than focusing on the raw averages across countries.

Finally, foreign acquirers generally face more competition, at the very least because their involvement implies that the transactions are open to foreign buyers and thus there is a larger pool of potential acquirers. Thus, the bargaining power of the seller in these transactions is likely to be bigger. We find that foreign buyers pay a premium of 6.9% (statistically significant at the 5% level).

(3) Cross-Listing in the United States

Finance and legal scholars have argued that foreign companies that list in the U.S. exchanges thereby submit themselves to tougher governance rules and limit their own ability to extract private benefits.⁸ Since we wanted to capture how "typical" firms across different countries compare in their governance outcomes, and firms that cross list are unlikely to be "typical," we controlled for the presence of cross-listing. For this purpose we inserted a dummy variable equal to one for any selling company that is cross-listed in the United States as well as in its home market.⁹ As expected, cross-listed companies had lower private benefits (although given the dearth of dually listed companies in our sample (23), the statistical significance of this effect is below conventional levels).

(4) Adjusted Estimates of Private Benefits Controlling for Differences in Deal and Firm Characteristics

After inserting all these deal and company characteristics in our basic regression, we re-estimated the country fixed effects. The results are reported at the bottom of column 2 in Table III. Since many of the control variables included capture part of the value of control, the country fixed effects can no longer be interpreted as the estimates of the average value of private benefits in that country, but only as relative rankings. Including these controls dramatically lowers the ranking for countries characterized by the higher-than-average presence of foreign acquirers and sales of majority stakes like Germany, Switzerland, Egypt, and Poland.

On the one hand, these estimates represent an improvement over our raw data because they adjust for deal characteristics. But they suffer from an econometric problem. To estimate the impact of these deal and firm characteristics, we had to assume that this impact is constant across countries. In some cases this assumption might be untenable. For example, the difference between acquiring a 51% stake rather than a 30% one might be huge in a country where private benefits of control are large, but it might be small or even irrelevant in a country

7. While other measures of cash flow are preferable, earnings per share is one of the few data items consistently reported in Datastream for the companies in our database.

8. Coffee (1999), Reese and Weisbach (2001), and Doidge et al. (2001).

9. We obtained the list of cross listing from Doidge et al. (2001). We thank Andrew Karolyi for kindly providing us with the data.

TABLE III ■ ESTIMATED BLOCK PREMIA BY COUNTRY

The dependent variable is the block premium as a percent of firm equity. Each regression includes country fixed effects. In addition, in column (2) we introduce several deal characteristics: whether it is a majority block, whether there is another large shareholder, whether the firm is in financial distress, whether the block was created by issuing new shares, whether the buyer is a foreigner, and if the firms' shares are cross-listed in the United States. In column (3) we introduce several industry and seller/buyer characteristics: identity of the buyer (individual, government, subsidiary, dispersed), identity of the seller (individual, government, unknown), 2-digit SIC code industry dummies, and the proportion of fixed to total assets. In column (4) we introduce in addition interactions between foreign acquirer and cross-listing dummy and the difference in governance rules between acquiring country (or U.S. for cross listed-firms) and target country. All regressions are estimated by OLS. Robust standard errors are in parentheses.

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: BLOCK PREMIUM					
	(1)	(2)	(3)	(4)		
Buyer's proportion of change in security value	0.323	(0.211)	-0.319	(0.209)	-0.336	(0.211)
Stake greater than 50%	0.095**	(0.039)	0.095**	(0.039)	0.087**	(0.039)
Another large shareholder	0.041	(0.043)	0.018	(0.040)	0.02	(0.039)
Financial distress in selling firm	-0.054*	(0.028)	-0.043	(0.028)	-0.044	(0.028)
Sold through new share issue	0.041	(0.057)	0.034	(0.059)	0.026	(0.058)
Buyer is foreign	0.069**	(0.034)	0.065*	(0.036)	0.06*	(0.036)
Cross-listed in the U.S.	0.062	(0.040)	0.067	(0.039)	0.113	(0.083)
Interaction of relative strength of anti-director rights (home-target nation) and foreign acquirer					-0.029***	(0.011)
Interaction of relative strength of anti-director rights (U.S.-target nation) and cross-listed in the U.S.					-0.07**	(0.034)
Buyer individual or private			-0.042	(0.026)	-0.045*	(0.026)
Buyer government			0.008	(0.046)	0.01	(0.049)
Buyer subsidiary			-0.001	(0.049)	0.013	(0.049)
Buyer dispersed or unknown			0.039	(0.044)	-0.031	(0.043)
Seller individual			0.021	(0.029)	0.024	(0.029)
Seller government			0.008	(0.100)	-0.008	(0.097)
Seller unknown			0.028	(0.031)	0.026	(0.031)
Fixed assets as percent of total			-0.097	(0.062)	-0.09	(0.062)
Industry-Agriculture, forestry, fishing			-0.03	(0.050)	-0.027	(0.050)
Industry-Mining			-0.071	(0.071)	-0.068	(0.072)
Industry-Construction			-0.027	(0.042)	-0.058	(0.071)
Industry-Transportation & utilities			0.066*	(0.031)	0.064**	(0.032)
Industry-Wholesale trade			0.046	(0.047)	0.037	(0.046)
Industry-Retail trade			-0.057	(0.055)	-0.046	(0.055)
Industry-Finance, insurance, real est.			0.055	(0.045)	0.054	(0.044)
Industry-Services			0.024	(0.038)	0.012	(0.038)

COUNTRY FIXED EFFECTS

Argentina	0.268**	(0.111)	0.158	(0.131)	0.197	(0.123)	0.183	(0.113)
Australia	0.020	(0.013)	-0.001	(0.034)	0.051	(0.052)	0.052	(0.051)
Austria	0.383***	(0.099)	0.318***	(0.054)	0.309***	(0.050)	0.319***	(0.051)
Brazil	0.650***	(0.252)	0.606***	(0.229)	0.652***	(0.245)	0.653***	(0.245)

(Continued on following page)

(TABLE III ■ CONT'D.)

