

CAPITAL MARKETS AND LEGAL INSTITUTIONS

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I. Introduction

The policy process in Latin America and in other parts of the world has gone beyond macroeconomic stability, and in the next decade will be critically focused on institution building. This includes development of financial institutions, such as banks and stock exchanges, the development of the legal infrastructure supporting business, and the creation of regulatory mechanisms compatible with best world practice. More generally, the role of the state throughout the world is being redefined to accommodate the needs of a market economy, and institution-building is becoming widely accepted as the principal means of fulfilling this role.

In this paper, we focus on the institutions required to support large capital markets and survey the empirical evidence on the link between legal institutions and financial markets. Specifically, we are interested in providing an answer to why we observe such large differences in the size, breadth and valuation of capital markets? Why, for example, are equity markets so much larger in South Africa than in Mexico or Peru? Why did many companies go public in India and Hong Kong in 1995, while no company went public in Brazil or Uruguay or Venezuela in the same year? Why do countries like New Zealand have large credit markets while Argentina and Colombia do not have them?

In a simple Modigliani-Miller framework (Modigliani and Miller, 1958), the size of capital markets is determined only by the cash flows that accrue to investors. Therefore, roughly speaking, the size of capital markets should be proportional to GNP. To explain the large discrepancies in the

size of financial markets across countries with similar GNP, we need to recognize that securities are more than the cash flows they represent since they entitle investors to exercise certain rights. Shares not only entitle investors to dividend payments, but also to exercise control over management through the voting process. Similarly, debt not only entitles creditors to receive interest payments, but also to regain their collateral in the event of bankruptcy of the firm.

The separation between ownership and control can have a large effect on the size of capital markets once we depart from the M&M assumptions and allow for the existence of agency costs. To take an extreme view, outside equity would have no value if shareholders did not have control rights to force managers to pay out dividends. In the same vein, creditors would be unwilling to lend money at any interest rate if their control rights did not allow them to punish debtors that default on their financial obligations. Both financiers and management would benefit from the elimination of the agency conflict if they could write a complete contract that specified what the manager should do with the funds and how he would give them back to investors in all states of the world. Unfortunately, a complete contract cannot be implemented in practice, making it necessary for management to have a level of discretion (Grossman and Hart, 1986). Management discretion, although a cost effective way of dealing with the separation of ownership and control, can unfortunately be used to expropriate financiers through outright expropriation, transfer pricing or asset stripping.

The agency model could, in principle, explain why some countries have much larger capital markets than others since it is apparent that countries differ enormously in the extent to which they afford legal protection to investors. Not only does a shareholder in Mexico, for example, have a very different bundle of rights than in the US, but his recourse to redress is likely to be significantly

weaker. The agency model predicts larger capital markets in countries where agency costs are reined in by the law and the institutions built to support their enforcement. La Porta et al. (1998a) systematically assess the rights of investors as well as the quality of their enforcement for 49 countries. La Porta et al. (1997a, 1998a and 1998b) relate legal institutions to the size and breath of external capital markets as well as to corporate ownership concentration around the world.

In this paper, we review and summarize the cross-country evidence on the influence of institutions on capital markets' development. The paper is divided in six sections. After the introduction, section II describes the differences in legal protection for shareholders and creditors in a cross-section of 49 countries. Since investor rights are not only determined by laws, section III compares the quality of the legal enforcement and accounting standards across nations. The ultimate question, is whether countries with poor investor protections actually do suffer. If laws and their enforcement matters, then countries that offer entrepreneurs better terms of external finance would have both higher valued and broader capital markets. We also predict that countries that offer entrepreneurs better terms would have widely held corporations. Consequently, section IV compares external finance and ownership concentration across countries as a function of the origin of their laws, the quality of legal investor protections, and the quality of law enforcement. Section V concludes and discusses policy implications of the results.

II. Legal Protection to Investors

La Porta et al. (1998a) assembled a data set covering legal rules pertaining to the rights of investors, and to the quality of enforcement of these rules, for 49 countries with publicly-traded companies. Naturally, laws in different countries are typically not written from scratch, but rather

transplanted -- voluntarily or coincidentally -- from a few legal families or traditions. In general, *commercial* laws come from two broad traditions: common law and civil law. Most English-speaking countries belong to the common law tradition based on the British Company Act. The rest of the world belongs to the civil law tradition, derivative of Roman law, which has three main families: the French family based on the Napoleonic Code of 1804, the German family based on Bismarck's Code of 1896, and the Scandinavian family which legal scholars describe as less derivative of Roman law but "distinct" from the other two civil families.

The common law family includes former British colonies and other nations like Thailand or Israel who modeled their initial corporate laws on the laws of England. There are 18 common law countries in the sample. The French legal family includes France, Spain, Portugal and their colonies. There are 21 French legal origin countries in our sample, including 9 in Latin America. The German tradition has had less influence and we have only 6 countries in this family: Austria, Germany, Japan, South Korea, Switzerland, and Taiwan. Finally, the Scandinavian family includes the four Nordic countries of Denmark, Finland, Norway and Sweden.

There are numerous potentially measurable differences among countries in their company and bankruptcy laws. We focus exclusively on those basic rules that scholars (e.g., Paul Vishny 1994, White 1993, American Bar Association 1989 and 1993) and observers (e.g., Investor Responsibility Research Center 1994, Institutional Shareholder Services 1994) believe to be essential to corporate governance. Furthermore, we restrict our attention to those basic rules that can easily be interpretable as either pro-investor or pro-management.

II.A. Shareholder rights:

Shareholders have residual rights over the cash flows of the firm. The right to vote is the shareholder's main source of power. This right to vote in the general assembly for the election of directors and on major corporate decisions guarantees shareholders that management will disgorge the firm's cash flows to shareholders through the payment of dividends rather than divert them to pay themselves higher compensation or undertake poor acquisitions, for example. Therefore, voting rights and the rights that support voting mechanisms are the defining features of equity.

Table 1 provides a detailed description of all the variables that we use in the paper and Table 2 presents the evidence on shareholder rights for the cross-section of 49 countries. A useful way to begin the discussion of shareholder rights is by first assuming the role of a an investor in a UK firm and then switching identity to become an investor in a Mexican corporation. The first column of Table 2 shows that not all UK shareholders have the right to vote. That is probably a bad thing because when votes are tightly linked to dividends, it is more difficult to control a company by having a small fraction of the equity. Yet, as it turns out, one-share-one-vote rules are uncommon everywhere --including Mexico.

The next six columns of Table 2 provide different measures of how strongly the corporate law protects minority shareholders against expropriation of managers or dominant shareholders. We label these rights as "anti-director" rights. The first four anti-director rights measure how easy it is for an investor to exercise any voting rights that he may have. A shareholder in the UK will receive a Proxy Statement two weeks in advance of the Shareholders Meeting with detailed information on the items that are going to be discussed at the meeting. Should he wish to vote, he does not need to show up in person at the meeting -- he can mail his proxy vote instead. The shares of an investor who has

indicated that he will participate in the shareholders meeting will not be blocked in the days that surround the meeting. The freedom to trade shares around shareholders meetings is an important right for people who may want to form alliances to challenge management proposals. Directors are chosen one at a time through a majority vote and thus, shareholders are not entitled to have proportional representation or cumulative voting for directors. Our hypothetical investor may have a resolution that he would like to be considered by the Extraordinary Shareholders Meeting (ESM). If that is the case, he has the right to call an ESM if he owns 10 percent of the share capital.

