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ABSTRACT

Using a sample of 49 countries, we show that countries with poorer investor protections, measured by both the character of legal rules and the quality of law enforcement, have smaller and narrower capital markets. These findings apply to both equity and debt markets. In particular, French civil law countries have both the weakest investor protections and the least developed capital markets, especially as compared to common law countries.

WHY DO SOME COUNTRIES have so much bigger capital markets than others? Why, for example, do the United States and the United Kingdom have enormous equity markets, while Germany and France have much smaller ones? Why do hundreds of companies go public in the United States every year, while only a few dozen went public in Italy over a decade (Pagano, Panetta, and Zingales (1995))? Why do Germany and Japan have such extensive banking systems, even relative to other wealthy economies? If we look at a broader range of countries, why in fact do we see huge differences in the size, breadth, and valuation of capital markets? Why, to take an extreme example, do Russian companies have virtually no access to external finance and sell at about one hundred times less than Western companies with comparable assets (Boycko, Shleifer, and Vishny (1993))?

In our earlier article (La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1996), henceforth LLSV (1996)), we have conjectured that the differences in the nature and effectiveness of financial systems around the world can be traced in part to the differences in investor protections against expropriation by insiders, as reflected by legal rules and the quality of their enforcement. We presented evidence indicating that legal rules protecting investors and the quality of their enforcement differ greatly and systematically across countries. In particular, these rules vary systematically by legal origin, which is either English, French, German, or Scandinavian. English law is common law, made by judges and subsequently incorporated into legislature. French, German, and Scandinavian laws, in contrast, are part of the scholar and legislator-made civil law tradition, which dates back to Roman law (David and Brierley (1985)). Most countries have adopted their legal systems through occupation or colo-

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nization by one of the European powers to which they owe the origin of their laws. Some other countries, such as those in Latin America, have adopted their legal systems after attaining independence, but have still typically chosen the laws of their former colonizers.

By comparing legal rules across 49 countries, we showed that legal rules from the different traditions differ in content as well as in the history of their adoption. In the area of protection against expropriation by insiders, common law countries protect both shareholders and creditors the most, French civil law countries the least, and German civil law and Scandinavian civil law countries somewhere in the middle. We also showed that richer countries enforce laws better than poorer countries, but, controlling for per capita income, French Civil law countries have the lowest quality of law enforcement as well. In our earlier article, we did not pursue the consequences of differences in legal environments at great length, except to show that countries with poor investor protections have more highly concentrated ownership of shares. The broader question, of course, is whether they also have inferior opportunities for external finance and thus smaller capital markets.

Accordingly, in this article we try to assess the ability of firms in different legal environments to raise external finance through either debt or equity. Presumably, the willingness of an entrepreneur to sell his equity, or to assume debt, depends to a large extent on the terms at which he can obtain external finance. For equity, these terms are reflected by valuation relative to the underlying cashflows; for debt, they are reflected by the cost of funds. If the terms are good, an entrepreneur would sell more of his shares or raise more debt. Countries whose financial systems offer entrepreneurs better terms of external finance would then have both higher valuations of securities and broader capital markets in the sense that more firms would access them. To the extent that better legal protections enable the financiers to offer entrepreneurs money at better terms, we predict that the countries with better legal protections should have more external finance in the form of both higher valued and broader capital markets.

Measuring the size of financial markets—whether debt or equity—is a bit tricky. The values of these markets are dominated by the largest firms. To address this problem, we supplement an aggregate stock market valuation measure with the number of domestic listed firms as well as the number of Initial Public Offerings (IPOs). We also focus on a debt measure that includes all private debt and bond market borrowing. Finally, we examine a sample of all firms from the WorldScope database, a subset consisting of the largest listed firms.

We compare external finance across 49 countries as a function of the origin of their laws, the quality of legal investor protections, and the quality of law enforcement. We find strong evidence that the legal environment has large effects on the size and breadth of capital markets across countries.

Our article is related to several recent strands of research. Shleifer and Vishny (1997) and LLSV (1996) focus on the legal solutions to agency problems between entrepreneurs and investors, and in particular emphasize the cross-

country differences in these solutions. Modigliani and Perotti (1996) also focus on contract enforcement as a determinant of external finance, and in particular stress the choice between bank loan and equity finance. Rajan and Zingales (1995) look at G-7 evidence on the determinants of capital structure, or debt and equity choice, although they do not emphasize investor protection. It is possible that the relative legal treatment of shareholders and creditors affects capital structure as well as the availability of either kind of finance, but we do not focus on this issue here. Finally, a growing literature surveyed by Levine (1996), and including recent contributions by King and Levine (1993) and Rajan and Zingales (1996), examines the consequences of developed financial markets for investment and growth. Our article, in contrast, focuses on the determinants of financial development, but does not follow through on its "real" consequences. Unlike the rest of the literature, then, our article aims to empirically establish the link between the legal environment and financial markets.

Section I describes our data. Section II presents the results, and Section III concludes.

I. Data

We are interested in the ability of companies in different countries to raise external funds in the form of either equity or debt. Since we do not have direct measures of external financing for smaller companies, we use primarily aggregate data, which partly capture the breadth of various markets. Table I summarizes the data we use and the sources they come from.

We use three measures of equity finance. Our first variable looks at the ratio of stock market capitalization to GNP in 1994, scaled by a rough measure of the fraction of the stock market held by outside investors. Conceptually, it is not appropriate to look at just the ratio of stock market valuation to GNP. For example, if 90 percent of a firm's equity is held by the insiders and 10 percent is held by the outsiders, then looking at the market capitalization of the whole firm gives a tenfold overestimate of how much has actually been raised externally. For each country, we roughly estimate the average fraction of equity held by the insiders by looking at the country's 10 largest publicly traded nonstate firms, finding the combined ownership stake of the three largest shareholders in each of these firms, and averaging that stake over the 10 firms (see LLSV (1996)). Since we made this calculation for only the largest firms, and since we do not take account of cross-holdings, this procedure probably overestimates the share of equity held by the true outsiders. With all the roughness, this procedure is still conceptually preferred to looking at the uncorrected ratio of market capitalization to GNP. We also note that the results presented below hold for that uncorrected ratio as well, although with lower explanatory power.

