DOES LEGAL ENFORCEMENT AFFECT FINANCIAL TRANSACTIONS? THE CONTRACTUAL CHANNEL IN PRIVATE EQUITY*

Josh Lerner and Antoinette Schoar

Analyzing 210 developing country private equity investments, we find that transactions vary with nations' legal enforcement, whether measured directly or through legal origin. Investments in high enforcement and common law nations often use convertible preferred stock with covenants. In low enforcement and civil law nations, private equity groups tend to use common stock and debt, and rely on equity and board control. Transactions in high enforcement countries have higher valuations and returns. While relying on ownership rather than contractual provisions may help to alleviate legal enforcement problems, these results suggest that private solutions are only a partial remedy.

I. Introduction

A large literature in economics and finance has documented a systematic relationship between a country's legal system and the development and liquidity of its financial markets. Starting with La Porta et al. [1997, 1998], these works identify legal origin as a crucial determinant of minority shareholder protection against expropriation by corporate insiders, with common law systems providing better protection than civil law ones. Glaeser, Johnson, and Shleifer [2001] and Djankov et al. [2003] suggest that parties in common law countries can more readily enforce commercial contracts. Common law and high enforcement nations have broader and more valuable capital markets, more public offerings, dispersed ownership of public firms, and other indicators of financial development (also see Demirgüc-Kunt and Levine [2001]).

Much less attention, however, has been directed to under-

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standing the specific avenues through which the nature of the legal system affects financial development. The current paper highlights the importance of what we term "the contractual channel": the ability of investors to enter into complex, state-dependent contracts. We document that investors in countries with effective legal enforcement rely on specific contracting contingencies and securities that shift control rights depending on the performance of the investment and enable investors to separate cash flow and control rights. A large theory literature points to the benefits of these contracting possibilities for entrepreneurs and investors (as we describe in the following section). By way of contrast, investors in countries with difficult legal enforcement seem to be required to secure control rights through majority ownership. These results suggest that a critical impact of the legal system is the way it constrains the ability of private parties to write contracts that are complex or state contingent. Parties cannot easily undo deficiencies of the law through private transactions if the legal system does not enforce certain types of contracts.

We focus on a specific set of transactions: private equity investments. We concentrate on these transactions since they are better documented than most private financial transactions, and follow a relatively standardized setup. Private equity transactions represent a relatively modest share of the absolute value of investments made in most developing countries. But we think that they are representative of the legal and economic considerations that private parties face in any contract negotiation. We collect data on the actual contractual relationships between investors and entrepreneurs in 210 transactions from a wide variety of private equity groups and countries.

We find that investments in countries with a common law tradition and with better legal enforcement are far less likely to employ common stock or straight debt, and more likely to use convertible preferred stock. Similarly, transactions in these nations are generally associated with greater contractual protections for the private equity groups. These contracts look similar to U. S. contracts, which an extensive theoretical literature suggests are a second-best solution to contracting in private equity. In contrast, investors in countries with civil law or socialist legal background and where legal enforcement is difficult rely more heavily on obtaining majority control of the firms they invest in, use debt more often, and have more board representation. These findings suggest that private equity groups here rely on ownership, which may substitute for the lack of contractual protections. We also verify that our results are not driven by the tendency of common law-based funds to invest in common law countries.

Finally, we investigate the consequences of these differences: can the parties successfully address the absence of the contractual channel by relying on large ownership stakes? We find that firms' valuations are significantly higher in nations with a common law tradition, and superior legal enforcement and private equity funds investing in common law countries enjoy higher returns. We point out, however, that this evidence is only suggestive of any effects of contracting constraints on investment outcomes.

These results suggest that systematic differences in legal enforcement impose constraints on the type of contracts that can be written. This inability to separate cash flow rights from control rights has the potential to seriously distort the contracting process by forcing the parties to rely on large equity stakes. Private equity investors face constraints in diversifying their portfolio, since they have to hold larger stakes of a given firm than they would like for pure control purposes. Entrepreneurs might have reduced incentives since they are forced to give up a substantial amount of cash flow (and control) rights early on. These findings suggest that the lack of contract enforcement may not be easily undone by private contracting arrangements that emphasize ownership.

The plan of this paper is as follows. Section II lays out the theoretical motivation for the analysis. Section III describes the construction of the data set. The analysis is in Section IV. The final section concludes the paper.

II. The Economics of Private Equity

Financial contracts are written to assign cash flow and control rights between contracting parties, e.g., a private equity group and an entrepreneur. An extensive literature on optimal contracting, starting with Holmström [1979], has analyzed the role of contracts in alleviating principal-agent problems through the contingent allocation of cash flow rights. It relies on the assumption that contracts can be enforced costlessly.