The next right in Table 2 measures the protection of minority shareholders against a particular type of expropriation: issuing shares at favorable prices to, for example, associates of the controlling shareholders. In the UK, shareholders have a preemptive right to buy new issues of stock of their holdings and that right can only be waived by a shareholder vote. Finally, if the investor in the UK feels that he has been hurt by the decisions of the majority he can seek redress through the courts. When the court is of the opinion that oppression has indeed taken place, it may order that the oppressed member's shares be bought out at a fair price and/or that the firm provides a remedy to the matters complained of by the investor. More generally, best-practice countries provide legal mechanisms for the protection of oppressed minorities. To give just another example, a dissenting investor in Chile has the right to request -- at the Meeting -- that the firm buy back his shares at the market price prevailing before the meeting.

Suppose that the Shareholders' Meeting took place not in London but in Mexico City. As in the UK, not all shares are endowed with the same right to vote. The investor will be notified of the forthcoming Shareholder Meeting but will not typically receive detailed information on the items to be discussed. Only by going to the meeting will he know what is discussed. In fact, attending the

meeting -- or designating someone to do so in his place -- is the only way in which he can vote; proxy by mail is not allowed. Furthermore, announcing that he intends to vote his shares will cause them to be blocked, making it impossible for him to trade them in the days surrounding the meeting. At the meeting, shareholders vote on the slate of directors proposed by management and are not allowed proportional representation on the board. Investors in Mexican firms must have at least 33 percent of share capital to have a resolution considered by the ESM. Fortunately, investors in Mexico have a preemptive right that prevents dilution. Regrettably, this is the only right (of those that we collect) that shareholders in Mexico have since they do not have any legal recourse against the decisions of the majority. To summarize, Table 2 paints a very bleak picture of shareholder rights in Mexico.

A convenient way of summarizing shareholder rights is to aggregate anti-director rights into an index adding 1 if the corporate law protects minority shareholders, and a zero otherwise. For the case of the percentage of share capital needed to call an ESM, we give a 1 to those countries where these percentage is at or below the world median of 10 percent. If we add up these six anti-director rights scores, the UK has a score of 5 while Mexico's score is only 1.

The comparison between Mexico and the UK illustrates the broad findings of Table 2: shareholder protection in common law countries is significantly better than in French civil law countries. While the incidence of one-share-one-vote rules, cumulative voting for directors and preemptive rights are not statistically different across English and French legal origins, the remaining four measures show marked differences. Common law countries more frequently allow shareholders to exercise their vote by mail than French origin countries (39% vs. 5%). No common law country blocks shares before shareholders' meetings while 57% of French civil law countries do. On average, 9 percent of the share capital is sufficient to call an ESM in common law country whereas 15 percent

of share capital is required in French civil law nations. Finally, 94 percent of common law countries have an oppressed minority mechanism in place while only 29 percent of French origin countries do. The differences between English and French origin countries are captured in the anti-director's index which has an average of 4.00 for common law countries and only 2.33 for French civil law nations (t-statistic of 4.73).

Mexico, however, is not representative of Latin America in shareholder rights. Compared to the average of the rest of the French origin, Latin America has a higher incidence of one-share-one-vote (44% vs 16%), is less likely to block shares (67% vs 50%), has a higher incidence of proportional representation (44% vs 17%), is more likely to grant preemptive rights (78% versus 50%) and has a higher incidence of oppressed minority remedies (44% vs 17%). On the other hand, Latin America never allows proxy by mail (vs 8% for the rest of French origin) and requires a higher fraction of the share capital to call for an ESM (18% vs 12%). With the exception of the percentage needed to call an ESM, these differences are not statistically significant when taken in isolation. However, although not statistically significant, differences add up to marginally better shareholder rights in Latin America than in the rest of the French civil origin when rights are aggregated in the anti-director index (2.67 vs 2.08).

German civil law countries share the French origin lack of protection of shareholder rights. Although German origin countries have a significantly higher incidence of oppressed minority mechanisms, they block shares more often than French countries do. The average anti-director scores for the German and French families are the same (2.33). Finally, Scandinavian origin countries, although clearly inferior to common law countries in shareholder protection, are the best within the civil law tradition. The average Scandinavian anti-director rights score is 3. In short,

relative to the rest of the world, common law countries have the package of laws most protective of shareholders.

II.B. Creditor rights:

In principle we would like to measure the ability of creditors to use the law to force companies to meet their credit commitments. In practice, creditor rights are difficult to assess for two main reasons. First, most countries have in place both reorganization and liquidation procedures which are used with varying frequency and may confer different levels of protections to creditors. Therefore, a country may be very protective of creditors if it offers, for example, strong rights in liquidation and weak protection in reorganization, provided that the reorganization procedure is seldom used. Second, creditors, unlike shareholders, do not have a homogenous claim against the firm i.e., they differ in the priority of their claim. As a result, it is possible that measures that favor some creditors (e.g., unsecured creditors) may hurt others (e.g., secured creditors).

To undertake a cross-country analysis of creditor rights, we score creditor rights in both reorganization and liquidation, and add up the scores to create a creditor rights index, in part because almost all countries rely to some extent on both procedures. In assessing creditor rights below, we also take the perspective of senior secured creditors, in part for concreteness, and in part because much of the debt in the world has that character. Creditor rights for the cross-section of 49 countries in the sample can be found in Table 3. Once again, we describe the data by comparing the rights of an investor who has a credit against a firm incorporated in the UK versus the rights of an investor with a credit against a firm incorporated in Mexico.

Suppose that a debtor to whom the creditor has lent money files a petition for reorganization

in a London court. The court will then notify the creditor who will have two weeks to oppose reorganization. A secured creditor who chooses to oppose a reorganization petition has the right to appoint a so-called *trustee* to decide what will happen to the firm. The important thing is that the debtor does not have the right to unilaterally file for reorganization. Even if the borrower has his petition for reorganization accepted, there is not an “automatic-stay” that prevents secured creditors from gaining access to their collateral. In addition, secured creditors who choose not to withdraw their collateral are paid first in the event that reorganization fails and liquidation ensues. Finally, the bargaining position of creditors is strengthened by the fact that pending the resolution of the bankruptcy procedure, the old management team will not continue to run the firm. Rather, a trustee appointed by the creditors would be in charge of the day-to-day operations of the firm.

Now suppose that a debtor to whom the creditor has lent money files a petition for reorganization in a Mexico City court. Creditors have no say in whether the firm’s reorganization petition is accepted or declined. But if the petition is accepted, secured creditors are not able to pull their collateral out of the firm as an “automatic-stay” is triggered by the acceptance of the reorganization petition. Secured creditors have additional worries because if liquidation takes place, they are not paid first. Rather the state and the firm’s employees take priority. The creditors’ predicament is aggravated by the fact that the debtor will not only write the reorganization proposal, but continue to run the firm pending the resolution of the bankruptcy procedure, which may take several years.

As with shareholders, one way to summarize the difference in creditors rights across countries is to create an index that adds 1 when the pro-investor right is granted by law, and zero otherwise. This index is shown in the last column of Table 3 and takes a value of 4 for the UK and zero for

Mexico. Again, as with shareholder rights, the picture for creditor rights in Mexico is substantially bleaker than in the UK.

The Mexico-UK comparison, albeit extreme, illustrates the differences in creditor rights between French civil law and common law countries. Table 3 shows that Common law countries offer creditors stronger legal protections against managers. All four measures of creditor rights are statistically significantly weaker for countries of French legal origin. A total of 72% of common law countries place restrictions on managers seeking court protection from creditors, while only 42% of French civil law nations do. The incidence of no-automatic stay on assets is 72% in common law countries versus only 26% in French civil law nations. Relatively fewer countries of French legal origin (65%) assure that secured creditors are paid first than in English legal origin (89%). Finally, only 26% of French civil law countries remove managers in reorganization, compared to 78% of countries of the common law family. In brief, the average aggregate creditor rights score is 3.11 for English origin and a mere 1.58 for French origin.