We look at two further measures of the extent of equity finance that focus more specifically on market breadth. The first is the number of listed domestic firms in each country relative to its population. The second is the number of

Table I

Description of the Variables

Origin	Identifies the legal origin of the Company Law or Commercial Code of each country. Source: Reynolds and Flores (1989) and La Porta *et al.* (1996).
External cap/ GNP	The ratio of the stock market capitalization held by minorities to gross national product for 1994. The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it. Source: *Moodys International*, *CIFAR*, *EXTEL*, *WorldScope*, *20-Fs*, *Price-Waterhouse*, and various country sources.
Domestic firms/ Pop	Ratio of the number of domestic firms listed in a given country to its population (in millions) in 1994. Source: *Emerging Market Factbook* and *World Development Report 1996*.
IPOs/Pop	Ratio of the number of initial public offerings of equity in a given country to its population (in millions) for the period 1995:7–1996:6. Source: *Securities Data Corporation*, *AsiaMoney*, *LatinFinance*, *GT Guide to World Equity Markets*, and *World Development Report 1996*.
Debt/GNP	Ratio of the sum of bank debt of the private sector and outstanding non-financial bonds to GNP in 1994, or last available. Source: *International Financial Statistics*, *World Bondmarket Factbook*.
GDP growth	Average annual percent growth of per capita gross domestic product for the period 1970–1993. Source: *World Development Report 1995*.
Log GNP	Logarithm of the Gross National Product in 1994. Source: *World Development Report 1996*.
Rule of law	Assessment of the law and order tradition in the country. Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for less tradition for law and order. Source: *International Country Risk Guide*.
Antidirector rights	An index aggregating shareholder rights. The index is formed by adding 1 when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (3) cumulative voting is allowed; (4) an oppressed minorities mechanism is in place; or (5) when the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10% (the sample median). The index ranges from 0 to 5. Source: Company Law or Commercial Code and La Porta *et al.* (1996).
One-share = one-vote	Equals one if the Company Law or Commercial Code of the country requires that ordinary shares carry one vote per share, and 0 otherwise. Equivalently, this variable equals one when the law prohibits the existence of both multiple-voting and non-voting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares she owns, and 0 otherwise. Source: Company Law or Commercial Code and La Porta *et al.* (1996).

Table I—Continued

Creditor rights	An index aggregating creditor rights. The index is formed by adding 1 when: (1) the country imposes restrictions, such as creditors' consent or minimum dividends, to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) the debtor does not retain the administration of its property pending the resolution of the reorganization; (4) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. The index ranges from 0 to 4. Source: Company Law or Bankruptcy Laws and La Porta *et al.* (1996).
Market cap/ sales	The median ratio of the stock market capitalization held by minorities to sales in 1994 for all nonfinancial firms in a given country on the *WorldScope* database. Firm's *j* stock market capitalization held by minorities is computed as the product of the stock market capitalization of firm *j* and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately-owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it. Source: *WorldScope*.
Market cap/ cash-flow	The median ratio of the stock market capitalization held by minorities to cash flow in 1994 for all nonfinancial firms in a given country on the *WorldScope* database. Firm's *j* stock market capitalization held by minorities is computed as the product of the stock market capitalization of firm *j* and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately-owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it. Source: *WorldScope*.
Debt/sales	Median of the total-debt-to-sales ratio in 1994 for all firms in a given country on the *WorldScope* database. Source: *WorldScope*.
Debt/cash flow	Median of the total-debt-to-cash-flow ratio for all firms in a given country on the *WorldScope* database. Source: *WorldScope*.

initial public offerings of shares in each country between mid-1995 and mid-1996 (the period for which we have been able to obtain the data), also relative to the population. These two variables obviously reflect the stock and the flow of new companies obtaining equity finance. It may make sense to look at both of them because the development of financial markets has accelerated greatly in the last decade, and hence the IPO evidence provides a more recent glance at external equity financing.

Finding data on debt finance that do not just focus on the largest companies is more difficult, since bank financing information is not readily available. However, we do have data on the total bank debt of the private sector in each country, as well as on the total face value of corporate bonds in each country. The aggregate of these two variables relative to the GNP is a plausible measure of the overall ability of the private sector to access debt finance. The fact that we are looking at the whole private sector rather than just corporations may actually be an advantage, since in many countries entrepreneurs

raise money on their personal accounts to finance their firms (for example, by mortgaging their properties).

Although the principal focus of our analysis is on the aggregate data, we devote some attention to the microdata on the largest firms, obtained from the WorldScope Database for 1996. For this sample, we also develop measures of equity and debt finance in different countries. For each country, we use four measures of access of their WorldScope companies to capital markets. The first equity variable is the median ratio of market capitalization to sales of the companies in the WorldScope sample for that country, corrected as in the aggregate data by the estimated share of equity of large companies held by outsiders. (We use the exact same correction here as for the aggregate data rather than assembling outside ownership data for all companies.) The second variable for each country is the median ratio of market capitalization to cash flow, again corrected for outside ownership. The first of these two variables is roughly the analog of the aggregate equity valuation variable, and the second is just a different—but perhaps more easily interpretable—normalization.

For debt, we also define two variables for each country. The first is the median ratio of total debt to sales of all the firms in the WorldScope database in that country. The second is the median ratio of total debt to cash flow. The first variable in particular is roughly parallel to our aggregate debt measure.

Our measures of investor protection draw on our earlier work, which has developed measures of shareholder and creditor protections in different legal regimes (LLSV (1996)). Theoretically, we are interested in the legal rights that shareholders and creditors have that enable them to extract a return on their investment from the insiders. For equity, these rights are most importantly the voting rights in the election of directors and other important corporate matters, as well as the rights to make specific claims against the corporation. For debt, these rights cover the liquidation and reorganization procedures when the borrower defaults. In LLSV (1996), we quantified many of these rights for a sample of 49 countries from around the world.