The literature on incomplete contracting—see Grossman and Hart [1986] and Hart and Moore [1990]—highlights that if courts are unable to enforce or even verify complicated, state-dependent contracts, the allocation of control rights can allow the parties to reach a second-best agreement. Aghion and Bolton [1992] and Hellmann [1998] show that convertible preferred securities allow control rights to be transferred to the party that makes better use of them. In particular, these securities allocate control to the entrepreneur when things are going well, but allow the investors to assert control if the firm is doing poorly. These securities will give stronger incentives to entrepreneurs than majority control based on common stock contracts, since they prevent the holdup of entrepreneurs by investors if the entrepreneurs are running the firm well.

In the context of private equity, Kaplan and Strömberg [2003] and Gompers [1998] identify a number of benefits to investors and entrepreneurs from being able to separate cash flow and control rights, typically through the use of convertible preferred securities.[1] The ability to maintain control rights without majority cash flow rights allows investors to invest relatively small amounts of capital early on without fearing expropriation, thereby allowing capital diversification. Entrepreneurs benefit since they do not have to give away cash flow rights early on when valuations are still very low.

It might well be, however, that private equity groups in certain nations are unable to enforce contracts involving the separation of ownership and control or more complicated contingencies, since it may be difficult to educate judges and lawyers about these contract features. In these instances, we envision that firms will employ third-best contracts, which entail the use of controlling blocks of common stock or straight debt. We expect this pattern to be most prevalent in nations where the legal system is less well developed. Moreover, we would predict that control through majority ownership of common stock and control through contract contingencies would be substitutes. Obviously, if courts are so inefficient or corrupt that they cannot enforce any

1. Unlike in public settings, in private equity preferred stock refers to a security that awards liquidation rights to the investor if the company does not achieve a threshold performance level. In the following, we refer to the group of securities as convertible preferred stock to avoid confusion with preferred that only has preferential voting rights.

contract at all, even majority ownership would not protect investors.

Bergman and Nicolaievsky [2003] develop a formal model that starts from a similar assumption as put forward here: legal regimes differ in their ability to enforce complicated contingencies to prevent investor expropriation. They find supporting evidence in Mexico. The focus of the analysis is complementary to the current paper, since the paper aims to contrast the use of contractual contingencies in private versus public firms, where renegotiation between different groups of investors is more difficult.

In a contemporaneous paper, Kaplan, Martel, and Strömberg [2003] examine venture capital contracts for a set of high-income European countries. They find that most of the contractual variation between common law and civil law countries in their sample is explained by the fact that private equity groups use contracts that are similar to the ones they employ in their home countries. It is possible that the higher sophistication of the judicial system in these countries allows private equity groups to experiment with contracts that are different from those customarily employed in the local market. One might also conjecture, however, that a perceived sense of similarity between the United States and Continental Europe led investors in some cases to make contracting choices that might ultimately be very difficult to enforce in these countries.[2]

Our hypothesis was informally corroborated in our conversations with investment professionals at private equity groups. The groups indicated that they place much greater emphasis on having controlling equity blocks in nations with poor contract enforcement, largely due to their inability to enforce more complex contracts. One group operating in Latin America, for instance, had initially employed convertible preferred securities in all its transactions. Their enthusiasm for this investment strategy waned, however, when they began litigating with one of their portfolio companies in Peru. The private equity investors found

2. Similarly, Cumming and MacIntosh [2002] examine the types of transactions funded and exit routes employed in twelve Asian nations. They argue that the legal regimes affect the types of investments selected and the way in which the private equity groups exit their holdings, but not returns. Qian and Strahan [2004] show that bank loans in countries with better legal protection are less likely to be secured and have more covenants.

themselves unable to convince the judge that their preferred stock agreement gave them the right to replace a third-generation founder of the company, even if the group's shares were only convertible into 20 percent of the firm's equity. After this experience, the private equity group structured its subsequent investments as common stock deals in which they held the majority of the equity. In many nations, our interviewees asserted, not only were the entrepreneurs unfamiliar with equity investments that used securities other than common stock, but key actors in the legal system—lawyers and judges—were suspicious and indeed hostile to such transactions. As a result, they chose to employ common stock there. These conversations did not yield a consistent answer to the question of whether the efforts to address the ineffectiveness of the contractual channel through a reliance on ownership would be successful.[3]

III. The Data

We constructed the sample by asking private equity groups that invest in developing nations[4] to give us a representative array of their transactions in terms of the type of deal, the location and industry of the firm, and the success of the transaction. For each transaction we obtained the investment memorandum, the associated stock purchase agreements, and any other documents associated with the structuring of the transaction. We deliberately attempted to recruit as diverse an array of private equity funds as possible. In a study along these lines, selection biases are an almost inevitable consequence. We tried to ameliorate this concern by obtaining transactions from groups with

3. While there are a few examples, we did not discover many instances where contracting parties in countries with poor legal enforcement relied on private arbitrators instead. See, for example, Johnson, McMillan, and Woodruff [2002] for an analysis of private contract enforcement mechanisms.