COUNTRY FIXED EFFECTS	DEPENDENT VARIABLE: BLOCK PREMIUM							
	(1)		(2)		(3)		(4)	
Canada	0.013	(0.017)	-0.06	(0.056)	0.055	(0.075)	-0.052	(0.083)
Chile	0.183***	(0.069)	0.149**	(0.065)	0.165**	(0.067)	0.16**	(0.065)
Colombia	0.273*	(0.142)	0.197	(0.137)	0.242*	(0.132)	0.325**	(0.128)
Czech Republic	0.578*	(0.312)	0.462	(0.297)	0.555*	(0.325)	0.563*	(0.330)
Denmark	0.077	(0.048)	0.039	(0.050)	0.036	(0.070)	0.027	(0.065)
Egypt	0.038	(0.024)	-0.050	(0.061)	0.025	(0.082)	0.112	(0.093)
Finland	0.025	(0.016)	-0.016	(0.027)	0.010	(0.030)	0.002	(0.037)
France	0.019	(0.052)	0.040	(0.059)	0.080	(0.077)	0.084	(0.078)
Germany	0.095**	(0.034)	-0.020	(0.052)	0.016	(0.059)	0.041	(0.058)
Hong Kong	0.003	(0.019)	0.045	(0.033)	0.040	(0.044)	0.008	(0.048)
Indonesia	0.072**	(0.017)	0.034	(0.040)	0.035	(0.047)	0.043	(0.045)
Israel	0.270**	(0.107)	0.238**	(0.108)	0.259**	(0.114)	0.252**	(0.116)
Italy	0.369*	(0.199)	0.323*	(0.191)	0.311*	(0.192)	0.349*	(0.199)
Japan	-0.043**	(0.021)	-0.070	(0.044)	-0.038	(0.054)	-0.039	(0.051)
Malaysia	0.072**	(0.017)	0.063**	(0.018)	0.073**	(0.032)	0.089**	(0.033)
Mexico	0.345**	(0.146)	0.296**	(0.143)	0.322**	(0.144)	0.396***	(0.133)
Netherlands	0.016	(0.020)	-0.054	(0.068)	0.015	(0.060)	0.015	(0.062)
New Zealand	0.027	(0.024)	-0.028	(0.042)	0.026	(0.046)	0.028	(0.045)
Norway	0.015	(0.014)	0.007	(0.026)	0.052	(0.041)	0.061	(0.045)
Peru	0.142***	(0.053)	0.067	(0.080)	0.060	(0.082)	0.08	(0.075)
Philippines	0.129	(0.083)	0.115	(0.081)	0.122	(0.079)	0.148	(0.080)
Poland	0.133***	(0.052)	0.003	(0.081)	0.041	(0.092)	0.039	(0.092)
Portugal	0.203**	(0.073)	0.159**	(0.052)	0.197**	(0.059)	0.207**	(0.059)
Singapore	0.030*	(0.016)	0.024	(0.035)	0.042	(0.069)	0.038	(0.062)
South Africa	0.017	(0.015)	0.045	(0.061)	0.005	(0.072)	0.014	(0.074)
South Korea	0.157***	(0.027)	0.086	(0.066)	0.088	(0.086)	0.137*	(0.081)
Spain	0.041	(0.027)	0.021	(0.042)	0.041	(0.058)	0.058	(0.052)
Sweden	0.074***	(0.027)	0.033	(0.047)	0.041	(0.057)	0.047	(0.056)
Switzerland	0.063***	(0.015)	0.073	(0.050)	0.062	(0.074)	0.051	(0.073)
Taiwan	-0.004	(0.004)	-0.047	(0.039)	-0.040	(0.074)	-0.038	(0.073)
Thailand	0.125**	(0.054)	0.073	(0.080)	0.121**	(0.064)	0.107	(0.080)
Turkey	0.371	(0.246)	0.276	(0.232)	0.346	(0.249)	0.363	(0.246)
United Kingdom	0.014*	(0.007)	0.000	(0.019)	0.040	(0.036)	0.02	(0.033)
United States	0.01	(0.013)	0.002	(0.031)	0.044	(0.038)	0.035	(0.038)
Venezuela	0.270***	(0.094)	0.256**	(0.105)	0.221**	(0.112)	0.268**	(0.119)
Number of Observations	393		393		393		393	
R-Squared	0.389		0.431		0.459		0.470	

* significant at 10% level; ** significant at 5% level; *** significant at 1% level

where the private benefits of control are very tiny.¹⁰ The regression, however, attributes the same effect to all the countries, underestimating differences across countries.

In the remainder of our study, where we explored the effects and causes of these cross-country differences, we used a refined measure that incorporates controls to keep constant deal (and other) characteristics. But recognizing that these deal characteristics may not be constant across countries, we also tested and reported results without controls.