In this article, we use some of the summary variables from the earlier article. First, we know for each country the legal origin of its laws. Second, we have a survey-based estimate of the quality of law enforcement, called "rule of law," which is an assessment by investors in different countries of the law and order environment they operate in. Third, we have measures of how well legal rules themselves protect investors in different countries. For shareholders, we have constructed an antidirector rights index described in detail in Table I. The index aggregates such elements of minority shareholder rights as the ability to vote by mail, the ability to retain control of shares during the shareholders' meeting, the possibility of cumulative voting for directors, the ease of calling an extraordinary shareholder meeting, and perhaps most importantly, the availability of mechanisms of allowing oppressed minority shareholders to make legal claims against the directors (e.g., the possibility of class action suits). We also use another shareholder rights variable, namely the requirement that each ordinary share carry only one vote in the country's commercial law.

For creditors, we use a creditor rights index that aggregates the various rights that secured creditors might have in liquidation and reorganization. Restrictions on the managers' ability to seek unilateral protection from creditors, mandatory dismissal of management in reorganization, lack of automatic stay on assets, and absolute priority for secured creditors all contribute to this index. Again, the precise definition of the index is presented in Table I.

II. Results

A. Presentation of the Data

Table II presents the aggregate data used in this study, with countries organized by origin of their legal system. It also presents comparisons across legal origins. Several interesting results jump out. First, on all measures, common law countries provide companies with better access to equity finance than civil law countries, and particularly French civil law countries. Common law countries have the average ratio of outsider held stock market to GNP of 60 percent, compared to 21 percent for the French civil law countries, 46 percent for the German civil law countries, and 30 percent for the Scandinavian countries. The United States, incidentally, is below the common law average in this sample, which is not entirely surprising given that it is growing much slower than Hong Kong, Malaysia, or Singapore. Common law countries have 35 listed firms per one million people (on average), compared to 10 for the French civil law countries, 17 for the German civil law countries, and 27 for the Scandinavian countries. It is actually quite striking to see that France has 8 listed firms per million people, Italy has 4, and Germany has 5, compared to 36 in the United Kingdom, 30 in the United States, and 128 in Israel. Finally, during the year we look at, common law countries averaged 2.2 IPOs per million people, compared to 0.2 of an IPO for the French origin, 0.12 of an IPO for German origin, and 2.1 IPOs for the Scandinavian origin. During that year, Germany had 7 IPOs, France had 10, while the United States had 803 and India had 1114. On all the equity measures, the differences in means between the English and the French origin are statistically significant.

As Table II indicates, our antidirector rights measure is by far the highest in common law countries, intermediate in Scandinavian and German civil law countries, and the lowest in the French civil law countries. In contrast, there is not much difference in the incidence of one-share-one-vote rules. These results give a preliminary indication that low shareholder protection may be the reason why some legal origins have smaller equity markets as well as lower access of firms to equity finance.

Aggregate debt as a share of GNP is 68 percent for common law countries, 45 percent for the French civil law countries, 97 percent for the German civil law countries, and 57 percent for the Scandinavian countries. Again, debt finance is more accessible in the English than in the French origin. However, indebtedness is even higher in the German civil law countries—also sometimes described as countries with bank-focused financial systems. The creditor rights

Table II

External Capital Markets

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table I. Panel B reports tests of means for the different legal origins.

Country	External Cap/GNP	Domestic Firms/Pop	IPOs/Pop	Debt/GNP	GDP growth	Log GNP	Rule of Law	Antidirector Rights	One-Share = One-Vote	Creditor Rights
					Panel A: Means					
Australia	0.49	63.55	—	0.76	3.06	12.64	10.00	4	0	1
Canada	0.39	40.86	4.93	0.72	3.36	13.26	10.00	4	0	1
Hong Kong	1.18	88.16	5.16	—	7.57	11.56	8.22	4	1	4
India	0.31	7.79	1.24	0.29	4.34	12.50	4.17	2	0	4
Ireland	0.27	20.00	0.75	0.38	4.25	10.73	7.80	3	0	1
Israel	0.25	127.60	1.80	0.66	4.39	11.19	4.82	3	0	4
Kenya	—	2.24	—	—	4.79	8.83	5.42	3	0	4
Malaysia	1.48	25.15	2.89	0.84	6.90	11.00	6.78	3	1	4
New Zealand	0.28	69.00	0.66	0.90	1.67	10.69	10.00	4	0	3
Nigeria	0.27	1.68	—	—	3.43	10.36	2.73	3	0	4
Pakistan	0.18	5.88	—	0.27	5.50	10.88	3.03	4	1	4
Singapore	1.18	80.00	5.67	0.60	1.68	11.68	8.57	3	1	3
South Africa	1.45	16.00	0.05	0.93	7.48	10.92	4.42	4	0	4
Sri Lanka	0.11	11.94	0.11	0.25	4.04	9.28	1.90	2	0	3
Thailand	0.56	6.70	0.56	0.93	7.70	11.72	6.25	3	0	3
UK	1.00	35.68	2.01	1.13	2.27	13.86	8.57	4	0	4
US	0.58	30.11	3.11	0.81	2.74	15.67	10.00	5	0	1
Zimbabwe	0.18	5.81	—	—	2.17	8.63	3.68	3	0	4
English origin avg	**0.60**	**35.45**	**2.23**	**0.68**	**4.30**	**11.41**	**6.46**	**3.39**	**0.22**	**3.11**
Argentina	0.07	4.58	0.20	0.19	1.40	12.40	5.35	4	0	1
Belgium	0.17	15.50	0.30	0.38	2.46	12.29	10.00	0	0	2
Brazil	0.18	3.48	0.00	0.39	3.95	13.03	6.32	3	1	1
Chile	0.80	19.92	0.35	0.63	3.35	10.69	7.02	3	1	2
Colombia	0.14	3.13	0.05	0.19	4.38	10.82	2.08	1	0	0
Ecuador	—	13.18	0.09	—	4.55	9.49	6.67	2	0	4
Egypt	0.08	3.48	—	—	6.13	10.53	4.17	2	0	4
France	0.23	8.05	0.17	0.96	2.54	14.07	8.98	2	0	0
Greece	0.07	21.60	0.30	0.23	2.46	11.25	6.18	1	1	1
Indonesia	0.15	1.15	0.10	0.42	6.38	11.84	3.98	2	0	4
Italy	0.08	3.91	0.31	0.55	2.82	13.94	8.33	0	0	2
Jordan	—	23.75	—	0.70	1.20	8.49	4.35	1	0	—
Mexico	0.22	2.28	0.03	0.47	3.07	12.69	5.35	0	0	0
Netherlands	0.52	21.13	0.66	1.08	2.55	12.68	10.00	2	0	2
Peru	0.40	9.47	0.13	0.27	2.82	10.92	2.50	2	1	0
Philippines	0.10	2.90	0.27	0.10	0.30	10.44	2.73	4	0	0
Portugal	0.08	19.50	0.50	0.64	3.52	11.41	8.68	2	0	1
Spain	0.17	9.71	0.07	0.75	3.27	13.19	7.80	2	0	2
Turkey	0.18	2.93	0.05	0.15	5.05	12.08	5.18	2	0	2
Uruguay	—	7.00	0.00	0.26	1.96	9.40	5.00	1	1	2
Venezuela	0.08	4.28	0.00	0.10	2.65	10.99	6.37	1	0	—
French origin avg	**0.21**	**10.00**	**0.19**	**0.45**	**3.18**	**11.55**	**6.05**	**1.76**	**0.24**	**1.58**
Austria	0.06	13.87	0.25	0.79	2.74	12.13	10.00	2	0	3
Germany	0.13	5.14	0.08	1.12	2.60	14.46	9.23	1	0	3
Japan	0.62	17.78	0.26	1.22	4.13	15.18	8.98	3	1	2
South Korea	0.44	15.88	0.02	0.74	9.52	12.73	5.35	2	1	3
Switzerland	0.62	33.85	—	—	1.18	12.44	10.00	1	0	1
Taiwan	0.88	14.22	0.00	—	11.56	12.34	8.52	3	0	2
German origin avg	**0.46**	**16.79**	**0.12**	**0.97**	**5.29**	**13.21**	**8.68**	**2.00**	**0.33**	**2.33**
Denmark	0.21	50.40	1.80	0.34	2.09	11.84	10.00	3	0	3
Finland	0.25	13.00	0.60	0.75	2.40	11.49	10.00	2	0	1
Norway	0.22	33.00	4.50	0.64	3.43	11.62	10.00	3	0	2
Sweden	0.51	12.66	1.66	0.55	1.79	12.28	10.00	2	0	2
Scandinavian origin avg	**0.30**	**27.26**	**2.14**	**0.57**	**2.42**	**11.80**	**10.00**	**2.50**	**0.00**	**2.00**
Sample average	**0.40**	**21.59**	**1.02**	**0.59**	**3.79**	**11.72**	**6.85**	**2.44**	**0.22**	**2.30**