Unlike the case of shareholder rights, Latin America offers considerable less legal protection to creditors than the rest of the French civil law countries. When compared to the rest of the French civil law origin, countries in Latin America are less likely to place restrictions for going into reorganization (38% vs 45%), have no-automatic-stay (13% vs 36%) policies, pay secured creditors first (56% vs 73%), and prevent management from staying (25% vs 27%). However, these differences are not statistically significant even when aggregated in the creditor rights index (1.25 vs 1.81).

Not only does Latin America offer fewer rights than the rest of the French legal family, but also it scores lower than the other two civil law families. German legal origin countries are relatively

more pro-creditor than Latin American and French civil law countries, averaging an aggregate score of 2.33. The differences between German and French origin countries are particularly significant in liquidation measures: 67% percent of German civil law countries have no automatic stay and pay secured creditors first always.

Finally, the situation of creditors in Scandinavian countries is very similar to that in French civil law nations. Countries of Scandinavian origin always pay secured creditors first, but always allow management to stay pending reorganization. In three out of four cases, they impose an automatic stay on assets and place restrictions to go into reorganization. As a result, the aggregate creditor rights index for the Scandinavian legal origin has a value of 2.00 vs 1.58 for the French legal origin (the difference is not statistically significant).

To summarize the results thus far, the content of the bankruptcy laws differ a great deal across countries: in particular, they differ because they come from different legal families. Relatively speaking, common law countries protect creditors the most, and French civil law countries protect them the least. German and Scandinavian civil law countries are in the middle. The one exception is the strong protections that German civil law countries afford secured creditors.

III. Enforcement of laws

Legal rules are only one element of investor protection; the enforcement of these rules may be equally or even more important. Investors may enjoy high levels of protection despite bad laws if an efficient judiciary system can redress expropriations by management. In this way, a strong legal enforcement may serve as a substitute for weak rules.

Table 4 presents several proxies for the quality of enforcement of laws in different countries.

These measures are collected by private credit risk agencies for the use foreign investors interested in doing business in the respective countries (Business International Corporation, International Country Risk Guide). We use three measures: efficiency of the judicial system, rule of law, and corruption. The first two of these proxies pertain to law enforcement, while the last one captures the government's general attitude toward business. In addition to these measures, we also collected data on the quality of accounting standards of publicly traded firms in different countries. Accounting is central to corporate governance as it may be quite difficult to assess management performance without reliable accounting standards. More broadly, cash flows may be very difficult to verify in countries with poor accounting standards, consequently, the menu of financial contracts available to investors may be substantially narrower in such countries. The index of accounting standards we show in Table 4 is provided by the Center for International Financial Analysis and Research based on examination of company reports of firms in each country. It is available for 41 of the 49 countries in our sample.

We can begin the discussion of this data by focusing on Argentina, a country that scores high on our shareholder legal protection variables despite widespread investor criticism about the quality of protection afforded to shareholders. Compared to New Zealand, a country with similar shareholder rights and better creditor rights, Argentina has very weak legal institutions and accounting standards. New Zealand has perfect scores on both, efficiency of the judiciary, rule of law and corruption. In contrast Argentina, scores below the world mean on all three measures. On accounting, New Zealand scores 70 points, whereas Argentina scores only 45, again substantially below the world mean. A corrupt or inefficient legal system coupled with poor disclosure standards could render legal rules ineffective.

As it turns out, the French civil law family shares Argentina's weak legal enforcement mechanisms. The French family has the weakest quality of legal enforcement and accounting standards. Scandinavian countries have the strongest enforcement mechanisms, with German civil law and common law countries close behind. Common law countries, although behind Scandinavian nations, are still ahead of the French civil law countries. Note that rule of law is the only measure where differences in means between common law and French legal origin are not statistically significant.

Argentina's weak legal enforcement illustrates Latin America's stance on rule of law within the French legal family. Latin America scores lower on all four measures of enforcement mechanisms in Table 4 (although differences are never statistically significant). These results do not support the conclusion that the quality of law enforcement substitutes or compensates for the quality of laws. An investor in Latin America, and more generally in a French civil law country, is poorly protected by both the laws and the system that enforces them. The converse is true for an investor in a common law country, on average. Poor enforcement and accounting standards aggravate, rather than cure, the difficulties faced by investors in the French civil law countries.¹ The weak scores obtained by Latin America in shareholder and creditor rights may actually understate the severity of the corporate governance problem in the region.

IV. External Finance and Legal Institutions

¹ By every single measure, richer countries have higher quality of law enforcement. Nonetheless, even controlling for per capita income, French civil law countries still score lower on every single measure, and statistically significantly lower for almost all measures, than the common law countries do. The regression results continue to show that legal families with investor-friendlier laws are also the ones with stronger enforcement of laws. (See regression results in La Porta et al., 1998a).

There are at least two reasons why legal institutions may have no effect on the pattern of external finance of firms. First, laws may not be necessary to support external financing if, for example, companies deliver on their promises not because they are forced to but because they want to build a good reputation to facilitate their access to capital markets (Diamond, 1989, 1991, and Gomes, 1996). Reputation unravels if there is ever a time when the gains from cheating exceed the value of keeping external financing open since investors, through backward induction, would never extend financing to such a firm to begin with.

Second, poor laws and their enforcement may have no real consequences if firms can easily opt out of the laws of their legal jurisdictions. Easterbrook and Fischel (1991) are skeptical that legal rules are binding in most instances, since entrepreneurs can offer better investors rights, when it is optimal to do so, through corporate charters which effectively serve as contracts between entrepreneurs and investors. In practice, however, opting out may be costly for both firms that need to write non-standard contracts and investors that need to study them. In addition, courts may be unwilling or unable to enforce non-standard contracts further limiting the scope for opting out.

Alternatively, if legal institutions matter, ownership concentration should be higher in countries with poor investor protection than in countries with strong protections for investors for at least two reasons. First, agency problems may call for large shareholders to monitor managers and thus prevent or minimize expropriation. Second, minority shareholders may be unwilling to pay high prices for securities in countries with weak legal protection. At the same time, entrepreneurs are going to be more reluctant to offer shares at discounted prices thus resulting in higher ownership

concentration as well as smaller and more narrow markets for external equity.² Similarly, bad creditor rights may have analogous price and quantity effects on debt markets. In other words, if laws do not protect the rights of creditors, debt markets may be small since creditors may demand high interest rates and firms may be reluctant to borrow from arm's length sources in such conditions.

Ultimately, the question of whether legal institutions matter is fundamentally empirical: if opting out were cheap and simple, the patterns of ownership and external finance of firms would not be affected by differences in legal institutions across countries.³ Accordingly, in this section, we examine two types of evidence regarding the influence of legal institution on external finance: ownership concentration and the size and breath of capital markets.

IV.A. Data

We describe sequentially our measures of ownership concentration, external equity financing and debt markets. First, to measure ownership concentration La Porta et al. (1998a) assembled data for up to 10 largest publicly-traded, non-financial private domestic firms in each of 45 countries. For each country we measure ownership concentration as the median percentage owned by the three largest shareholders in each of these ten firms.

Second, as in La Porta et al. (1997a), we also use three measures of equity finance. The first

²Ownership concentration per se may be efficient since the existence of large shareholders monitoring management reduces the agency problem between management and shareholders (Jensen and Meckling, 1976 and Shleifer and Vishny, 1986). But large concentration comes at a cost as it creates another agency problem: the expropriation of minority shareholders by large ones. An additional costs of heavily concentrated ownership is that their core investors are not diversified.