(5) Differences in Industry and Buyer/Seller Characteristics

Cross-country differences could also arise because of other differences in industry and deal characteristics. Private benefits might differ across industry. The media industry, for instance, is often mentioned as an industry where private benefits are larger.¹¹ Similarly, individuals might value opportunities for private benefits more highly than corporate blockholders.¹² We wanted to ensure that our cross-country comparison was not affected by any systematic difference in the industry characteristics of the deals or the nature of the seller and the buyer. For this reason we re-estimated the country averages, controlling for differences in industry characteristics and identity of the controlling party.

To capture industry differences, we introduced an industry dummy based on the two-digit SIC code of the acquired firm. About three-quarters of our transactions were accounted for by manufacturing (39%), finance insurance and real estate (24%), and services (10%). In a crude way, these controls capture differences in private benefits linked to product market competition. Second, we constructed a measure of tangibility of assets (percentage of total assets that are fixed) based on the three-digit SIC code of the acquired firm. The rationale for this control was that insiders will have more difficulty diverting resources if assets are tied down and easily observable, as is the case with tangible assets.¹³

As shown in column 3 of Table III, companies with more tangible assets were found to have lower private benefits. Firms in wholesale trade, finance (financial, insurance, and real estate sector), and transportation and utilities had higher level of private benefits than manufacturing firms (although these results are not significant).¹⁴

We also collected information on the identity of the acquirers and the sellers, attempting to determine whether the seller was an individual, the company itself (through new share issues), or a corporate entity. We found the most common seller is a corporation, followed next by individuals (18%), new share issues (16%), and governments (3%). We used SDC data to identify whether the acquirer was a public company, subsidiary, the government, or a private company. The transactions in our sample were almost equally divided between public acquirers (41%) and private acquirers (also 41%). We provided a further classification using news stories and the SDC synopsis field. We identified 13% of our transactions as involving individual acquirers, and 4% as involving a financial intermediary that purchases the shares and then resells them to institutional investors. We interpreted these latter acquisitions as the dispersal of the controlling stake. None of these buyer or seller characteristics turned out to be significant.

At the bottom of column 3 of Table III, we report the estimates of the country average level of private benefits after we control for the above differences in level of private benefits across industries. The relative ranking, however, does not seem to be affected very much by these industry controls.

Alternative Interpretation of Control Premiums

While conducting our study, we also considered the possibility that the block premiums were not really measuring private benefits, but something else. The most plausible alternative interpretation is

10. Since we have enough observations for the United States (46), we can assess the realism of our assumption by estimating the same specification restricted to U.S. data. While the other coefficients are very similar to the ones reported in Table IV, the coefficient of the majority block dummy is small and insignificant. "Imposing" to the United States the same majority dummy effect as other countries, thus, will distort its average level of private benefits upward.

11. See, for example, Demsetz and Lehn (1985).

12. See, for example, Barclay and Holderness (1989).

13. To avoid potential endogeneity problems, we used U.S. averages (see Rajan and Zingales (1998)). We derived U.S. measures in a two-step procedure. First, we computed the average ratio of fixed assets (property plant and equipment) to total assets for all companies in each three-digit SIC code for the period 1990-1999. Then we took the median value across all companies. We then impute this value for all of the companies in our sample.

14. Including both types of industry controls in a sense "overcontrols" for industry effects, with tangibility (coefficient of -0.11, p-value of 0.033) and financial industry (coefficient of 0.076, p-value of 0.019) being significant in regressions that include these industry variables separately (not reported).

that such control premiums reflect a tendency of buyers to overpay. We tested for this possibility by looking at the announcement effect on the stock price of the acquiring company. If these premiums reflect overpayments, acquiring firms should experience negative returns at the announcement of the transaction.

Of the 393 transactions in our sample, there were 115 in which the acquirer was a publicly traded company and the stock price reaction was reported in Datastream. But inconsistent with the overpayment hypothesis, the mean value of the announcement effect (not reported) was in fact slightly positive (0.5%) and not statistically different from zero. Another implication of the overpayment hypothesis is that the buyer's announcement return should be negatively related to the size of the control premium. But our study found that although the coefficient was negative, it was neither economically nor statistically significant (coefficient of -0.018 , p -value of 0.64).

A second possible alternative interpretation—particularly for larger premiums in underdeveloped and therefore less efficient markets—is that buyers have better information (than the market) about the expected payoff from a transaction and there is therefore a delay in incorporating new information. On average, such delays will inflate our estimates of private benefits.

To test for this possibility, we re-estimated the private benefits using the market price 30 days after the announcement instead of just two days after. But our results were virtually identical. If anything, the average premium in developing countries like Brazil was higher rather than lower. We also examined the cumulative abnormal returns to shareholders in target firms from two days to 30 days after the announcement and tested whether the initial level of private benefits was related to the subsequent cumulative abnormal returns. But we found no such effect (with an insignificant relationship between control premiums and post-announcement returns (coefficient of 0.009 , p -value of 0.80)).

Finally, we were concerned about a possible distortion stemming from selective nondisclosure of the terms of a transaction. In fact, one of the criteria we had to impose to obtain our estimates was the observability of the price paid for the controlling block. A major concern was the possibility that, in countries with better protection of investors, controlling parties were more reluctant to disclose large premiums. If that were the case, then our study

would report lower private benefits in the United States not because they are indeed lower, but because large premiums are less likely to be disclosed.

To check for this possibility, we computed the percentage of deals we had to drop from our sample because the terms were not disclosed. On average, 33% of the deals did not disclose the terms, ranging from 0% in Taiwan to 70% in Austria and 82% in the Czech Republic. Contrary to the selective nondisclosure argument, we found that countries with higher premiums tend to have a higher percentage of deals whose terms are not disclosed. Similarly, when we used as a proxy for protection of minority shareholders the “antidirector rights” index constructed by La Porta et al. (1997), we found (not surprisingly) that in countries with greater shareholder protection a larger percentage of deals are disclosed. In sum, if selective nondisclosure biased our results, it did so in a way that understated rather than exaggerated cross-country differences.