Table II—Continued

Country	External Cap/GNP	Domestic Firms/Pop	IPOs/Pop	Debt/GNP	GDP growth	Log GNP	Rule of Law	Antidirector Rights	One-Share = One-Vote	Creditor Rights
Panel B: Tests of Means (t-statistics)										
Common vs civil law	3.12	3.16	3.97	1.33	1.23	−1.06	−0.77	5.24	−0.03	3.61
English vs French origin	3.29	3.16	4.50	2.29	1.97	−0.28	0.51	5.13	−0.11	3.61
English vs German origin	0.68	1.24	2.34	−1.88	−0.78	−2.31	−1.82	3.66	−0.52	1.43
English vs Scand. origin	1.25	0.44	0.08	0.71	1.81	−0.44	−15.57	2.14	2.20	1.71
French vs German origin	−2.38	−1.85	0.78	−3.39	−1.96	−2.48	−2.55	−0.47	−0.45	−1.29
French vs Scand. origin	−0.91	−3.31	−5.45	0.82	0.97	−0.33	−20.80	−1.25	2.50	−0.60
German vs Scand. origin	0.94	−1.21	−2.76	2.71	1.32	2.11	−11.29	−0.98	1.58	0.63

index is the highest in common law countries, intermediate in German and Scandinavian civil law countries, and the lowest in the French civil law countries. Again, low rights line up with small markets when we compare French and English origin, but German civil law countries are somewhat of a mystery. A possible explanation of this mystery is suggested by Rajan and Zingales (1995), who find that German companies have high overall liabilities, though not necessarily high debt per se. Overall, the results on debt, like those on equity, suggest that legal rules influence external finance.

Table III abstracts away from origin and examines in more detail the determinants of external financing. It suggests that stronger antidirector rights (and perhaps also one-share-one-vote rules) are associated with larger and broader equity markets. The association between creditor rights and indebtedness is more tenuous. Better law enforcement, as measured by rule of law, is associated with more domestic firms and IPOs per capita, as well as a greater ratio of private sector debt to GNP. There is also some weak evidence that larger countries have higher debt. Table III confirms our preliminary impressions from Table II, points to the importance of law enforcement as well as of the legal rules, and indicates the need for more systematic testing in a regression framework.

B. Regression Analysis

Tables IV–VII present a series of regressions of capital market size measures on various controls as well as estimates of the quality of investor protection. We include several control variables in all the regressions. First, we control for historical GDP growth because growth is likely to affect both valuations and market breadth. Second, we control for the (logarithm of) real GNP on the theory that setting up capital markets might be an increasing returns to scale activity, and therefore larger economies might have larger capital markets. Third, because all the regressions include our rule of law measure, and the correlation between rule of law and GDP per capita is 0.87, we do *not* include GDP per capita as a control. Including it does not have much of an effect on the coefficients on legal rights variables, but does eliminate the significance of rule of law. In a sense, rule of law is a theoretically more appropriate variable.

Table III

Investor Rights and External Finance

This table classifies countries according to their ranking in: (a) Antidirector Rights; (b) One-Share = One-Vote; (c) Creditor Rights; (4) Rule of Law; (5) GDP Growth; and (5) Log GNP. For each panel, the table shows the average value of different external finance measures for the bottom quartile, the middle two quartiles, and the top quartile. The last row of each panel shows the *t*-statistic for a test of means between the bottom and the top quartiles.