³ La Porta et al. (1997b) find that, for a cross-section of countries around the world, various measures of dividend payout ratios are lower in countries with poor investor protection than in countries with high investor protection. This evidence suggests that companies in countries with poor laws and their enforcement do not build reputations by paying high dividends to their shareholders.

measure is the 1994 ratio of external equity finance to GNP in each country. To compute a rough proxy of external equity finance, we multiply the total market value of common stock of all publicly traded firms by the average fraction of the equity not held by the largest three investors (*ie*, the complement of the ownership variable just described). We scale the total market value of common stock by the fraction of equity held by minority shareholders to avoid overestimating the availability of external financing. For example, when 90 percent of a firm's equity is held by insiders, looking at the market capitalization of the whole firm gives a tenfold overestimate of how much has actually been raised externally. The procedure we follow may still overestimate the level of external financing since our ownership concentration figures are based on the largest firms and since they ignore cross-holdings. Still, this procedure is conceptually better than looking at the ratio of market capitalization to GNP.⁴

The remaining two measures of external equity finance capture market breadth. The first is the number of domestic firms listed in the stock exchange of each country relative to its population. The second is the number of 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. We look at both the stock and flow of new companies obtaining equity financing since the development of financial markets has accelerated greatly in the last decade, and hence the IPO data provides a more recent picture of external equity financing.

Finally, also as in La Porta et al. (1997a), we measure the availability of debt financing in each country as the ratio of the sum of private sector bank debt and corporate bonds outstanding to GNP. Our choice of debt variable is partly determined by data availability since the analogue of the stock

⁴ The results presented below hold for that uncorrected ratio as well.

market data that we use to measure external equity financing does not exist for debt markets. However, the fact that our debt measure includes not only corporations but the whole private sector 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).

IV.B. Results

The first striking result of this table is that in the world as a whole, dispersed ownership is a myth: in an average median firm 45 percent of the common shares are held by the largest three shareholders. The second result is that those countries with weaker investor protections have larger share ownership concentration. In particular, countries of the French legal family have an average ownership concentration of 55 percent. This number is statistically significantly higher than the mean of the rest of the world and of each of the other three legal families individually.

Like the rest of the French origin, Latin America has highly concentrated ownership. With the exception of Chile, which has strong shareholder rights, all Latin American countries in the sample have higher ownership concentration than the world mean. After Greece (68%), the three largest ownership concentration levels in the world are found in Colombia (68%), Mexico (67%) and Brazil (63%). In sum, these data indicate that Latin American countries, and the French civil law countries in general, have unusually high ownership concentration, possibly as an adaptation to weak legal protection.

Several interesting patterns emerge from looking at our proxies for external equity finance on Table 5. First, access to external equity financing is most limited in French civil law countries. Specifically, both the ratio of external capital to GNP and the ratio domestic firms to population are

roughly half the world mean whereas the ratio of IPOs to population is roughly one-fifth of the world mean. Equity markets are particularly narrow in Latin America: the ratio of the number of firms to population is roughly one-third of the world mean whereas the ratio of the number of IPOs to population is more than ten times smaller than the world mean. In contrast, all three equity measures indicate that, on average, access to external equity is easiest in common law countries: the ratio of outsider held stock market to GNP is 60 percent vs 40 percent for the world mean; the number of listed firms per one million people is 35 listed vs 21.6 for the world mean; and the number of IPOs per million people is 2.2 vs 1.02 for the world mean. Finally, equity markets in countries of Scandinavian origin are smaller but broader than in countries of German origin. To summarize, external equity markets line up pretty well with shareholder rights and legal institutions: they are smallest in French civil law countries and largest in common law countries.

The last column in Table 5 shows the aggregate debt measure. The ratio of total debt to GNP is 45% for French civil law countries, 57% for Scandinavian countries, 68% for Common law countries, and 97% for German countries. It is also interesting to note that Latin America, with a ratio of total debt to GNP of only 29%, is an outlier even within the French civil law family. Low creditor rights line up with small markets when we compare French, Scandinavian and English origin. However, German civil law countries are somewhat of a mystery. We conjecture that a possible explanation of the German-origin anomaly is that firms in both Germany and Japan have large liquid assets and therefore our debt measure overstates their true liabilities (Rajan and Zingales, 1995).

IV.C. Regression Results

We present two sets of regressions on Tables 6 and 7 for each of our measures of ownership

concentration, external equity finance and debt markets. The first set of regressions (Table 6) includes legal origin dummies whereas the second one (Table 7) includes our measures of shareholder and creditor rights. In both specifications we regress our measures of capital markets on two control variables and on law enforcement. The first control is the growth of GDP on the theory that growth affects valuation and that in turn may affect ownership patterns as entrepreneurs are more willing to issue at attractive prices. We also control for the logarithm of total GNP on the theory that the creation of capital markets may be an activity subject to increasing returns to scale. If this theory is true, we should observe that larger economies have larger firms which might therefore have lower ownership concentration.⁵ As a measure of quality enforcement we chose the “rule of law” index, but the results we present are representative of other specifications with alternative enforcement measures.

The regression results in the first column of Table 6 show that larger economies have lower ownership concentration, and that, although not significant in this specification, better enforcement leads to lower ownership concentration. In addition, this regression confirms the sharply higher concentration of ownership in the French civil law countries: controlling for other variables, the average country of French legal origin has 12 percentage points more concentrated ownership in the hands of the largest three shareholders than the average country of English legal origin.

The first regression in Table 7 has the same controls and legal enforcement variables as Table 6 but instead of legal origin, it tests for the significance of stronger shareholder protection in the form

⁵ In alternative specifications presented in La Porta et. al (1998a) we also controlled for the Gini coefficient of each country on the theory that more egalitarian nations have lower ownership concentration; and for the logarithm of GDP per capita under the theory that richer countries may have different ownership patterns. The coefficients on these two variables are insignificant in most specifications and their inclusion does not significantly affect the results presented here. In the case of GDP per capita, a further reason to eliminate this variable from the specifications is that its correlation with rule of law is quite high (0.87).

of more anti-director rights and the existence of one-share-one-vote rules. Looking at Table 7, the coefficient on the logarithm of GNP remains significant, showing that larger economies have less concentrated ownership. The results also show that legal enforcement significantly reduces the concentration of ownership in the regression. A 4.65 point increase in the rule of law score (roughly the distance between New Zealand and Argentina or Mexico) reduces average ownership concentration by 7 percentage points. Similarly, countries with stronger shareholder protection, measured by our aggregate score of anti-director rights, also have a statistically significantly lower concentration of ownership. A 1.6 points increase in the anti-director rights score (roughly the distance between common law and French civil law averages) reduces ownership concentration by 6 percentage points. Finally, the existence of a one-share-one-vote rule in the corporate law turns out not to be significant for ownership concentration. In sum, regression results confirm our previous finding that the protection of shareholders through legal institutions is an important determinant of ownership concentration.

As with ownership concentration, we present two sets of regressions for external equity markets on Tables 6 and 7. Two key results emerge from the analysis of the regressions that use legal origin (Table 6). First, rule of law has a large impact on all three variables: a move from the world mean of 6.85 to a perfect score of 10 is associated with an increase of 13.1 percentage points (the standard deviation of the variable is 37) in the ratio of external market capitalization to GNP, an additional 15.3 (the standard deviation of the variable is 25) firms per million population and a further 0.67 (the standard deviation of the variable is 1.5) IPOs per million population. However only the last two results are statistically significant. Second, legal origin matters. Relative to Common law countries, French civil law countries have a ratio of external equity to GNP 32.2 percentage points

lower, 21.9 less publicly-traded firms per million population and 1.6 less IPOs per million population.

German and Scandinavian legal origin are also associated with smaller and more narrow stock markets than English origin but the effects are not as pronounced as with French legal origin. All estimates are statistically significant with the sole exception of the effect of Scandinavian origin on the number of IPOs per million population.