4. According to the World Bank, developing nations are those countries that have either low- or middle-level per capita incomes, have underdeveloped capital markets, and/or are not industrialized. It should be noted, however, that the application of these criteria is somewhat subjective. For instance, Kuwait appears on many lists of developing nations despite its high per capita gross domestic product. The reason for its inclusion lies in the income distribution inequality that exists there, which has not allowed it to reach the general living standards of developed countries. For the purposes of this paper, we take an expansive view of what constitutes a developing nation, and simply eliminate any transactions taking place in the 24 nations that were original members of the Organisation for Cooperation and Development or joined within fifteen years of its creation (i.e., through the addition of New Zealand in 1973).

TABLE I
CONSTRUCTION OF SAMPLE

This table summarizes the key features associated with the construction of the sample of 210 private equity transactions.

Private equity group		Year of deal		Industry of firm		Deal type		Country of firm	
Group 1	8	1987	2	Distribution/Retail	14	Buyout	28	Argentina	18
Group 2	6	1988	2	Finance	16	Corp. acquisition	10	Bolivia	2
Group 3	6	1992	3	Food	29	Distress	4	Brazil	18
Group 4	5	1993	4	Health care	9	Expansion	97	Bulgaria	8
Group 5	3	1994	2	Information tech	24	IPO	12	Chile	7
Group 6	3	1995	5	Internet	9	Privatization	10	China	13
Group 7	10	1996	10	Manufacturing	32	Venture capital	49	Estonia	8
Group 8	8	1997	17	Media	8			Ghana	3
Group 9	6	1998	35	Natural resources	11			Hong Kong	13
Group 10	6	1999	31	Real estate	4			India	28
Group 11	11	2000	34	Services	17			Korea	10
Group 12	3	2001	40	Software	10			Indonesia	2
Group 13	2	2002	22	Telecom	14			Latvia	4
Group 14	4	2003	3	Other	13			Malaysia	2
Group 15	10							Mexico	14
Group 16	8							Peru	2
Group 17	6							Poland	13
Group 18	5							Romania	18
Group 19	10							Singapore	6
Group 20	13							South Africa	2
Group 21	14							Taiwan	4
Group 22	8							Tanzania	2
Group 23	5							Thailand	3
Group 24	7							Uruguay	2
Group 25	21							Yugoslavia	6
Group 26	13							Other	5
Group 27	7								
Group 28	2								

diverse backgrounds. But it is likely that the private equity groups that participated in this study are more Western-oriented and sophisticated than their peers. The presence of this bias should, in fact, reduce the observed variation between legal regimes and thus makes the substantial differences that we see even more striking.

Table I summarizes the sample. The 210 transactions are from 28 private equity groups, who contributed between 2 and 21 deals for our sample. The transactions occurred between 1987 and 2003, with the bulk of investments between 1996 and 2002. Thirty distinct countries are represented with no single nation or region dominating the sample. The industries include a broad array, from food to information technology. We classified the transactions by type using the definitions in European Venture Capital Association [2002]. The investments are dominated by expansion transactions, as well as venture capital and buyout transactions.

Panel A of Table II shows that the average GNP per capita for the countries in our sample is $2142 per year. Moreover, 27 percent of the investments are based in countries that have British legal origin, 30 percent have French legal origins, and 42 percent are in former socialist countries. In comparison, 56 percent of the investments included in this study are funded by private equity partnerships that are based either in the United States or United Kingdom. While U. K.- and U. S.-based partnerships in our sample are more likely to invest in countries with British legal origin, we find that they also invest in a large fraction of deals that are not based in common law countries. This heterogeneity is important, since it will allow us to analyze whether a given partnership adjusts the contract terms in response to the environment of the country where the deal takes place.

Panel B of Table II provides an initial overview of the transactions. The differences between this sample and U. S. transactions are striking. In the United States nearly 80 percent of private equity transactions are dominated by convertible preferred stock (see Kaplan and Strömberg [2003]).[5] Common stock is quite rare, found in only a little more than 10 percent of the U. S. deals. In contrast, in our sample 54 percent of the transactions employ common stock, while convertible preferred stock is only encountered in 21 percent of the deals.[6] Similarly, many of the protections commonly employed by venture capitalists in the United States are rarely found here. Kaplan and Strömberg

5. It should be noted that Kaplan and Strömberg's sample includes only venture capital transactions, which would encompass transactions described as "venture capital" and "expansion" transactions in the developing world. (The category of "expansion" deals is not frequently employed in the United States.) Legal texts (e.g., Bartlett [1995]), however, suggest that we would observe similar patterns if we examined all U. S. private equity transactions.

6. We tried as best as possible to avoid any bias in our coding of contractual terms that are purely based on differences in contractual language. For example, any security structure that has payoff streams equivalent to a convertible preferred would be classified as such, even if the contract did not explicitly use that term.

TABLE II

CHARACTERISTICS OF DEVELOPING COUNTRY PRIVATE EQUITY TRANSACTIONS

The sample consists of 210 investments in developing countries by private equity groups (PEGs). The first panel describes the features of the transactions; the second panel, the features of the nation and the private equity group involved in the transaction. We do not record the medians and standard deviations of the dummy variables.