	External Cap/ GNP	Domestic Firms/Pop	IPOs/Pop	Debt/GNP
Means by antidirector rights				
Bottom 25%	0.19	12.05	0.14	0.44
Mid 50%	0.39	20.03	0.97	0.63
Top 25%	0.58	35.68	2.05	0.63
Test of means (*t*-statistic)				
Bottom 25% vs. Top 25%	−2.50	−2.35	−2.55	−1.22
Means by one-share = one-vote				
Not One Vote	0.32	20.10	0.87	0.59
One Vote	0.65	26.76	1.48	0.56
Test of means (*t*-statistic)				
One Vote vs Not One Vote	−2.61	−0.76	−1.08	0.29
Means by creditor rights				
Bottom 25%	0.27	18.43	0.85	0.49
Mid 50%	0.40	18.25	0.62	0.66
Top 25%	0.59	31.30	2.37	0.65
Test of means (*t*-statistic)				
Bottom 25% vs. Top 25%	−2.09	−1.11	−1.95	−1.15
Means by rule of law				
Bottom 25%	0.28	8.51	0.28	0.34
Mid 50%	0.47	22.36	0.89	0.63
Top 25%	0.36	33.08	1.85	0.70
Test of means (*t*-statistic)				
Bottom 25% vs. Top 25%	−0.73	−4.11	−2.30	−3.84
Means by GDP growth				
Bottom 25%	0.42	22.83	0.74	0.54
Mid 50%	0.28	15.90	0.86	0.60
Top 25%	0.62	30.43	1.64	0.62
Test of means (*t*-statistic)				
Bottom 25% vs. Top 25%	−1.05	−0.61	−1.20	−0.56
Means by log GNP				
Bottom 25%	0.25	15.36	0.27	0.43
Mid 50%	0.46	26.12	1.33	0.50
Top 25%	0.39	19.82	0.98	0.82
Test of means (*t*-statistic)				
Bottom 25% vs. Top 25%	−1.31	−0.63	−1.24	−3.26

Table IV looks at the ratio of our estimate of externally held market capitalization to GNP. Not surprisingly, the results show that faster growing economies have higher capitalization stock markets: a 1 percent faster growth rate between 1970 and 1993 raises the ratio by about 4 to 6 percentage points (where the worldwide mean is 40 and the standard deviation is 37 percentage

Table IV

External Market Capitalization of Equity/GNP Regressions

Ordinary least squares regressions of the cross-section of 49 countries around the world. The dependent variable is "External Cap." The independent variables are (1) GDP Growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; (6) Scandinavian origin; (7) Antidirector Rights; (8) One-share = One-Vote. Standard errors are shown in parentheses.

Independent Variables	Dependent Variable: External Cap/GNP				
GDP growth	0.0617[b]	0.0544[b]	0.0584[b]	0.0562[b]	0.0441[b]
	(0.0232)	(0.0201)	(0.0238)	(0.0242)	(0.0209)
Log GNP	−0.0129	−0.0168	0.0038	−0.0053	0.0091
	(0.0333)	(0.0334)	(0.0386)	(0.0382)	(0.0324)
Rule of law	0.0378[c]	0.0455[b]	0.0417	0.0424[b]	0.0437[c]
	(0.0206)	(0.0203)	(0.0250)	(0.0243)	(0.0231)
French origin			−0.3225[a]	−0.2142[c]	−0.3341[a]
			(0.1131)	(0.1194)	(0.1084)
German origin			−0.2962[c]	−0.1849	−0.3230[b]
			(0.1497)	(0.1599)	(0.1438)
Scandinavian origin			−0.3391[b]	−0.2816[c]	−0.3056[b]
			(0.1373)	(0.1479)	(0.1218)
Antidirector rights	0.1171[a]			0.0675[c]	
	(0.0353)			(0.0354)	
One-share = one-vote		0.2745[b]			0.2890[b]
		(0.1235)			(0.1111)
Intercept	−0.2437	0.0100[b]	0.0336	−0.0860	−0.0475
	(0.2880)	(0.3063)	(0.3677)	(0.3629)	(0.3066)
Observations	45	45	45	45	45
Adjusted R^2	0.2936	0.2347	0.2867	0.3016	0.3801

[a] Significant at 1%; [b] Significant at 5%; [c] Significant at 10%.

points). Country size does not matter. The coefficient on the rule of law is around 4 in all specifications: raising rule of law from the sample average of 6.85 to a perfect 10 increases outsider held market capitalization by about 13 percent of the GNP.

The five specifications in Table IV look at the different combinations of origin dummies and shareholder rights variables. We find that individually, both the antidirector rights score and the one-share-one-vote dummy have a relatively large effect on the market capitalization ratio. Raising the antidirector rights score from its French origin average of 1.76 to its common law average of 3.39 raises the market capitalization to GNP ratio by 19 percentage

points—half of the difference between the French and the English means. Countries with mandatory one-share-one-vote rules have a 27 percentage points higher ratio. Each of the three civil law families has an about 30 percentage points lower outsider held market capitalization relative to GNP than the common law family does. The reason that these results looked less pronounced in the raw data in Table II is that German and Scandinavian origin countries have extremely high rule of law scores, which contribute to larger stock markets. Once these scores are controlled for, all civil law families have much smaller stock markets than those in common law countries, presumably because of inferior investor protections.

The last two columns of Table IV include both the origin dummies and the two shareholder rights variables, included one at a time. The coefficients on all variables fall relative to their values when included in isolation. Taken on face value, the estimates suggest that our shareholder rights variables account for some of the difference between relative market capitalizations of different legal families, but that the family effects are also significant.

The results on the number of listed domestic firms per (million) capita are presented in Table V. Here, higher GDP growth is not associated with a statistically significantly higher number of listed firms, suggesting that the result of Table IV is explained by a higher valuation of listed firms in faster growing economies rather than by a higher number of listed firms. The results also show that countries with bigger economies have fewer listed firms per capita, other things equal. Rule of law again comes in very significantly: a move from the world mean of 6.85 to a perfect score of 10 is associated with 15 more domestic listed firms per million people (the world mean is 22). When included alone, our antidirector rights score is highly significant: a move from the French to the English mean in that score raises the number of listed domestic firms per million people by 12. The one-share-one-vote dummy is no longer significant, although it has a relatively large estimated effect of the predicted sign.

The dummies for civil law origins again point to much narrower stock markets for countries in the French, German, and Scandinavian legal families than in common law countries. The parameter estimates of about -20 indicate that civil law countries have about 20 fewer listed firms per million people. This is 0.8 of a standard deviation, and is a pretty impressive estimate given that the sample-wide mean of the dependent variable is 21. When the antidirector rights score is included together with origin dummies, the coefficient estimates on the dummies fall only slightly, while the coefficient on the antidirector score falls sharply. As far as market breadth is concerned, there is more to the difference between legal families than is captured by our antidirector rights score.