ARE WE REALLY ESTIMATING PRIVATE BENEFITS?

While we were able to reject these alternative interpretations, what evidence did we have that our estimates were really reflecting private benefits of control?

At the anecdotal level, there are several studies documenting the pervasiveness of self-dealing transactions in countries like Italy (such as Zingales (1994)) and the Czech Republic (Glaeser et al. (2000)). It is thus reassuring that our estimates of private benefits for these two countries are both very high (37% and 58%, respectively). It is particularly interesting to stress the differences between our estimates for Poland and the Czech Republic. Both of them are former socialist countries, with a similar level of GDP per capita. Nevertheless, consistent with the analysis of Glaeser et al. (2000) who document differences in the protections for minority shareholders, our estimates are very different (11% for Poland, 58% for the Czech Republic).

A more subtle test of whether these estimates really reflect the ability to extract private benefits is whether our estimated private benefits depend not only upon the institutional variables of the country of the company whose control has been acquired, but also on those of the country of the acquiring

company (when the two are different).¹⁵ In other terms, an acquirer from a country with less investor protection is likely to be better able to siphon out corporate resources from a subsidiary than a company coming from a country with very rigid rules. This should be reflected in a higher willingness to pay and higher control premiums. Thus, we should observe higher estimated private benefits in cases where a foreign acquirer comes from a country with poor protection of investors.

To test this possibility, we re-estimated our basic specification inserting as additional explanatory variables two interaction terms: between the difference in governance rules and the foreign acquirer's dummy (equal to one if the acquirer comes from a country different from the target), and between the difference in governance rules and the cross-listing dummy. Our proxy for the difference in governance rules was the difference between countries of the antidirector rights index mentioned earlier. As shown in column 4 of Table III, companies coming from more investor-friendly countries paid control premiums that were 2.8% less, on average (and this effect was statistically significant). We also found a statistically significant negative effect of the superiority of governance rules on the control premiums for cross-listed firms. This result implies that the reduction in private benefits resulting from cross-listing is greater for firms from countries with weaker investor protections. (In the bottom of Table III we present country fixed effects with these controls—and such controls were applied in all the tests reported in the remainder of this article.)

Besides providing some comfort that our estimates were indeed capturing private benefits of control for company insiders, these findings also provided some new evidence that bears on the ongoing debates about governance. On one hand, the results suggest the possibility for firms in countries with weak investor protection to raise their value by "borrowing" another country's institutions—either by selling a block to a firm in that country or, say, by cross-listing in the U.S. These results provide direct support for the contention of studies (such as Coffee

(1999), Reese and Weisbach (2001), and Doidge et al. (2001) of a link between cross listing and private benefits. But perhaps more important, the results cast some doubt on the prospects for the convergence of different corporate governance systems. For example, Coffee (1999) predicts that companies from countries with better protection of investors will end up buying companies from countries with weaker protection. Our result suggests that, in the context of controlling blocks, companies from countries with better investor protection may be more limited in their ability to extract private benefits and so less willing to bid high premiums for controlling blocks. This raises the possibility that controlling blocks may end up in the hands of companies from the countries with the worst rules, not the best.

An Analysis of Outliers

In Brazil we estimated private benefits to be 65% of the value of equity. Could private benefits really be this large, or was this finding the result of some problem with the way we measured them? We did some further analysis of this extreme outlier to help ascertain the reliability of our method.

As part of a study of the impact of legal reform on private benefits in Brazil, Nenova (2001b) independently collected information on control sales in Brazil between 1995 and 2000. In so doing, she identified 8 transactions that met our initial sample selection criteria.¹⁶ For those transactions, she reported an average value of private benefits of 42%, reasonably close to our estimate. In addition, we asked a Brazilian investment bank to give us all the privatization data for transactions in which the government sold a controlling block of an already listed firm.¹⁷ Their search produced 23 privatization transactions with the requisite data, including 21 transactions that were not included in our original data set.¹⁸ The average control premium in this sample was 129%.

In sum, independent estimates lead to a very similar conclusion: Private benefits of control in Brazil are extremely high.

15. For example, Coffee (1999), Reese and Weisbach (2001), and Doidge et al. (2001) argue that foreign companies list in the United States to precommit themselves to extract fewer private benefits of control.

16. Her approach, albeit very similar, is not strictly comparable with our own, as she uses the price on the date of sale and compares the sale price with the price of voting shares on the exchange.

17. This sample only includes transactions where the sale price is cash. That is, we excluded privatizations where sale price could include so-called "privatization currencies" that include government debt that was trading at a discount.

18. They identified 12 transactions where the stake sold was 19.26% which we excluded because this level was below our selection criteria, but in Brazil accounted for 50.1% of the voting shares in the company. In addition, they were able to identify stock market prices for a number of firms that we were not able to collect using Datastream or were not identified by SDC.

Within-Country Variation in Private Benefits

Another check to verify whether our method captures private benefits was to see whether our estimates changed when there are changes in external conditions that affect the ability to extract private benefits. While the fact that we had relatively few transactions from many countries limited our ability to systematically explore time series variation, for three events we had this possibility.