Panel A: Setting of transactions

	Mean	Median	Standard dev	Minimum	Maximum
Per capita gross national product	2142	1743	2561	181	12368
Logarithm of rule of law index	0.22	0.28	0.59	−1.25	1.85
English legal family nation	0.27			0	1
French legal family nation	0.30			0	1
Socialist legal family country	0.42			0	1
U. K.- or U. S.-based private equity group	0.56			0	1

Panel B: Nature of transactions

	Mean	Median	Standard dev	Minimum	Maximum
Size of financing (1997 $MMs)	4.31	3.29	5.12	0.17	18.53
Implied valuation (1997 $MMs)	5.12	4.18	4.92	0.45	61.38[a]
Straight debt	0.11			0	1
Common stock	0.55			0	1
Straight preferred stock	0.09			0	1
Participating preferred stock	0.05			0	1
Convertible preferred stock	0.21			0	1
Warrants	0.06			0	1
Contingent equity	0.34			0	1
PEG's maximum equity stake	0.47	0.40	0.37	0	1
PEG's minimum equity stake	0.33			0	1
Difference in PEG ownership	0.15	0.01	0.26	0	1
PEG has control when maximum stake	0.37			0	1
PEG has control when minimum stake	0.29			0	1
Antidilution provisions	0.27			0	1
Automatic conversion provisions	0.26			0	1
Maximum board size	6.50	6	2.03	3	12
Minimum board size	5.40	5	1.95	3	11
Maximum PEG board seats	2.66	2	1.89	0	9
Minimum PEG board seats	1.35	1	1.24	0	6
Maximum founder/manager board seats	3.22	3	1.87	0	7
Minimum founder/manager board seats	2.47	2	1.72	0	6
Supermajority sum	18.47	15	12.98	0	57

a. The size of the financing is greater than the valuation in the largest transaction (a leveraged buyout which entailed the purchase of all of the firm's equity) because part of the financing proceeds were used to cover fees to investment bankers, lawyers, and others.

[2003] find that venture capitalists obtain redemption rights in 84 percent of the transactions, antidilution protection in 95 percent of deals, and founder vesting requirements in 42 percent of transactions. The corresponding shares in our sample are much lower: 31 percent, 27 percent, and 5 percent.

Finally, the structure of the boards differs little from that seen in the United States. The mean U. S. transaction has a board with 6.2 members, of which two seats were allocated to the founders and managers and two-and-a-half to venture capitalists [Kaplan and Strömberg 2003]. The patterns here are similar, though we see a slightly greater representation of founders and managers on the boards.

IV. Analysis

We now analyze how contractual choices vary across countries with different legal structure and enforcement. The econometric analyses throughout the paper employ a similar structure. We use the existence of different contract provisions as dependent variables: we create a dummy variable equal to one if the deal contains, for example, an antidilution right and zero otherwise. The main explanatory variables we are interested in are the countries' legal origin and, alternatively, the enforcement of contracts, measured as the "time-to-contract-dispute-resolution" (see Djankov et al. [2003]). We control for industry, deal type, and year fixed effects.[7] We also include per capita gross national product (in current dollars) averaged over the 1990s as a control for the national economic development. We also replicate our results employing logit specifications without industry dummy variables and the results are generally very similar.

IV.A. Security Structure

In Table III we begin by examining the security structure employed in countries with different legal origins. The economet-

7. We use dummy variables for the observations in three time periods in the reported regressions: the years 1993 to 1997, 1998 to 2000, and 2001 to 2003. These periods correspond, respectively, to the years when many institutions made initial investments into private equity funds focusing on leveraged buyouts in developing nations, the growth of venture capital funding in these nations, and the recent sharp falloff in venture capital and private equity activity there. The results are robust to the use of dummy variables for each year, as well as to the use of controls measuring the annual level of private equity fundraising worldwide and of foreign direct investment into developing nations.

TABLE III

SECURITY STRUCTURE AND LEGAL REGIME

The sample consists of 210 investments in developing countries made by private equity groups (PEGs). The dependent variables are dummies denoting whether common stock, straight debt, or convertible preferred stock was employed in the transaction. Independent variables include dummy variables denoting nations with British or socialist legal origin (French legal origin is the omitted category) and the time to resolve commercial disputes in that nation. U. K./U. S.-based PEG is a dummy if the private equity fund is based in the United Kingdom or United States. GNP per capita is the per capita gross national product of the country averaged over the 1990s. All regressions employ ordinary least squares specifications. Standard errors are clustered at the private equity group.