The results on anti-director rights and one-share-one-vote (Table 7) are easy to summarize. One share one vote has the expected sign but it is never significant. In contrast, anti-director rights has a large impact on equity financing both in statistical and economical terms: a move from the world mean of 2.5 to a perfect score of 6 is associated with an increase of 43.5 percentage points in the ratio of external market capitalization to GNP, an additional 21.2 publicly-traded firms per million population and 2.0 additional IPOs per million population. Finally, as in previous regressions, rule of law has large impact on equity financing and it is now statistically significant everywhere.

Overall, the results on external equity finance in Tables 6 and 7, show that rule of law and shareholder rights have a large impact on the availability of external equity financing. With the exception of the number of IPOs per million population in Scandinavia, the regressions also confirm our earlier results that the legal institutions of civil law countries reduce the size and breadth of the stock markets.

As for the results on the size of debt markets, the last column on Table 6 shows that French civil law countries have a ratio of debt to GNP 15 percentage points lower than common law countries. Similarly, Scandinavian origin countries also have much lower (28 percentage points) debt-to-GNP ratios than common law countries. In contrast, German origin countries have a higher (11 percentage points) debt to GNP ratios than common law countries. Finally, both regressions

show that rule of law has, as in the case of equity financing, a large and statistically significant effect on the level of the debt-to-GNP ratio: the move from world mean (=6.85) to a perfect 10 is associated with a 20 percentage point increase in the debt-to-GNP ratio.

The results using legal origin are confirmed in regressions that include creditor rights. In particular, Table 7 shows that the creditor rights index is statistically significant at 10%. The point estimate implies that a move from the world mean (=2.30) to a perfect score of 4 is associated with a 8.8 percentage point increase in the debt-to-GNP ratio which is economically significant when compared to a world mean debt-to-GNP ratio of 59%. The size of the debt market does vary with rule of law, creditor rights and legal origin. As a result, French and Scandinavian civil law countries have more narrow debt markets than common law countries.

In sum, the results in this section show that the protection of investors through legal institutions is an important determinant of ownership concentration and the size and breath of capital markets across nations.

V. Conclusion and Policy Implications

In this paper, we have surveyed the evidence on laws governing investor protection, the quality of enforcement of these laws, and their effect on the availability of external financing on a sample of 49 countries. The analysis suggests three broad conclusions.

First, being an investor in different legal jurisdictions entitles an investor to very different bundles of rights. Therefore investor rights are not inherent to securities but rather are determined by laws. In particular, French civil law countries protect investors the least and common law countries the most. Countries of German and Scandinavian legal origin take an intermediate stance

toward investor rights.

Second, law enforcement differs a great deal around the world. French Civil law countries have the worst quality of law enforcement whereas German civil law and Scandinavian countries have the best quality of law enforcement. Law enforcement is strong in common law countries as well. These rankings also hold for one critical input into law enforcement in the area of investor protections: accounting standards.

Third, the evidence surveyed in this paper suggests that large capital markets require that countries protect financiers against expropriation by entrepreneurs and provide them with good enforcement mechanisms to exercise such rights. In the absence of a good legal environment financiers are reluctant to surrender funds in exchange for securities, and hence the scope of capital markets is limited. Specifically, we see evidence that bad legal institutions result in high levels of ownership concentration, low availability of external equity financing, narrow equity markets, and small debt markets.

Latin America offers investors a rather unattractive legal environment. Both creditor rights as well as the quality of enforcement lags behind the rest of the French civil law origin countries while shareholder rights are marginally better than the rest of the French legal origin average. As a result, credit markets are exceedingly small and stock markets are both small and very narrow.

It is clear that improving corporate governance should be at the top of the policy agenda in Latin America. The immediate reaction to the evidence surveyed in this paper is to call for wholesale legal reform. Clearly, minority shareholders would benefit from the existence of a mechanism to redress expropriation and there is plenty of room to strengthen voting rights and to enhance disclosure requirements. Similar arguments can be made for creditor rights.

However, to the extent that improving the efficiency of the judicial system and asserting the rule of law are slow processes it is important to incorporate those constraints in the policy design. For example, it may be particularly valuable to adopt an oppressed minority mechanism, perhaps similar to that of Chile, that minimizes the involvement of the courts even if its more mechanical nature results in less fair outcomes. Similarly, mandating enhanced disclosure requirements may not be sufficient in countries with weak legal institutions. In such instances it may be desirable, for example, to require that institutional investors only be allowed to invest in companies that meet minimum corporate governance standards as determined by independent best practice commissions.

Finally, in the area of creditor rights one may want to emphasize bankruptcy procedures that minimize the involvement of courts. The UK Administration procedure is an example of bankruptcy procedure that puts most of the discretion on the hands of commercial banks rather than on courts. Along the same lines, another departure from current practice would introduce market forces in the bankruptcy process by auctioning off bankrupt firms much the same way that state-owned enterprises are currently privatized (Hart et al. 1997).

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Table 1: The variables

This table describes the variables collected for the 49 countries included in our study. The first column gives the name of the variable. The second column describes the variable and gives the range of possible values. The third column provides the sources from which the variable was collected.

Variable	Description	Sources
Origin	Identifies the legal origin of the Company Law or Commercial Code of each country. Equals 1 if the origin is English Common Law; 2 if the origin is the French Commercial Code; and 3 if the origin is the German Commercial Code.	Foreign Law Encyclopedia Commercial Laws of the World.
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 zero 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 zero otherwise.	Company Law or Commercial Code
Proxy by mail	Equals one if the Company Law or Commercial Code allows shareholders to mail their proxy vote to the firm, and zero otherwise.	Company Law or Commercial Code
Shares not blocked	Equals one if the Company Law or Commercial Code does not allow firms to require that shareholders deposit their shares prior to a General Shareholders Meeting thus preventing them from selling those shares for a number of days, and zero otherwise.	Company Law or Commercial Code
Cumulative voting or proportional representation	Equals one if the Company Law or Commercial Code allows shareholders to cast all of their votes for one candidate standing for election to the board of directors (cumulative voting) or if the Company Law or Commercial Code allows a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board, and zero otherwise.	Company Law or Commercial Code
Oppressed minorities mechanism	Equals one if the Company Law or Commercial Code grants minority shareholders either a judicial venue to challenge the decisions of management or of the assembly or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, assets dispositions and changes in the articles of incorporation. The variable equals zero otherwise. Minority shareholders are defined as those shareholders who own 10 percent of share capital or less.	Company Law or Commercial Code
Preemptive rights	Equals one when the Company Law or Commercial Code grants shareholders the first opportunity to buy new issues of stock and this right can only be waived by a shareholders' vote, and zero otherwise.	Company Law or Commercial Code
%capital to call an ESM	It is the minimum percentage of ownership of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting. It ranges from one to 33 percent.	Company Law or Commercial Code
Anti-director rights	An index aggregating the shareholder rights which we labeled as "anti-director rights." The index is formed by adding 1 when: (1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10 percent (the sample median); or (6) shareholders have preemptive rights that can only be waived by a shareholders' vote. The index ranges from 0 to 6.	Company Law or Commercial Code
Restrictions for going into reorganization.	Equals one if the reorganization procedure imposes restrictions, such as creditors' consent, to file for reorganization. It equals zero if there are no such restrictions.	Bankruptcy and Reorganization Laws
No automatic stay on secured assets	Equals one if the reorganization procedure does not impose an automatic stay on the assets of the firm upon filing the reorganization petition. Automatic stay prevents secured creditors to gain possession of their security. It equals zero if such restriction does exist in the law.	Bankruptcy and Reorganization Laws
Secured creditors first	Equals one if secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. Equals zero if non-secured creditors, such as the Government and workers, are given absolute priority.	Bankruptcy and Reorganization Laws