The first event we explored was the passage in Italy of a corporate governance reform in 1998 known as the Draghi reform. Among other things, this reform made it easier for minority shareholders to sue management appointed by the controlling shareholder. Such a reform should limit the ability to extract private benefits. When we segmented our data into observations before and after July 1998, we found that before the reform the average value of private benefits was 47%, while after the reform the average value was only 6%.¹⁹

The second event we explored focuses on Brazil in the 1990s where, as Nenova (2001) reported, there were two important changes in corporate law. The first change occurred on May 5, 1997, when Law 9457 was adopted. This law, designed in part to enhance government revenues when they sold controlling stakes in privatization transactions, eliminated mandatory disclosure of the price of sales of blocks, eliminated minority shareholders' right to withdraw from the firm in the case of significant transactions such as mergers and spinoffs and to receive a price per share based on the book value of the firm, and eliminated a requirement for acquirers to make a mandatory offer to other holders of voting shares at the same price and terms as that for the controlling block. The elimination of withdrawal rights gives controlling shareholders another avenue to extract private benefits, while the equal opportunity provision theoretically has more mixed effects on the ability to extract private benefits (see Bebchuk (1994)). The second change, passage of Instruction 299 by the Brazilian securities and exchange commission (CVM), reinstated these disclosure, withdrawal, and equal opportunity provisions, and added even more disclosure requirements.

These legal changes suggest that private benefits will differ depending on which legal regime is

in effect, with private benefits expected to be greatest in the period when Law 9457 was in effect, and lower both before and after. This is in fact what we found in our sample of transactions; the average premium was highest in the 9457 period, at 119%, with lower levels in the pre-9457 period at 53% and 37% in the post-instruction 299 period. A similar trend was revealed in our privatization sample where we had data only for the first two periods (with values of 109% in the pre-9457 period increasing to 131% in the 9457 period).

The third event we explored focuses on changes in the economic environment rather than changes in the legal regime to protect investors. It has been suggested that stealing will increase when the expected return on investment declines (e.g., Yellen (1998)) and that the Asian crisis presents such an event (Johnson, Boone, Breach, and Friedman (2001)). We tested for this possibility, examining whether the levels of private benefits were different for emerging markets in Asia during the Asian crisis (of 1997 and 1998).²⁰ Based on a regression of private benefits with country fixed effects, we found that the Asian crisis period was indeed associated with higher private benefits (coefficient of 0.068), although this is not significant at conventional significance levels (p value=0.162).

In sum, in all the three instances our estimates of private benefits were consistent with our theory. Having established some degree of confidence in our estimates, our study next turned to an exploration of the key factors that lead to better performance.

WHAT WORKS TO LIMIT PRIVATE BENEFITS?

What sorts of institutions help to constrain abuses? And what types of corporate governance reforms—both by firms and governments—will ultimately deliver the greatest returns?

The prevailing view is that the law and a country's legal origin are the primary institutional factors that work to limit corporate abuses. This view focuses clearly on the interests of financial investors and the specific contractual and legal mechanisms that are designed to constrain managerial misconduct. Accordingly, we examined the importance of

19. The p -value for the equality of the two means is only 21%, but this is not surprising given that we have only six observations before and two afterward.

20. Specifically, this test includes Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

legal institutions for governance outcomes. But we did not limit our empirical investigation to just these institutions. There are other stakeholders in firms that take an interest in governance and have the potential to influence the extent of abuses. As a result, we also explored whether explicit contracts with other stakeholders (for example, the government through its tax claim) and non-legal constraints on management behavior (such as concerns about reputation and avoiding criticism by the press) help limit the consumption of private benefits.

The Role of Legal Institutions

The legal environment. The ability of a controlling shareholder to appropriate some of the value generated is limited by the possibility of being sued. Thus, a greater ability to sue should translate into smaller private benefits of control (see Zingales (1995a)). The same reasoning applies to any legal right attributed to non-controlling shareholders (La Porta et al., 1997). Accordingly, our study attempted to examine the explanatory power of legal rights that give minority investors leverage over insiders. More specifically, we focused our attention on the level of shareholder rights in the country of the target firm (as proxied for by the La Porta “anti-director rights” index for the transition countries in our sample).

Disclosure standards. Disclosure standards regulate the information available to non-controlling shareholders. The more accurate is this information, the more difficult it is for a controlling shareholder to appropriate value without incurring legal penalties or at least reputational costs. Thus, we expected our measures of the quality of disclosure to be negatively correlated with the size of private benefits of control.

Enforcement. The strength of legal protections depends on the expectation of speedy and predictable enforcement. Thus, we included as one of our contractual variables a measure of the strength of a country’s law and order tradition as measured by the country risk rating agency International Country Risk. This rule of law index is scaled from zero to ten.

Extralegal Institutions

The potential constraints imposed by extralegal institutions have not been prominent in current debates, at least in part because of a lack of empirical examination. We focused our attention on five

institutional factors that, at least in theory, have the potential to raise expectations of penalties for activities that produce private benefits for controlling shareholders. Some of these factors that can raise the costs to the controlling shareholder for wealth-diverting activities (such as the penalties produced by product market competition and by public opinion pressure) are constraints that are *external* to the firm. Other factors (such as the sanctions that can be introduced by moral norms, labor, and the government as tax collector) are more ‘internal’ to the firm.

Product market competition. The degree of product market competition affects the opportunity to appropriate private benefits in two main ways. First, the more competitive markets are, the more verifiable prices become. When prices are more “objective,” it is more difficult for a controlling shareholder to tunnel out resources using manipulated transfer prices without incurring legal or reputational costs. Second, in a competitive market, the distortions produced by the extraction of private benefits are more likely to jeopardize the survival of the firm. Hence, competition represents a natural constraint on the extraction of private benefits. In regressions in our study, we included controls for industry characteristics and used as our cross-country proxy for the extent of product market competition the general response to the survey question, “Do competition laws prevent unfair competition in your country?,” as reported by the World Competitiveness Yearbook for 1996.