	Common stock			Debt			Convertible preferred stock		
British legal origin	−0.19	−0.17		−0.13	−0.11		0.17	0.17	
	***[0.09]	**[0.09]		***[0.06]	**[0.06]		**[0.09]	**[0.09]	
Socialist legal origin	0.09	0.07		−0.05	−0.08		−0.05	−0.01	
	[0.09]	[0.09]		[0.06]	[0.06]		[0.08]	[0.08]	
Dispute time			0.07			0.10			−0.09
			[0.05]			**[0.05]			*[0.05]
U. K./U. S.-based PEG		−0.03			−0.18			0.11	
		*[0.02]			***[0.05]			**[0.06]	
GNP per capita	−0.06	−0.05	−0.02	0.05	0.06	0.08	0.01	0.03	0.01
	[0.07]	[0.06]	[0.05]	[0.06]	[0.04]	**[0.04]	[0.03]	[0.05]	[0.03]
Industry dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deal type dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
N of observations	210	210	210	210	210	210	210	210	210
Adjusted R^2	0.11	0.11	0.09	0.07	0.11	0.06	0.09	0.09	0.07

* = Significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.

ric specification follows the description above, with French legal origin as the omitted category. Columns (1), (4), and (7) of Table III show that private equity transactions in common law countries less frequently use common stock or debt in their transaction and much more often employ convertible preferred stock compared with those in French or socialist legal origin nations.

One concern is that the observed contract structure could be biased due to selection problems. Private equity groups based in common law countries, such as the United States and the United Kingdom, may be disproportionately investing in common law nations, and vice versa for civil law countries. In this case, the structure of the deal might not be driven by the contracting constraints in the country of the transaction, but rather by the familiarity of the private equity group with the contracts in its domestic market. To alleviate this concern, we include a dummy variable equal to one if the private equity group is based in a common law country and zero otherwise. The results in columns (2), (5), and (8) suggest that this potential selection bias does not explain our results. While indeed deals done by private equity groups based in common law countries look more similar to U. S.-style private equity contracts (i.e., they are less likely to rely on common stock or debt and are more likely to use preferred stock), this control does not eliminate the effect on the British legal origin dummy. In fact, the coefficient on the dummy is almost completely unchanged in all specifications. We also repeat the analysis including group fixed effects (not reported). Again, the results on the legal origin of countries are very similar in direction and magnitude.

Finally, we use time-to-resolve-contract-dispute as an alternative proxy for the quality of enforcement of the legal system. We focus on this variable, since it captures more precisely the quality of the enforcement of laws through the court system. We do not include the legal origin indicators in these regressions, since Djankov et al. [2003] show that dispute resolution time is strongly correlated with a country's legal origin. The results in columns (3), (6), and (9) show that countries that take a longer time to resolve contract disputes are less likely to rely on preferred stock and are more likely to use debt.

In unreported regressions we repeat this and subsequent analysis excluding any countries that have legal restrictions on private equity transactions. We want to prevent our results from being "hard wired" by legal rules in different countries (see the Appendix for a summary). For example, in the case of the People's Republic of China, firms can only get permission to use security structures other than common stock in very exceptional cases. We find that the results presented above are qualitatively unchanged when excluding nations restricting security types from the sample. This suggests that our findings reflect the investors' contracting *choices* and not just the constraints imposed by different legal regimes.

IV.B. Allocation of Equity and Board Control

In Table IV we first examine whether the private equity group controls the company's equity. The dependent variable in columns (1) and (2) is a dummy that takes on the value one if the private equity investors own at least 50 percent of the equity when at their minimum stake. The size of the stake can vary, due to contingent clauses in the main contract that call for supplemental equity grants to founders and managers in case of good performance and side-agreements regarding vesting. We find that in countries with British legal origins, as well as those with quick dispute resolution, private equity groups are much less likely to have equity control of a firm in the minimum stake scenario.

Similarly, in columns (3) and (4) of Table IV, we see that the difference between the maximum and minimum equity stake a private equity group can hold in a given firm is significantly larger in common law countries. In countries with poor enforcement, firms avoid contingent equity stakes. The difference in ownership stakes is predominantly driven by the fact that investors in countries with better legal enforcement are willing to invest without a controlling equity stake, since they can achieve minority shareholder protection through other contractual provisions.

The last four columns of Table IV investigate the structure of the board as specified in the stock purchase agreements, examining the overall board size as well as the seats assigned to the private equity group. We see that common law nations tend to have larger boards with fewer private equity group representatives on the board. Similarly, nations where the time to resolve disputes is shorter have larger boards. (In unreported regressions we show that countries with quick dispute resolution have more

TABLE IV

EQUITY OWNERSHIP, BOARD COMPOSITION, AND LEGAL REGIME IN DEVELOPING COUNTRY PRIVATE EQUITY TRANSACTIONS

The sample consists of 210 investments in developing countries by private equity groups (PEGs). The dependent variables in the first four columns are a dummy denoting whether the PEG has control of the firm's equity when it has its minimum contractually specified share of the equity and the difference in the equity ownership stake in the minimum and maximum scenarios. The dependent variables in the last four columns are the logarithms of the number of seats on the board, as well as the seats assigned to the PEG. Independent variables include dummy variables denoting nations with British or socialist legal origin (French legal origin is the omitted category) and the time to resolve commercial disputes in that nation. GNP per capita is the per capita gross national product of the country averaged over the 1990s. All regressions employ ordinary least squares specifications. Standard errors are clustered at the private equity group.