Our last, and relatively direct, measure of firms' access to capital markets is the number of IPOs between mid-1995 and mid-1996, again per million people. In Table VI, the GDP growth rate has a statistically significant effect on the number of IPOs in specifications that control for legal origin; the coefficient

Table V

Domestic Firms/Population Regressions

Ordinary least squares regressions of the cross-section of 49 countries around the world. The dependent variable is "Domestic Firms/Pop." The independent variables are (1) GDP growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; (6) Scandinavian origin; (7) Antidirector rights; (8) One-share = one-vote. Standard errors are shown in parentheses.

Independent Variables	Dependent Variable: Domestic Firms/Pop				
GDP growth	1.0767	1.3461	1.0111	0.8950	0.5763
	(1.4000)	(1.3318)	(1.2661)	(1.2733)	(0.9884)
Log GNP	−4.3181[b]	−4.0659[b]	−2.9126	−3.3073[b]	−2.7979
	(1.6588)	(1.7697)	(1.7698)	(1.8165)	(1.6816)
Rule of law	4.5093[a]	4.8584[a]	4.8422[a]	4.8577[a]	4.9582[a]
	(1.2579)	(1.4023)	(1.3616)	(1.3377)	(1.3356)
French origin			−21.9069[a]	−17.5313[b]	−22.5204[a]
			(7.4014)	(8.9183)	(7.2884)
German origin			−25.1485[a]	−20.5611[b]	−26.3007[a]
			(8.4882)	(9.7216)	(7.8639)
Scandinavian origin			−22.2680[b]	−19.9575[c]	−21.3009[b]
			(10.1744)	(10.0144)	(10.0541)
Antidirector rights	7.3034[a]			2.7304	
	(1.8052)			(1.6591)	
One-share = one-vote		8.1382			10.0675
		(7.5228)			(6.3165)
Intercept	19.3863	29.0780[c]	33.0485	28.6987	30.6212
	(15.4445)	(17.0108)	(20.6317)	(21.4015)	(20.2510)
Number of observations	49	49	49	49	49
Adjusted R^2	0.2198	0.1153	0.2197	0.2495	0.2681

[a] Significant at 1%; [b] Significant at 5%; [c] Significant at 10%.

estimates indicate that a one percentage point higher historical growth rate raises the number of IPOs by about 0.2, or less than one-tenth of a standard deviation. The size of the economy is again insignificant. Rule of law has a large positive effect on the number of IPOs: the move from the world mean to a perfect 10 in the rule of law raises the number of IPOs by 0.8, where the world mean is 1 per million people per year. The antidirector rights score is highly significant (just as in Table V): moving from the French to the English origin mean raises the number of IPOs by 0.8. In contrast, one-share-one-vote is not significant when included alone, just like what we found in Table V.

The results on the effects of the legal origin are a bit different than before. The French and German civil law countries average 2 fewer IPOs (per million

Table VI

Initial Public Offerings/Population Regressions

Ordinary least squares regressions of the cross-section of 49 countries around the world. The dependent variable is "IPOs/Pop." The independent variables are (1) GDP growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; (6) Scandinavian origin; (7) Antidirector rights; (8) One-share = one-vote. Standard errors are shown in parentheses.

Independent Variables	Dependent Variable: IPOs/Pop				
GDP growth	0.1222	0.1320	0.1937[b]	0.1916[c]	0.1633[b]
	(0.1281)	(0.1193)	(0.1012)	(0.1037)	(0.0744)
Log GNP	−0.1672	−0.1225	0.0662	0.0452	0.1255
	(0.1453)	(0.1692)	(0.1086)	(0.1129)	(0.1002)
Rule of law	0.2549[a]	0.2943[a]	0.2122[b]	0.2108[b]	0.2127[a]
	(0.0889)	(0.0926)	(0.0842)	(0.0830)	(0.0731)
French origin			−1.5982[a]	−1.2949[a]	−1.6677[a]
			(0.3552)	(0.3696)	(0.3132)
German origin			−2.8118[a]	−2.5450[a]	−3.027[a]
			(0.5698)	(0.5909)	(0.5543)
Scandinavian origin			−0.3123	−0.1421	−0.1367
			(0.8666)	(0.8486)	(0.8414)
Antidirector rights	0.5352[a]			0.1937[c]	
	(0.1364)			(0.0989)	
One-share = one-vote		0.6359			1.0287[a]
		(0.5422)			(0.3450)
Intercept	−0.5546	−0.2720	−0.9201	−1.3071	−1.7268
	(1.3472)	(1.7534)	(1.3233)	(1.3204)	(1.2088)
Number of observations	41	41	41	41	41
Adjusted R^2	0.3082	0.1571	0.4907	0.4927	0.5643

[a] Significant at 1%; [b] Significant at 5%; [c] Significant at 10%.

people) than the common law countries—more than a standard deviation of the IPO variable. Scandinavian countries, however, do not appear to have fewer IPOs in any of the specifications. The adverse effects of the French and German origin on IPOs remain once we include the antidirector rights score and the one-share-one-vote dummy. Both of our rights measures are significant after controlling for origin. Overall, the results in this table, like those of the previous one, show that our shareholder rights measures explain some of the variation in equity finance across countries, but that there is more to the origin effect than is captured by these measures. The regressions also confirm all our earlier results that civil law—particularly of the French or German

Table VII

Debt/GNP Regressions

Ordinary least squares regressions of the cross-section of 49 countries around the world. The dependent variable is "Debt/GNP." The independent variables are (1) GDP growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; (6) Scandinavian origin; (7) Creditor rights. Standard errors are shown in parentheses.