Public opinion pressure. Controlling shareholders might limit their efforts to divert firm resources not out of fear of legal sanction by financial investors but rather out of concern for their reputation. But for concern about reputation to act as a deterrent, it is necessary to have a “public opinion”—that is, an independent press that publicizes the facts and a large set of educated investors who read newspapers and have some (collective) power to punish improper behavior (Zingales, 2000). As one example, shareholder activist Robert Monks succeeded in initiating some major changes at Sears not by means of the norms of the corporate code (his proxy fight failed miserably), but through the pressure of public opinion. He paid for a full-page announcement in the *Wall Street Journal* where he exposed the identities of Sears’ directors and called them “non-performing assets” (Monks and Minnow (1995)). The

embarrassment for the directors was so great that they implemented all the changes proposed by Monks. Likewise in Russia, one of the top-performing investment funds has achieved its returns in part by publicizing abuses and so embarrassing insiders and regulators to take corrective action (Dyck (2002)). In a study we published two years ago (Dyck and Zingales (2002)), we attempted a systematic examination of this potential corporate governance role of the media. Specifically, we tested whether indicators of the presence of the press are correlated with lower levels of abuse. As our measure of press presence, we used an indicator of newspapers' "diffusion," measured as the circulation of daily newspapers normalized by population.

Internal Policing through Moral Norms. Regardless of the reputational cost or the legal punishment associated with private benefits, a controlling shareholder might choose not to appropriate value as a result of moral considerations. Coffee (2001) proposed the violent crime rate as a proxy for these moral norms, while Stulz and Williamson (2001) focused on culture as an indicator of norms. To test for an impact of moral norms, we used both proposed measures: the number of violent crimes (as reported by the World Competitiveness Yearbook based on Interpol data for 1993) and Stulz and Williamson's classification of countries by their primary religious orientation.

Labor as Monitor. Additional constraints on controlling shareholders might come from the presence of economic entities with a direct interest in firm decisions that could penalize efforts to extract private benefits directly without having to turn to the courts. Labor is privy to inside information on customers and suppliers and can hold up the controlling shareholder by threatening to withhold services and, in some cases, through its position on the board of directors. On the other hand, because labor's interest are not the same as minority shareholders', it is not clear that labor can be counted on to constrain private benefits; in many cases, it may choose to align itself with the controlling shareholder against outside investors. We tested for the effect of labor on private benefits using as a cross-country measure of the extent of potential labor power the degree of employee protection. This measure is available for all OECD countries.

Government as Monitor through Tax Enforcement. Like labor, government has an economic

interest in corporate profitability and decision making, and it can take actions to reduce private benefits without having to turn to the courts. What has received little recognition, though, is how the presence of the state's claim (e.g., corporate income tax) and how the state enforces that claim can influence governance and have spillover effects on minority shareholders. We make a distinction between the effect of tax rates and tax enforcement. While the presence of taxes can make governance problems worse, by providing an additional incentive to steal from minority shareholders (see Desai, Dyck, and Zingales (2003)), tax enforcement can improve the situation for shareholders. This is because tax authorities and non-controlling shareholders have a common objective: to ascertain the value produced by a company and get a share of it. For example, a principle of corporate taxation for transfer pricing is the use of an arms-length price based on what independent parties in a competitive market would charge. How tax authorities enforce their rules on transfer pricing affects the incentives to reallocate returns through transfer pricing, with strict enforcement reducing the likelihood that a controlling shareholder will use transfer prices to siphon out value at the expense of minority shareholders. Therefore, better tax enforcement should lead to smaller private benefits of control. Hence, to test for the effect of taxes on governance in our study, we used as a measure of the effectiveness of a taxation system an index developed by the World Competitiveness Report that assesses the level of tax compliance.

The Tests

In our study, we then ran a series of tests examining, first, the impact of each institution in isolation on private benefits (the results of which are reported in Table IV) and, second, their effects in combination with each other (see Table V). (For both of these regressions, we included all of the control variables used in the test reported in Table III as well as an indicator variable that identifies countries that have any form of tender offer requirement.) In the "univariate" tests whose findings are reported in Table IV, we included log GNP per capita and rule of law variables to capture important sources of additional variation across countries. In multivariate tests reported in Table V, we did not include these control variables.

TABLE IV ■ INSTITUTIONAL DETERMINANTS OF PRIVATE BENEFITS OF CONTROL—UNIVARIATE ANALYSIS

The dependent variable is the block premia as a percent of firm equity. The explanatory variables include all of variables introduced in Table III except the country fixed effects, but including a dummy to indicate the presence of a mandatory tender offer law. In place of the country fixed effects, we include as controls log gnp per capita and rule-of-law index, then introduce one at a time several institutional variables: (1) accounting standards index; (2) antidirector rights index; (3) an index of the extent of competition laws; (4) diffusion of the press as measured by the newspaper circulation/population; (5) incidence of violent crimes; (6) extent of legal protections for labor; (7) a dummy variable if primary religion is Catholicism; and (8) tax compliance index. Standard errors, which are reported in parentheses, are robust and clustered by country.