	Does PEG have control when min. ownership stake?		Difference between min. and max. stake		Number of board seats		Number of PEG board seats	
British legal origins	−0.20		−0.20		0.17		−0.06	
	***[0.07]		***[0.07]		***[0.08]		**[0.03]	
Socialist legal origins	−0.10		−0.10		0.05		0.04	
	*[0.06]		*[0.06]		[0.08]		[0.03]	
Dispute time		0.11		0.11		−0.16		0.09
		***[0.05]		***[0.05]		***[0.07]		[0.07]
GNP per capita	0.02	0.09	0.02	0.09	0.01	0.03	0.03	0.04
	[0.04]	***[0.04]	[0.04]	***[0.04]	[0.04]	[0.05]	[0.04]	[0.04]
Industry dummies	Y	Y	Y	Y	Y	Y	Y	Y
Deal type dummies	Y	Y	Y	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y	Y	Y	Y
Number of observations	194	194	194	194	197	197	197	197
Adjusted R^2	0.08	0.09	0.08	0.09	0.09	0.06	0.07	0.06

* = Significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.

TABLE V
CONTROL RIGHTS AND LEGAL REGIME IN DEVELOPING COUNTRY PRIVATE EQUITY TRANSACTIONS

The sample consists of 210 investments in developing countries by private equity groups (PEGs). The dependent variables are dummies denoting whether the PEG group has antidilution protection and automatic conversion and the sum of the score of supermajority provisions. (A higher score implies greater use of supermajority provisions.) Independent variables include dummy variables denoting nations with British or socialist legal origin (French legal origin is the omitted category) and the time to resolve commercial disputes in that nation. GNP per capita is the per capita gross national product of the country averaged over the 1990s. All regressions employ ordinary least squares specifications. Standard errors are clustered at the private equity group.

	Antidilution rights		Automatic conversion		Supermajority	
British legal origins	0.20		0.17		1.76	
	***[0.09]		***[0.07]		***[0.61]	
Socialist legal origins	−0.08		−0.07		1.06	
	[0.09]		[0.08]		**[0.56]	
Dispute time		−0.09		−0.04		−1.01
		[0.06]		[0.03]		**[0.53]
GNP per capita	0.05	0.01	0.12	0.10	−0.22	−0.72
	[0.04]	[0.04]	***[0.05]	**[0.05]	[0.35]	*[0.40]
Industry dummies	Y	Y	Y	Y	Y	Y
Deal type dummies	Y	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y	Y
Number of observations	210	210	194	194	210	210
Adjusted R^2	0.09	0.05	0.05	0.02	0.18	0.17

* = Significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.

managers on the board.) Table IV suggests that investors use board and equity control to protect their investments in countries with poor legal enforcement. If other methods of enforcing investor rights are effective, equity and board control are less critical.

IV.C. Control Rights

Table V analyzes control rights that affect the prerogatives of the private equity investors without the need for obtaining a controlling ownership stake. We focus on a number of the most important provisions. The first two columns analyze the existence of antidilution provisions, i.e., the right to have some compensation if subsequent financings are done at a lower valuation. This protects investors against losing their equity through dilutive financing rounds. The next two columns focus on the existence of automatic-conversion provisions. Lawyers typically interpret the latter as protecting the lead private equity investor against individual or smaller private equity investors, who may seek to hold up an IPO or acquisition by refusing to convert their shares. In the last two columns we look at supermajority provisions. These provisions require that a fraction greater than one-half of the investors approves a decision specified in the contract. Typical supermajority provisions include voting on major acquisitions, changes in the business plan that change the nature of the firm, change in top management, etc. These provisions protect minority shareholders from mismanagement or outright fraud by the management of the company.[8]

A common theme emerges from the analysis in Table V: transactions in common law countries are much more likely to include contractual protections for the private equity investors than those with French or socialist legal origin. This pattern holds whether we examine antidilution, automatic conversion, and supermajority protections. We again replicate these findings using the time-to-resolve-contract-dispute variable as an alternative proxy for the quality of contractual enforcement. We see that dispute resolution time is most strongly related to the use of supermajority provisions.

IV.D. Correlation of Different Contract Parts

So far, we have analyzed each of the contractual features in isolation. We now want to understand whether the different contract features (security structure, ownership stakes, and other control provisions) are used as complements or substitutes in financial contracting. To undertake this analysis, we regress each of the contract provisions of interest on each other, as well as controls for the logarithm of gross national product and dummy variables for the year, industry, and deal type.