Independent Variables	Dependent Variable: Debt/GNP		
GDP growth	0.0310[c]	0.0251[c]	0.0197
	(0.0171)	(0.0134)	(0.0152)
Log GNP	0.0667[b]	0.0370	0.0404
	(0.0252)	(0.0255)	(0.0250)
Rule of law	0.0615[a]	0.0698[a]	0.0694[a]
	(0.0132)	(0.0147)	(0.0148)
French origin		−0.1516[b]	−0.1163
		(0.0740)	(0.0825)
German origin		0.1080	0.1082
		(0.1010)	(0.0982)
Scandinavian origin		−0.2764[b]	−0.2618[b]
		(0.1037)	(0.1075)
Creditor rights	0.0518[c]		0.0270
	(0.0267)		(0.0298)
Intercept	−0.8621[a]	−0.3496	−0.4414
	(0.2579)	(0.2524)	(1.341)
Number of observations	39	39	39
Adjusted R^2	0.5522	0.5191	0.5984

[a] Significant at 1%; [b] Significant at 5%; [c] Significant at 10%.

variety—reduces the breadth of the stock markets. In Scandinavian countries, the IPOs picture is brighter than that for the number of listed issues.

Table VII presents the results for our aggregated indebtedness measure. Note a somewhat smaller sample owing to the lack of data. In the specification that does not include origin dummies, both the level of the nation's GNP and the historical growth of GDP are associated with higher total debt relative to GNP; however, the statistical significance of these results does not carry over once origin is controlled for. In the specification without origin dummies, the coefficient on the creditor rights index is also statistically significant, but this result loses significance, and the coefficient falls sharply once origin is controlled for. The effect of rule of law is more robust, as before. Rule of law yet again has a large and statistically significant effect on the size of the capital market: the move from world mean to a perfect 10 is associated with a 20 percentage point increase in debt to GNP ratio, or 0.7 of a standard deviation.

The origin effects are interesting. Relative to common law countries, French legal origin countries have a lower ratio of debt to GNP (which becomes insignificant when creditor rights are also included, perhaps because of a high negative correlation between creditor rights and the French dummy). French origin countries have a 12 to 15 percentage point lower ratio of debt to GNP, where the overall sample mean is 59 percent. German origin countries again have a higher ratio of debt to GNP, but the effect is not statistically significant. Finally, Scandinavian origin countries have a hugely (almost one standard deviation) lower ratio of debt to GNP, a difference not much diminished by the inclusion of the creditor rights index. In sum, French and Scandinavian civil law countries do have more narrow debt markets than common law countries, a difference not adequately captured by our creditor rights index.

The overall results of Tables IV to VII are straightforward to summarize. We find that good law enforcement has a large effect on the valuation and breadth of both debt and equity markets. We also find large systematic differences between countries from different legal origins in the size and breadth of their capital markets. Whether measured by capitalization of equity held by outsiders, by the number of listed firms, or by IPOs, common law countries have larger equity markets than civil law, and particularly French civil law, countries, and at least part of the differences is captured by the differences in shareholder protections *that we measure*. Common law countries also have larger aggregate liabilities than do the French civil law and Scandinavian, though not German, countries. Our measure of creditor rights is less effective in capturing the difference between origins than our measure of shareholder rights. The results add up to a rather consistent case that the quality of the legal environment has a significant effect on the ability of firms in different countries to raise external finance.

C. Who gets External Finance?

Our analysis has focused on aggregate measures of the valuation and breadth of markets. An alternative approach is to look at microdata. The key issue about these data is that they cover primarily large firms that may have exposure to international capital markets, access to government finance, and captive banks. In this section, we attempt a very preliminary investigation of whether large firms are different, and in what ways.

To this end, we examine the WorldScope Database for 1996, which provides data for 38 of our 49 countries. The exclusion of smaller firms is pronounced both in that only a fraction of listed firms is included from each country, and in that relatively fewer firms are included from the emerging markets. For rich countries, WorldScope appears to cover 30–50 percent of the listed firms, whereas for developing countries, the share may be just a couple of percentage points (see the last column of Table VIII). For example, we have 2161 firms for the United States compared to nearly 7,770 listed firms, 93 firms for Italy compared to 223 listed firms, and 54 firms for India compared to 7,000 listed firms.

Table VIII

External Funding at the Firm Level

The sample of thirty-eight countries includes all the firms on the Worldscope database for 1996. The table shows median values for all the firms in each country. Panel A show the medians based on a classification by legal origin. The definition for each of the variables can be found in Table I. Panel B gives the tests of means for the different legal origins. Panel C shows mean of medians and *t*-tests for countries sorted by levels of "External Cap/GNP." Panel D shows mean of medians and *t*-tests for countries sorted by "Debt/GNP."

Country	Market Cap/Sales	Market Cap/ Cash-Flow	Debt/ Sales	Debt/Cash-Flow	WorldScope Firms/ Domestic Firms
Panel A: Median Values by Legal Origin					
Australia	0.75	6.15	0.19	1.42	0.12
Canada	0.76	4.66	0.30	2.07	0.26
Hong Kong	0.66	4.01	0.31	2.50	0.12
India	0.73	8.75	0.47	4.26	0.01
Ireland	0.75	3.51	0.16	0.74	0.29
Israel	0.34	3.79	0.17	1.41	0.03
Malaysia	1.46	6.82	0.24	1.45	0.23
New Zealand	0.38	4.26	0.23	2.74	0.11
Pakistan	0.50	4.18	0.33	2.34	0.05
Singapore	0.83	5.68	0.07	0.83	0.19
South Africa	0.40	3.23	0.29	2.06	0.22
Thailand	0.71	4.65	0.54	3.45	0.32
UK	0.64	5.77	0.11	1.06	0.51
US	0.67	6.70	0.18	1.86	0.28
Average English origin	**0.69**	**5.16**	**0.26**	**2.01**	**0.20**
Argentina	0.63	4.18	0.28	1.78	0.10
Belgium	0.16	2.28	0.25	2.52	0.39
Brazil	0.24	1.97	0.18	1.52	0.11
Chile	1.68	8.15	0.29	1.59	0.13
France	0.29	4.28	0.19	2.36	0.67
Greece	0.25	5.99	0.21	2.55	0.04
Indonesia	0.48	3.03	0.37	3.25	0.23
Italy	0.17	2.21	0.32	3.04	0.44
Mexico	0.47	4.06	0.66	1.54	0.29
Netherlands	0.27	3.93	0.11	1.33	0.42
Philippines	1.61	5.17	0.29	0.86	0.14
Portugal	0.19	2.48	0.33	3.73	0.17
Spain	0.27	3.28	0.25	2.33	0.15
Turkey	0.46	2.87	0.11	0.50	0.12
Average French origin	**0.51**	**3.85**	**0.27**	**2.06**	**0.24**
Austria	0.21	2.29	0.24	2.38	0.17
Germany	0.21	3.29	0.10	1.24	0.55
Japan	0.63	13.80	0.34	6.99	0.50
South Korea	0.29	—	0.58	—	0.09
Switzerland	0.26	3.06	0.30	3.14	0.36
Taiwan	2.21	14.94	0.26	2.16	0.20
Average German origin	**0.63**	**7.48**	**0.30**	**3.18**	**0.31**
Denmark	0.30	3.30	0.22	1.88	0.38
Finland	0.30	2.90	0.31	2.58	0.80
Norway	0.49	3.70	0.36	3.62	0.46
Sweden	0.40	3.10	0.21	1.59	0.82
Average Scandinavian origin	**0.37**	**3.25**	**0.28**	**2.42**	**0.61**
Sample average	**0.58**	**4.77**	**0.27**	**2.24**	**0.28**