INDEPENDENT VARIABLES	LEGAL INSTITUTIONS			EXTRA-LEGAL INSTITUTION				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Accounting standards	-0.004 [0.002]*							
Antidirector rights		-0.026 [0.011]**						
Competition laws			-0.066 [0.034]*					
Newspaper circulation/pop.				-0.021 [0.012]*				
Violent crime incidence					0.000 (0.000)			
Labor protection						0.027 [0.020]		
Catholicism is primary religion							0.064 [0.058]	
Tax compliance								-0.069 [0.025]**
<i>Variables Controlled for:</i>								
Buyer bargaining power	y	y	y	y	y	y	y	y
Ownership variables	y	y	y	y	y	y	y	y
Financial distress	y	y	y	y	y	y	y	y
Foreign acquirer	y	y	y	y	y	y	y	y
Cross-listed in the U.S.	y	y	y	y	y	y	y	y
Buyer identity	y	y	y	y	y	y	y	y
Seller identity	y	y	y	y	y	y	y	y
Industry group	y	y	y	y	y	y	y	y
Tangibility of assets	y	y	y	y	y	y	y	y
Interaction of relative strength of anti-director rights (home-target nation) and foreign acquirer dummy	y	y	y	y	y	y	y	y
Interaction of relative strength of antidirector rights (U.S.-target nation) and cross-listed in the U.S. dummy	y	y	y	y	y	y	y	y
Presence of takeover law	y	y	y	y	y	y	y	y
Log gnp per capita	y	y	y	y	y	y	y	y
Rule of law	y	y	y	y	y	y	y	y
Constant	y	y	y	y	y	y	y	y
Number of observations	381	393	393	393	377	233	393	393
Countries included	36	39	39	39	36	18	39	39
R-squared	0.250	0.220	0.210	0.220	0.230	0.200	0.220	0.240

* significant at 5% level; ** significant at 1% level

We started by estimating the impact of “legal” factors—those factors that directly or indirectly rely on the court enforcement of certain rights. Because information disclosure is a prerequisite for any legal action, we started with the quality of the accounting standards, as measured by the CIFAR index. As reported in column 1 of Table IV, companies in countries with better accounting standards have lower private benefits of control. This effect is both statistically and economically significant. A one standard deviation increase in our measure of accounting standards reduced the value of control by 9.0 percentage points. Viewed together with the other control variables, accounting standards explained 25% of the variation in private benefits of control (the firm-specific control variables alone explained just 15%).

The second variable we examined was the extent of legal protections for minority investors, measured, again, using the La Porta et al. index of antidirector rights. As reported in column 2, countries with greater antidirector rights have lower private benefits of control. A one standard deviation increase in the La Porta index reduced the value of control by 4.4 percentage points. Together with the firm-specific variables, antidirector rights explained 22% of the variation in private benefits of control. In sum, we found that legal institutions are strongly associated with lower levels of private benefits.

We also tested the explanatory power provided by extra-legal institutions, which are suggested by a functional rather than an institutional perspective. Here we focused on crude country-wide measures of product market competition, size and extent of reputational penalties, moral norms, employee protections, and diligence of tax authorities.

As reported in column 3 of Table IV, we found that, after controlling for industry type, countries with more competitive product markets—at least as measured by this survey of the World Competitiveness Report—have lower private benefits of control. A one standard deviation increase in our measure of competition reduced the value of control by 6.0 percentage points. Together with the firm-specific

variables, competition explained 21% of the variation in private benefits of control.

As reported in column 4 of Table IV, consistent with the idea that public opinion pressure might curb insider abuse, countries where newspapers are more diffused (as measured by the number of copies sold per 100,000 inhabitants) have lower private benefits of control. Diffusion captures both the importance of public opinion and the credibility of newspapers (assuming that less credible newspapers sell fewer copies).²¹ A one standard deviation increase in newspapers’ diffusion reduced the value of control by 6.4 percentage points. Together with the firm-specific variables, newspapers’ diffusion explained 22% of the variation in private benefits of control. The findings reported in columns 3 and 4 both suggest that institutions external to the firm help to limit private benefits.

Columns 5 and 7 report the findings of our tests of the idea that countries with higher moral norms might have lower private benefits. Consistent with Coffee’s prediction, countries with worse norms as proxied by higher violent crime rates have higher private benefits of control, but the effect is economically and statistically insignificant. To investigate moral norms as proxied by primary religion, we introduced indicator variables for the four main religions (Buddhist, Catholic, Muslim, and Protestant). As a country religion, we used the dominant one (see Stulz and Williamson, 2001). We found that Catholic countries have higher private benefits (although the result is not significant) while those in Protestant countries were significantly lower. The effects of the Muslim and Buddhist religion were not significant.

Reported in columns 6 and 8 are our tests of the extent to which the strength of other corporate stakeholders are associated with lower levels of private benefits. In column 6, we report the estimated effect of labor as a monitor of private benefits. As an index of potential labor strength, we used both an unweighted and a weighted (not reported) index of employee protections based on average indicators on regular contracts and short-term contracts from

21. In Dyck and Zingales (2002b) we study the determinants of newspapers’ diffusion. We find that the type of dominant religion and the degree of ethnolinguistic fractionalization explain 41% of the variation in press diffusion. When we use these as instruments for press diffusion, the results are unchanged.

TABLE V ■ INSTITUTIONAL DETERMINANTS OF PRIVATE BENEFITS OF CONTROL—MULTIVARIATE ANALYSIS

The dependent variable is the block premia as a percent of firm equity. The explanatory variables include all of the variables introduced in Table III except the country fixed effects, but including a dummy to indicate the presence of a mandatory tender offer law. As institutional variables in specification (1) we use the antidirector rights index and the rule-of-law index. In specification (2) we use a dummy variable if the primary religion is Catholicism, a tax compliance index, the diffusion of the press as measured by the newspaper circulation/population, and the index of the extent of competition laws. The independent variables in specification (3) are the antidirector rights index, rule-of-law index, tax compliance index, and diffusion of the press as measured by the newspaper circulation/population. Standard errors, which are reported in parentheses, are robust and clustered by country.