We find in Table VI a strong negative correlation between common stock and convertible preferred stock. Moreover, pre-

8. We identify nineteen different types of provisions in these agreements. We score each of these clauses from zero to three, with a higher score representing a more stringent supermajority clause. Instead of using a simple sum of the scores, we also conducted a principal component analysis. Our results are very similar.

TABLE VI

CORRELATION IN THE USE OF CONTRACTING TOOLS OF PRIVATE EQUITY CONTRACTS

The sample consists of 210 investments in developing countries by private equity groups (PEGs). We regress the contract provision at the top of the column on the provisions at the beginning of each row. Each cell contains the coefficients from separate regressions of the contract provisions on the right-hand-side variables (standard errors are reported in brackets). We control for log of gross national product and year, industry, deal type dummies. All variables are defined as before.

	Debt	Common stock	Preferred stock	Antidilution	Automatic conversion	PEG equity stake
Common stock	0.08 [0.04]***					
Preferred stock	−0.02 [0.04]	−0.21 [0.07]***				
Antidilution	−0.01 [0.04]	−0.25 [0.07]***	0.16 [0.07]***			
Automatic conversion	−0.09 [0.05]**	−0.50 [0.07]***	0.34 [0.08]***	0.43 [0.07]***		
PEG maximum equity stake	0.22 [0.09]***	−0.02 [0.14]	0.20 [0.16]	0.18 [0.16]	−0.07 [0.17]	
Board size	−0.03 [0.08]	0.04 [0.15]	0.38 [0.15]***	0.16 [0.17]	0.06 [0.14]	0.10 [0.12]

ferred stock offerings are more likely to employ other protections such as antidilution and automatic conversion terms, while these provisions are negatively associated with common stock. We also find a strong positive correlation between the maximum ownership stakes that the private equity group obtains and the use of debt. The correlations between the minimum ownership stake and the use of debt and between board size and preferred stock are significantly positive.

Overall, these results suggest that contracts differ systematically in the way they aim to provide investors with control rights. Preferred security structures and control provisions such as antidilution clauses are generally used as complements. Deals with common shares and debtlike securities rely more heavily on controlling ownership stakes rather than other control provisions. Taken together, these results suggest that private equity groups rely on either (a) protection of minority shareholders through detailed specification of behavior that is ruled out or (b) control through ownership of a majority of the common stock and board dominance.

IV.E. Consequences

A natural question, suggested by La Porta et al. [2002], relates to the consequences of these investment choices. We would like to examine this question by looking at the relationship between transaction structures and investment outcomes. Given the relative recentness of most of the investments, and the difficulties that investors have recently had in exiting developing country investments, such an analysis would be premature. We focus instead on two proxies: valuations and fund returns.

When we look at the valuations of the financings in Table VII, we see that investments in common law countries and those with quick dispute resolution have higher valuations. These results hold even after controlling for the size of the firm, measured by sales in the year of the investment. These findings suggest that the differences in legal regime affect not just the structure of transactions, but also have real effects on firms' valuations.[9]

9. Similarly, we observe that the amount of capital invested is larger in common law countries than civil law countries holding constant firm size. Our

TABLE VII

FINANCING VALUATION IN DEVELOPING COUNTRY PRIVATE EQUITY TRANSACTIONS

The sample consists of 210 investments in developing countries by private equity groups (PEGs). The dependent variable is the logarithm of the implied "postmoney" valuation of the transaction. Independent variables include dummy variables denoting nations with British or socialist legal origin (French legal origin is the omitted category) and the time to resolve commercial disputes in that nation. GNP per capita is the per capita gross national product of the country averaged over the 1990s. Sales is a control for the size of the firm: the annual sales in the year the investment was made (in 1997 dollars). All regressions employ ordinary least squares specifications. Standard errors are clustered at the private equity group.

	Implied valuation	
British legal origins	0.75	
	*[0.42]	
Socialist legal origins	−1.62	
	***[0.43]	
Dispute time		−0.49
		*[0.30]
GNP per capita	0.27	0.43
	[0.25]	[0.28]
Sales	0.15	0.19
	***[0.06]	***[0.07]
Industry dummies	Y	Y
Deal type dummies	Y	Y
Year dummies	Y	Y
Number of observations	193	193
Adjusted R^2	0.26	0.18

* = Significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.

We also examine the overall returns of funds that are active in developing countries. We use Private Equity Intelligence's *2004 Private Equity Performance Monitor,* which has data on over 1700 private equity funds (for more details see Lerner, Schoar, and Wong [2004]). We examine all listed funds active primarily in developing countries of a certain type, e.g., excluding funds active in both common and civil law developing countries. Private equity funds that were active in common law developing nations had an average return multiple 19 percent

interpretation of these results must be cautious since we only observe realized transactions. Investments that are completed in noncommon law countries, despite the many difficulties there, might be particularly promising. Thus, there may not be as many differences in the intensive margin, i.e., the observed amount of financing, as along the extensive margin (the number and types of deals that are done). Since we cannot construct an exhaustive sample of transactions, it is very difficult to draw any conclusions about the extensive margin.

better than the typical fund established in that subclass and that year, while those in socialist and civil law countries had a multiple 49 percent worse than the benchmark (significantly different at the 1 percent confidence level).[10] It must be acknowledged that we can analyze only the investors' (private) returns, not the returns to society as a whole. We anticipate, however, that the two measures should be correlated: for example, there are unlikely to be many social returns from a liquidated company. We hope to explore this question in future work.