Table VIII—Continued

Country	Market Cap/Sales	Market Cap/ Cash-Flow	Debt/ Sales	Debt/Cash-Flow	WorldScope Firms/ Domestic Firms
Panel B: Tests of Means (*t*-statistics)					
Common vs. civil law	1.04	0.64	−0.60	−0.87	
England vs. France	1.10	2.11	−0.36	−0.14	
England vs. Germany	0.20	−1.33	−0.71	−1.61	
England vs. Scandinavia	2.17	2.38	−0.32	−0.73	
France vs. Germany	−0.42	−2.04	−0.43	−1.59	
France vs. Scandinavia	0.54	0.69	−0.06	−0.68	
Germany vs. Scandinavia	0.64	1.32	0.30	0.64	
Panel C: Sorted by External Cap/GNP			Panel D: Sorted by Debt/GNP		
Means					
Bottom 25%	0.29	3.23	0.26	1.94	
Mid 50%	0.53	4.31	0.29	2.17	
Top 25%	0.97	7.28	0.24	2.52	
Test of means					
Bottom 25% vs. Top 25%	−3.03	−2.68	0.33	−0.80	

Table VIII presents the results for the two debt and two equity variables developed for each country, and described in Section I and in Table I. To begin, Panel A presents the data on country medians, and Panel B shows the *t*-tests of comparison between families. For the outsider held market capitalization to sales ratio (which is closest to the variable in Table IV), we get the same pattern of results as before: common law countries have a higher outsider-held capitalization of the largest companies than does any other group, with the difference being most pronounced for the Scandinavian and the French origin. However, the statistical significance of the results is considerably lower. When we normalize by cash flow rather than sales, we actually get that the German legal origin countries have the highest capitalization, in part because of extremely high market valuations in Japan and Taiwan. Basically, the picture on equity for the largest firms is similar to the aggregate picture, but less pronounced. These results, incidentally, continue to hold if we consider, for each country, the median market capitalization to sales and to cash flow ratios, without correcting for the share of equity held by insiders.

For both measures of debt, the differences between the English law, the French, and the Scandinavian origins essentially disappear, although debt of large companies in German origin countries remains the highest, especially relative to cash flow. Still, the similarity of these debt numbers across origins is remarkable, and suggests to us—albeit somewhat indirectly—a potentially important conclusion: large publicly traded firms get external debt finance in almost all countries, regardless of legal rules. A possible reason for this is debt financing *of the largest publicly traded firms* comes from the government and its banks. The countries whose large companies have unusually high debt levels compared to these countries aggregate ratio of liabilities to GNP are Mexico, India, and South Korea—all with heavy state intervention in banking. We cannot be sure given the available data that this is the right interpretation.

Still, the focus on large, publicly-traded firms in assessing the ability of firms in different countries to raise external funds may be misleading.

Panels C and D focus even more directly on the comparison of the results for large firms with our earlier results. In Panel C, we sort countries into bottom 25 percent, middle 50 percent, and top 25 percent by their aggregate ratio of external market capitalization to GNP (the variable in Table IV). For each of these three groups, we compute the average of the market capitalization to sales ratio and the average market capitalization to cash flow ratio for the countries in that group, from Panel A. The results in Panel C confirm the consistency of the aggregate and large firm data for equity: countries with high aggregate outsider held market capitalization are also the countries with the relatively high relative valuation of the largest firms. In Panel D, we make the same calculation for the two debt variables used in Panel A. The striking result is that our debt measure for large firms does not vary nearly as much as the aggregate measure: large publicly traded firms in countries with low aggregate debt do not have unusually low debt levels. The largest firms appear to get external finance even in countries where smaller listed firms do not.

III. Conclusion

The results of this article confirm that the legal environment—as described by both legal rules and their enforcement—matters for the size and extent of a country's capital markets. Because a good legal environment protects the potential financiers against expropriation by entrepreneurs, it raises their willingness to surrender funds in exchange for securities, and hence expands the scope of capital markets.

Our results show that civil law, and particularly French civil law, countries, have both the weakest investor protections and the least developed capital markets, especially as compared to common law countries. Our measures of investor protection capture some, though not all, of the difference between legal environments across origins. It is interesting to note in this regard that our earlier article (LLSV (1996)) has been criticized for choosing measures of investor protection that paint a selectively bleak picture of investor protection in the French civil law family. If anything, the results of this article show the reverse: our measures of investor protection do not fully account for outside investors' predicament in these countries.

While this article has further developed the theme that legal environments differ across countries, and that these differences matter for financial markets, we have again refrained from answering the deeper question: what is it about the civil law family, and particularly about the French civil law subfamily, that accounts for the relative unfriendliness of laws to investors? Is it just by coincidence that these countries have investor-unfriendly laws? Or, have the laws been designed to keep investors relatively weak, and to assure family firms and the state a larger role in economic development? Alternatively, are poor laws just a proxy for an environment that is hostile to institutional development, including that of capital markets? In this connection, we have

found some evidence (La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997)) that public and private institutions are less effective in countries exhibiting low levels of trust among citizens. It is possible that some broad underlying factor, related to trust, influences the development of all institutions in a country, including laws and capital markets. We cannot resolve these issues now, but hope to address them in future work.

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