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: BLOCK PREMIUM		
	(1)	(2)	(3)
Antidirector rights	-0.026** (0.012)		-0.003 (0.019)
Rule of law	-0.026*** (0.010)		-0.006 (0.011)
Catholicism		0.019 (0.056)	
Tax compliance		-0.064*** (0.021)	-0.061* (0.033)
Newspaper circulation/population		-0.020** (0.009)	-0.018* (0.010)
Competition laws		-0.042 (0.036)	
<i>Variables Controlled for:</i>			
Buyer bargaining power	y	y	y
Ownership variables	y	y	y
Financial distress	y	y	y
Buyer characteristics	y	y	y
Seller characteristics	y	y	y
Foreign acquirer	y	y	y
Cross-listed in the U.S.	y	y	y
Industry type	y	y	y
Tangibility of assets	y	y	y
Interaction of relative strength of anti-director rights (home–target nation) and foreign acquirer dummy	y	y	y
Interaction of relative strength of antidirector rights (U.S.–target nation) and cross-listed in the U.S. dummy	y	y	y
Presence of takeover law	y	y	y
Constant	y	y	y
Number of observations	393	393	393
Countries included	39	39	39
R-squared	0.213	0.245	0.243

* significant at 10% level; ** significant at 5%; ***significant at 1% level

OECD data compiled in Pagano and Volpin (2000). The restriction to OECD countries admittedly limits our number of countries and observations, but gives perhaps a purer test of the contention that labor can work as monitors since this literature has focused on organized labor in developed economies. Inconsistent with the hypothesis that labor is an effective monitor (but consistent with Pagano and Volpin's counter-contention that entrepreneurs and workers will align themselves against the interests of minority investors), we found that increased labor power is associated with higher private benefits, although this result is not statistically significant (p-value of 0.204 for employee protections, 0.13 for weighted employee protections).

Finally, we investigated the possibility that a government interested in enforcing tax rules can reduce private benefits. As reported in column 8, countries with a higher degree of tax compliance, as measured by the World Competitiveness Report, have lower private benefits of control. A one standard deviation increase in our measure of tax compliance reduced the value of control by 8.6 percentage points, a significant amount. Together with the firm-specific variables, tax compliance explained 24% of the variation in private benefits of control.

In interpreting these results, one should keep in mind that tax compliance is an "equilibrium outcome," one that is affected both by tax enforcement and by the attitude of citizens toward cheating on their taxes. To try to identify the impact of tax enforcement, we included (in an unreported regression) a measure of willingness to cheat on taxes as measured in the World Value Survey. In this survey people are asked to rate from 1 to 10 the statement "cheating on taxes if you have a chance is ...", where 1 is never justifiable and 10 is always justifiable. We found this variable to be insignificant, while the coefficient on tax compliance remained significant, suggesting that the effect of tax compliance comes from tax enforcement and not from differences in moral values across countries. We also examined the robustness of this result to the inclusion of the marginal tax rate and our results were unchanged.

Table V (column 2) reports the combined effect of the four extra-legal institutions that individually had a statistically significant effect. All four variables retained the predicted sign, but the magnitudes of their coefficients fell and only tax compli-

ance and newspaper diffusion remained statistically significant at the 5% level. Together these four variables were able to explain 24 % of the variation in private benefits.

Thus, all the evidence reported thus far is consistent with both the legal and the extra-legal institutions playing a role in constraining private benefits. In fact, a crude R-squared test suggests that *both* sets of institutions have roughly the same explanatory power. Next we asked ourselves, can we design a test that would enable us to distinguish which is more important?

There are two obstacles to doing so. First, many of these institutional variables are highly correlated. Shareholder's protection, however, showed no correlation with newspaper circulation and had a correlation of only 0.4 with tax compliance. Second, and most important, all these proxies are measured with error. Hence, their statistical significance in a multivariate analysis may well be more related to the level of noise in these measures than to their actual importance.

Nevertheless, we thought it would be interesting to try and put all these variables in one regression. When we did so, as reported in column 3 of Table V, of all the institutional variables we found to be significant in the previous regressions, only newspapers' diffusion and tax compliance remained significant. The paucity of observations and the high degree of multi-collinearity caution us against drawing any strong conclusion from this comparison. What we can say, however, is that the results are inconsistent with an exclusive focus on legal factors as institutional curbs to private benefits.

CONCLUSIONS

In a study recently published in the *Journal of Finance*, we attempted to measure the quality of a corporate governance system by computing the level of private benefits enjoyed by insiders. We then used these estimates to determine which institutions help shareholders limit the diversion of wealth by insider or controlling shareholders.

We found that many institutional variables, taken in isolation, seem to be associated with a lower level of private benefits of control: better accounting standards, better legal protection of minority shareholders, better law enforcement, more intense product market competition, diffusion of an independent press, and a high rate of tax compliance.

The possible role of tax enforcement in reducing private benefits, and thus indirectly enhancing financial development, is probably the most important new insight that emerges from our analysis. Improving the corporate taxation system is well

within the range of feasible reforms. If this is indeed a primary mechanism by which private benefits of control can be curbed and financial markets fostered, the benefits of financial development might be within reach for many more countries.

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