Variable	Description	Sources
Management does not stay	Equals one when an official appointed by the court, or by the creditors, is responsible for the operation of the business during reorganization. Equivalently, this variable equals one if the debtor does not keep the administration of its property pending the resolution of the reorganization process, and zero otherwise.	Bankruptcy and Reorganization Laws
Creditor Rights	An index aggregating different 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) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from 0 to 4.	Bankruptcy and Reorganization Laws
Efficiency of judicial system	Assessment of the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms" produced by the country-risk rating agency <i>Business International Corporation</i> . It "may be taken to represent investors' assessments of conditions in the country in question". Average between 1980-1983. Scale from 0 to 10, with lower scores lower efficiency levels.	Business International Corporation.
Rule of law	Assessment of the law and order tradition in the country produced by the country-risk rating agency <i>International Country Risk (ICR)</i> . 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. (We changed the scale from its original range going from 0 to 6).	International Country Risk Guide
Corruption	ICR's assessment of the corruption in government. Lower scores indicate "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans". 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 higher levels of corruption. (We changed the scale from its original range going from 0 to 6).	International Country Risk Guide
Accounting standards	Index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. These items fall into 7 categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data and special items). A minimum of 3 companies in each country were studied. The companies represent a cross-section of various industry groups where industrial companies numbered 70 percent while financial companies represented the remaining 30 percent.	International Accounting and Auditing Trends, Center for International Financial Analysis & Research, Inc.
Ownership, 10 largest private firms	The average percentage of common shares owned by the three largest 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.	Moody's International, CIFAR, EXTEL, WorldScope, 20-Fs, Price-Waterhouse and various country sources.
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.	Moody's 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.	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.	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.	International Financial Statistics, World Bondmarket Factbook.

Variable	Description	Sources
GDP Growth	Average annual percent growth of per capita gross domestic product for the period 1970-1993.	World Development Report 1995.
Log GNP	Logarithm of the Gross National Product in 1994.	World Development Report 1996.

Table 2: Shareholder rights around the world

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports the test of means for the different legal origins.

Country	One share - One Vote	Proxy by mail allowed	Shares not blocked	Cumulative vote / proportional representation	% capital to call ESM	Preemptive rights	Oppressed minority	Anti-director rights
<i>Panel A: Shareholder rights (1=investor protection is in the law)</i>								
Australia	0	1	1	0	0.05 ^d	0	1	4
Canada	0	1	1	1	0.05	0	1	5
Hong Kong	0	1	1	0	0.10	1	1	5
India	0	0	1	1	0.10	1	1	5
Ireland	0	0	1	0	0.10	1	1	4
Israel	0	0	1	0	0.10	0	1	3
Kenya	0	0	1	0	0.10	0	1	3
Malaysia	1	0	1	0	0.10	1	1	4
New Zealand	0	1	1	0	0.05	0	1	4
Nigeria	0	0	1	0	0.10	0	1	3
Pakistan	1	0	1	1	0.10	1	1	5
Singapore	1	0	1	0	0.10	1	1	4
South Africa	0	1	1	0	0.05	1	1	5
Sri Lanka	0	0	1	0	0.10	0	1	3
Thailand	0	0	1	1	0.20 ^e	0	0	2
UK	0	1	1	0	0.10	1	1	5
US	0	1	1	1	0.10	0	1	5
Zimbabwe	0	0	1	0	0.05	0	1	3
English origin avg.	0.17	0.39	1.00	0.28	0.09	0.44	0.94	4.00
Argentina	0	0	0	1	0.05	1	1	4
Belgium	0	0	0	0	0.20	0	0	0
Brazil	1	0	1	0	0.05	0	1	3
Chile	1	0	1	1	0.10	1	1	5
Colombia	0	0	1	1	0.25	1	0	3
Ecuador	0	0	1	0	0.25	1	0	2
Egypt	0	0	1	0	0.10	0	0	2
France	0	1	0	0	0.10	1	0	3
Greece	1	0	0	0	0.05	1	0	2
Indonesia	0	0	1	0	0.10	0	0	2
Italy	0	0	0	0	0.20	1	0	1
Jordan	1	0	1	0	0.25	0	0	1
Mexico	0	0	0	0	0.33	1	0	1
Netherlands	0	0	0	0	0.10	1	0	2
Peru	1	0	1	1	0.20	1	0	3
Philippines	0	0	1	1	open	0	1	3
Portugal	0	0	1	0	0.05	1	0	3
Spain	0	0	0	1	0.05	1	1	4
Turkey	0	0	1	0	0.10	0	0	2
Uruguay	1	0	0	0	0.20	1	1	2
Venezuela	0	0	1	0	0.20	0	0	1
Latin American avg.	0.44	0.00	0.67	0.44	0.18	0.78	0.44	2.67
Rest of French origin avg.	0.17	0.08	0.50	0.17	0.12	0.50	0.17	2.08
French origin avg.	0.29	0.05	0.57	0.29	0.15	0.62	0.29	2.33
Austria	0	0	0	0	0.05	1	0	2
Germany	0	0	0	0	0.05	0	0	1
Japan	1	0	1	1	0.03	0	1	4
South Korea	1	0	0	0	0.05	0	1	2
Switzerland	0	0	0	0	0.10	1	0	2
Taiwan	0	0	0	1	0.03	0	1	3
German origin avg.	0.33	0.00	0.17	0.33	0.05	0.33	0.50	2.33
Denmark	0	0	1	0	0.10	0	0	2
Finland	0	0	1	0	0.10	1	0	3
Norway	0	1	1	0	0.10	1	0	4
Sweden	0	0	1	0	0.10 ^e	1	0	3
Scandinavian origin avg.	0.00	0.25	1.00	0.00	0.10	0.75	0.00	3.00
Sample average	0.22	0.18	0.71	0.27	0.11	0.53	0.53	3.00
<i>Panel B: Tests of Means (t-statistics)</i>								
Common vs. civil law	-0.72	3.03 ^a	4.97 ^a	0.15	1.48	-0.91	5.59 ^a	5.00 ^a
English vs. French origin	-0.87	2.82 ^a	3.87 ^a	-0.05	-2.53 ^b	-1.08	5.45 ^a	4.73 ^a
English origin vs. Latin America	-1.57	3.29 ^a	2.00 ^c	-0.85	-3.56 ^a	-1.67	3.44 ^a	2.98 ^a
French vs. German origin	-0.22	1.00	-1.78 ^c	-0.22	2.64 ^b	1.23	-0.96	0.00
French vs. Scandinavian origin	2.83 ^b	-1.37	-3.87 ^a	2.82 ^b	2.43 ^b	-0.48	2.83	-1.06
Rest of French origin vs. Latin America	-1.39	1.00	-0.74	-1.39	-1.71	-1.29	-1.39	-1.11

a=Significant at 1% level; b= Significant at 5% level ; c=Significant at 10% level; d=as a percentage of votes; e= as a percentage of the number of shares

Table 3: Creditor rights around the world

This table classifies countries by legal origin. Definitions for each variable can be found in Table 1. Panel B reports tests of means for the different legal origins.