V. Conclusions

This paper seeks to understand how differences in the enforcement of commercial laws, measured directly as well as through legal origin, affect financial contracting. We focus on a well-documented and reasonably systematized set of transactions, private equity investments. We find that investments in nations with effective legal enforcement are more likely to employ preferred stock and to have more contractual protections for the private equity group, such as supermajority voting rights and antidilution provisions. By way of contrast, contracts in low enforcement countries tend to rely more heavily on common stock (or even debt) and control the firm via majority ownership and board dominance. Relying on ownership as opposed to contractual protections seems to be only a partial remedy: these investments have lower valuations and returns.

The results suggest the importance of a contractual channel between legal enforcement and financial transactions. The legal system appears to profoundly shape the transactions into which private equity groups enter, and efforts to address this problem by relying on ownership rather than contractual protections are only partially successful. Exploring this channel outside of private equity would be a natural next step.

10. The return multiple is the ratio of the value of distributed investments and undistributed holdings to their cost. These results are also robust to using internal rates of return: the adjusted IRRs are -2.6 percent and -22.6 percent, respectively (significantly different at the 5 percent confidence level).

Appendix: Key Legal Provisions Affecting Private Equity Investors in Nine Nations Most Frequently Represented in the Sample

Class of limitation	Argentina	Brazil	Hong Kong
Security Type	No restrictions, but preferred stock can only have same vote as common stock. Also possible to have common stock with enhanced voting rights (up to 5 votes).	No restrictions.	No restrictions.
Super-Majority Provisions	No restrictions.	No restrictions.	No restrictions. Many corporate events require approval of 75% of shareholders.
Management Equity Holdings	No restrictions. Ambiguities surround tax treatment of options.	Limitations on types of firms who can issue stock options. Special disclosure requirements for option-issuing firms. Disadvantageous tax treatment of options.	No restrictions, except that shareholders in private firms must first offer shares to other investors.
Reinvestment and Antidilution Provisions	Equity holders can maintain pro rata share. Provision can be waived with shareholder vote.	Equity holders can maintain pro rata share. Restrictions on unreasonably dilutive financings.	Equity holders can maintain pro rata share.
Domiciling Entity	Could be domiciled overseas until recently. Now substantial difficulties to do so.	Can be domiciled overseas, but may be more difficult to enforce corporate rights locally.	Can be domiciled overseas.

(continued on next page)

APPENDIX
(CONTINUED)

India	Mexico	People's Republic of China
Preferred stocks cannot have any voting rights, except in special circumstances. Limits on extent of returns preferred shareholders can enjoy.	No restrictions, but some limitations on voting rights of preferred shareholders.	Most domestic and foreign private equity investments must employ common stock-like structure. Some large investments may use other securities, but must receive authorities' permission first.
No restrictions. Some corporate events require approval of 75% of shareholders.	No restrictions. Some legal protections for minority shareholders (e.g., right to name at least one director).	No restrictions. Some corporate events must have 2/3rds approval by investors. For foreign investments, decisions must be approved by 2/3rds of directors in many cases.
No restrictions on private firms.	No restrictions.	For most investments, not possible to issue equity to management. May be allowed in certain very large investments, but permission of authorities may be required.
Equity holders can maintain pro rata share. Provision can be waived with shareholder vote.	Equity holders can maintain pro rata share. Provision can be waived with shareholder vote.	Equity holders have preemptive right to purchase shares, except for certain very large investments.
Can be domiciled overseas.	Can be domiciled overseas.	Cannot be domiciled overseas.

Poland	Republic of Korea	Romania
No restrictions, but limitations on voting (no more than 2–3× common stock), dividend, and liquidation preference rights of preferred shareholders.	No restrictions, but only common stock had voting rights until late 1990s. Now, no restrictions.	No restrictions, but investors cannot require that classes of shareholders vote as a block.
No restrictions. Some corporate events must have 75% approval by investors.	No restrictions.	No restrictions.
No restrictions.	No restrictions.	No restrictions.
Equity holders can maintain pro rata share. Provision can be waived with 80% shareholder vote.	Equity holders have preemptive right to purchase shares, with limited exceptions.	Equity holders have preemptive right to purchase shares, except for some private firms.
Can be domiciled overseas.	Can be domiciled overseas. May entail loss of attractive tax incentives for startups.	These restrictions cannot be avoided by domiciling company in another country.

Harvard University and National Bureau of Economic Research
Massachusetts Institute of Technology and National Bureau of Economic Research

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