Country	Restrictions for reorganization	No automatic on assets	Secured creditor paid first	Management does not stay in reorganization	Creditor rights
<i>Panel A: Creditor Rights (1 = creditor protection is in the law)</i>					
Australia	0	0	1	0	1
Canada	0	0	1	0	1
Hongkong	1	1	1	1	4
India	1	1	1	1	4
Ireland	0	0	1	0	1
Israel	1	1	1	1	4
Kenya	1	1	1	1	4
Malaysia	1	1	1	1	4
New Zealand	1	1	0	1	3
Nigeria	1	1	1	1	4
Pakistan	1	1	1	1	4
Singapore	1	1	1	1	4
South Africa	1	0	1	1	3
Sri Lanka	1	1	0	1	3
Thailand	0	1	1	1	3
UK	1	1	1	1	4
US	0	0	1	0	1
Zimbabwe	1	1	1	1	4
English origin avg.	0.72	0.72	0.89	0.78	3.11
Argentina	0	0	1	0	1
Belgium	0	1	1	0	2
Brazil	1	0	0	0	1
Chile	1	0	1	0	2
Colombia	0	0	0	0	0
Ecuador	1	1	1	1	4
Egypt	1	1	1	1	4
France	0	0	0	0	0
Greece	0	0	0	1	1
Indonesia	1	1	1	1	4
Italy	1	0	1	0	2
Jordan	na	na	na	na	na
Mexico	0	0	0	0	0
Netherlands	1	0	1	0	2
Peru	0	0	0	0	0
Philippines	0	0	0	0	0
Portugal	0	0	1	0	1
Spain	0	1	1	0	2
Turkey	1	0	1	0	2
Uruguay	0	0	1	1	2
Venezuela	na	na	1	na	na
Latin American avg.	0.38	0.13	0.56	0.25	1.25
Rest of French origin avg.	0.45	0.36	0.73	0.27	1.81
French origin avg.	0.42	0.26	0.65	0.26	1.58
Austria	1	1	1	0	3
Germany	1	1	1	0	3
Japan	0	0	1	1	2
South Korea	0	1	1	1	3
Switzerland	0	0	1	0	1
Taiwan	0	1	1	0	2
German origin avg.	0.33	0.67	1.00	0.33	2.33
Denmark	1	1	1	0	3
Finland	0	0	1	0	1
Norway	1	0	1	0	2
Sweden	1	0	1	0	2
Scandinavian origin avg.	0.75	0.25	1.00	0.00	2.00
Sample average	0.55	0.49	0.81	0.45	2.30
<i>Panel B: Tests of means (t-statistics)</i>					
Common vs. civil law	1.86 ^c	2.65 ^a	1.04	4.13 ^a	3.61 ^a
English vs. French origin	1.89 ^c	3.06 ^a	1.75 ^b	3.55 ^a	3.61 ^a
English origin vs. Latin America	1.71 ^c	3.25 ^a	2.04 ^b	2.83 ^a	3.42 ^a
French vs. German origin	0.37	-1.85 ^c	-3.20 ^a	-0.32	-1.29
French vs. Scandinavian origin	-1.18	0.05	-3.20 ^a	2.54 ^b	-0.60
Rest of French origin vs Latin America	0.33	1.14	0.77	0.11	0.90

a = Significant at 1% level ; b = Significant at 5% level ; c = Significant at 10% level.

Table 4: Enforcement of laws

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports the tests of means for the different legal origins.

Country	Efficiency of judicial system	Rule of law	Corruption	Accounting standards	GNP per capita (US \$)
<i>Panel A: Means</i>					
Australia	10.00	10.00	8.52	75	17,500
Canada	9.25	10.00	10.00	74	19,970
Hong Kong	10.00	8.22	8.52	69	18,060
India	8.00	4.17	4.58	57	300
Ireland	8.75	7.80	8.52	na	13,000
Israel	10.00	4.82	8.33	64	13,920
Kenya	5.75	5.42	4.82	na	270
Malaysia	9.00	6.78	7.38	76	3,140
New Zealand	10.00	10.00	10.00	70	12,600
Nigeria	7.25	2.73	3.03	59	300
Pakistan	5.00	3.03	2.98	na	430
Singapore	10.00	8.57	8.22	78	19,850
South Africa	6.00	4.42	8.92	70	2,980
Sri Lanka	7.00	1.90	5.00	na	600
Thailand	3.25	6.25	5.18	64	2,110
UK	10.00	8.57	9.10	78	18,060
US	10.00	10.00	8.63	71	24,740
Zimbabwe	7.50	3.68	5.42	na	520
English origin avg.	8.15	6.46	7.06	69.62	9,353
Argentina	6.00	5.35	6.02	45	7,220
Belgium	9.50	10.00	8.82	61	21,650
Brazil	5.75	6.32	6.32	54	2,930
Chile	7.25	7.02	5.30	52	3,170
Colombia	7.25	2.08	5.00	50	1,400
Ecuador	6.25	6.67	5.18	na	1,200
Egypt	6.50	4.17	3.87	24	660
France	8.00	8.98	9.05	69	22,490
Greece	7.00	6.18	7.27	55	7,390
Indonesia	2.50	3.98	2.15	na	740
Italy	6.75	8.33	6.13	62	19,840
Jordan	8.66	4.35	5.48	na	1,190
Mexico	6.00	5.35	4.77	60	3,610
Netherlands	10.00	10.00	10.00	64	20,950
Peru	6.75	2.50	4.70	38	1,490
Philippines	4.75	2.73	2.92	65	850
Portugal	5.50	8.68	7.38	36	9,130
Spain	6.25	7.80	7.38	64	13,590
Turkey	4.00	5.18	5.18	51	2,970
Uruguay	6.50	5.00	5.00	31	3,830
Venezuela	6.50	6.37	4.70	40	2,840
Latin American avg.	6.47	5.18	5.22	46.25	3,077
Rest of French origin avg.	6.62	6.70	6.30	55.10	10,121
French origin avg.	6.56	6.05	5.84	51.17	7,102
Austria	9.50	10.00	8.57	54	23,510
Germany	9.00	9.23	8.93	62	23,560
Japan	10.00	8.98	8.52	65	31,490
South Korea	6.00	5.35	5.30	62	7,660
Switzerland	10.00	10.00	10.00	68	35,760
Taiwan	6.75	8.52	6.85	65	10,425
German origin avg.	8.54	8.68	8.03	62.67	22,067
Denmark	10.00	10.00	10.00	62	26,730
Finland	10.00	10.00	10.00	77	1,930
Norway	10.00	10.00	10.00	74	25,970
Sweden	10.00	10.00	10.00	83	24,740
Scandinavian origin avg.	10.00	10.00	10.00	74.00	24,185
Sample average	7.67	6.85	6.90	60.93	11,156
<i>Panel B: Tests of means (t-statistics)</i>					
Common vs. civil law	1.27	-0.77	0.39	3.12 ^a	-0.94
English vs. French origin	2.65 ^a	0.51	1.79 ^c	4.66 ^a	0.85
English origin vs. Latin America	2.37 ^b	1.25	2.33 ^b	6.53 ^a	2.08 ^b
French vs. German origin	-2.53 ^a	-2.55 ^a	-2.49 ^a	-2.10 ^b	-3.79 ^a
French vs. Scandinavian origin	-9.34 ^a	-20.80 ^a	-9.77 ^a	-3.32 ^a	-4.28 ^a
Rest of French origin vs. Latin America	0.19	1.52	1.28	1.49	2.27 ^b

a=Significant at 1% level; b=Significant at 5% level; c=Significant at 10% level.

Table 5: External Finance and Legal Institutions

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports tests of means for the different legal origins.

Country	Ownership Concentration	External Cap / Domestic Firms / Pop	IPOs / Pop	Debt / GNP	GDP growth	Log GNP	
<i>Panel A: Means</i>							
Australia	0.28	0.49	63.55	.	0.76	12.64	
Canada	0.24	0.39	40.86	4.93	0.72	13.26	
HongKong	0.54	1.18	88.16	5.16	.	11.56	
India	0.43	0.31	7.79	1.24	0.29	12.50	
Ireland	0.36	0.27	20.00	0.75	0.38	10.73	
Israel	0.55	0.25	127.60	1.80	0.66	11.19	
Kenya	.	.	2.24	.	.	8.83	
Malaysia	0.52	1.48	25.15	2.89	0.84	11.00	
New Zealand	0.51	0.28	69.00	0.66	0.90	10.69	
Nigeria	0.45	0.27	1.68	.	.	10.36	
Pakistan	0.41	0.18	5.88	.	0.27	10.88	
Singapore	0.53	1.18	80.00	5.67	0.60	11.68	
South Africa	0.52	1.45	16.00	0.05	0.93	10.92	
SriLanka	0.61	0.11	11.94	0.11	0.25	9.28	
Thailand	0.48	0.56	6.70	0.56	0.93	11.72	
UK	0.15	1.00	35.68	2.01	1.13	13.86	
US	0.12	0.58	30.11	3.11	0.81	15.67	
Zimbabwe	0.51	0.18	5.81	.	.	8.63	
English Origin Avg	0.42	0.60	35.45	2.23	0.68	4.30	11.41
Argentina	0.55	0.07	4.58	0.20	0.19	12.40	
Belgium	0.62	0.17	15.50	0.30	0.38	12.29	
Brazil	0.63	0.18	3.48	0.00	0.39	13.03	
Chile	0.38	0.80	19.92	0.35	0.63	10.69	
Colombia	0.68	0.14	3.13	0.05	0.19	10.82	
Ecuador	.	.	13.18	0.09	.	9.49	
Egypt	0.62	0.08	3.48	.	.	10.53	
France	0.24	0.23	8.05	0.17	0.96	14.07	
Greece	0.68	0.07	21.60	0.30	0.23	11.25	
Indonesia	0.62	0.15	1.15	0.10	0.42	11.84	
Italy	0.60	0.08	3.91	0.31	0.55	13.94	
Jordan	.	.	23.75	.	0.70	8.49	
Mexico	0.67	0.22	2.28	0.03	0.47	12.69	
Netherlands	0.31	0.52	21.13	0.66	1.08	12.68	
Peru	0.57	0.40	9.47	0.13	0.27	10.92	
Philippines	0.51	0.10	2.90	0.27	0.10	10.44	
Portugal	0.59	0.08	19.50	0.50	0.64	11.41	
Spain	0.50	0.17	9.71	0.07	0.75	13.19	
Turkey	0.58	0.18	2.93	0.05	0.15	12.08	
Uruguay	.	.	7.00	0.00	0.26	9.40	
Venezuela	0.49	0.08	4.28	0.00	0.10	10.99	
Latin American avg.	0.57	0.23	7.49	0.10	0.29	2.84	11.11
Rest of French origin avg.	0.53	0.19	11.89	0.28	0.56	3.43	11.89
French Origin Avg	0.55	0.21	10.00	0.19	0.45	3.18	11.55
Austria	0.51	0.06	13.87	0.25	0.79	12.13	
Germany	0.50	0.13	5.14	0.08	1.12	14.46	
Japan	0.13	0.62	17.78	0.26	1.22	15.18	
South Korea	0.20	0.44	15.88	0.02	0.74	12.73	
Switzerland	0.48	0.62	33.85	.	.	12.44	
Taiwan	0.14	0.88	14.22	0.00	.	12.34	
German Origin Avg	0.33	0.46	16.79	0.12	0.97	5.29	13.21
Denmark	0.40	0.21	50.40	1.80	0.34	11.84	
Finland	0.34	0.25	13.00	0.60	0.75	11.49	
Norway	0.31	0.22	33.00	4.50	0.64	11.62	
Sweden	0.28	0.51	12.66	1.66	0.55	12.28	
Scandinavian Origin Avg	0.33	0.30	27.26	2.14	0.57	2.42	11.80
Sample Average	0.45	0.40	21.59	1.02	0.59	3.79	11.72
<i>Panel B: Tests of Means (t-statistics)</i>							
Common vs Civil Law	-0.91	3.12^a	3.16^a	3.97^a	1.33	1.23	-1.06
English vs French Origin	-2.68^a	3.29^a	3.16^a	4.50^a	2.29^b	1.97^c	-0.28
English origin vs. Latin America	-2.34^b	1.97^c	2.29^b	3.21^a	3.42^a	1.93^b	0.46
French vs German Origin	3.29^a	-2.38^b	-1.85	0.78	-3.39^a	-1.96^c	-2.48
French vs Scand. Origin	3.32^a	-0.91	-3.31^a	-5.45^a	0.82	0.97	-0.33
Rest of French origin vs. Latin America	-0.54	-0.35	1.36	2.41^b	2.20^b	0.88	1.22

a=Significant at 1% level; b=Significant at 5% level; c=Significant at 10% level.

Table 6: Regressions of External Finance and Legal Origin

Ordinary least squares regressions of the cross section of 49 countries around the world. The dependent variables are: (1) Ownership Concentration (the mean of each country); (2) External Cap / GNP; (3) Domestic Firms / Pop; (4) IPOs / Pop; and (5) Debt / GNP. The independent variables are (1) GDP Growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; and (6) Scandinavian origin. Robust standard errors are shown in parentheses.

<i>Independent Variables</i>	<i>Dependent Variables:</i>				
	<i>Ownership Concentration</i>	<i>External Cap / GNP</i>	<i>Domestic Firms / Pop</i>	<i>IPOs / Pop</i>	<i>Debt / GNP</i>
GDP Growth	-0.0077 (0.0084)	0.0584 ^b (0.0259)	1.0111 (1.3676)	0.1938 ^b (0.1112)	0.0251 ^b (0.0148)
Log GNP	-0.0436 ^a (0.0132)	0.0038 (0.0420)	-2.9127 (1.9117)	-0.0662 (0.1193)	0.0370 (0.0281)
Rule of Law	-0.0031 (0.0067)	0.0417 (0.0272)	4.8422 ^a (1.4708)	0.2122 ^b (0.0926)	0.0698 ^a (0.0163)
French Origin	0.1217 ^a (0.0317)	-0.3225 ^a (0.1131)	-21.9070 ^a (7.9944)	-1.5982 ^a (0.3902)	-0.1516 ^b (0.0817)
German Origin	-0.0013 (0.0660)	-0.2962 ^c (0.1629)	-25.1485 ^a (9.1683)	-2.8119 ^a (0.6257)	0.1080 (0.1116)
Scandinavian Origin	-0.0589 (0.0434)	-0.3391 ^b (0.1494)	-22.2680 ^b (10.9897)	-0.3123 (0.9516)	-0.2764 ^b (0.1145)
Intercept	0.9889 ^a (0.1314)	0.0336 (0.4001)	33.0486 (22.2848)	-0.9201 (1.4532)	-0.3496 (0.2786)
Observations	45	45	49	41	39
Adjusted R ²	0.5517	0.3840	0.3497	0.5671	0.6647

^a Significant at 1%; ^b Significant at 5%; ^c Significant at 10%

Table 7: Regressions of External Finance and Shareholder and Creditor Rights

Ordinary least squares regressions of the cross section of 49 countries around the world. The dependent variables are: (1) Ownership Concentration (the mean of each country); (2) External Cap / GNP; (3) Domestic Firms / Pop; (4) IPOs / Pop; and (5) Debt / GNP. The independent variables are (1) GDP Growth; (2) Log GNP; (3) Rule of law; (4) Anti-directors rights; (5) One-share = One-vote; and (6) Creditor rights. Robust standard errors are shown in parentheses.

<i>Independent Variables</i>	<i>Dependent Variables:</i>				
	<i>Ownership Concentration</i>	<i>External Cap / GNP</i>	<i>Domestic Firms / Pop</i>	<i>IPOs / Pop</i>	<i>Debt / GNP</i>
GDP Growth	-0.0124 (0.0097)	0.0604 ^a (0.0176)	1.3926 (1.3976)	0.1433 (0.1251)	0.0311 ^c (0.0184)
Log GNP	-0.0312 ^b (0.0116)	-0.0205 (0.0306)	-4.7687 ^a (1.7815)	-0.1814 (0.1541)	0.0667 ^b (0.0270)
Rule of Law	-0.0151 ^b (0.0060)	0.0456 ^b (0.0214)	4.8174 ^a (1.4273)	0.2824 ^a (0.0887)	0.0615 ^a (0.0142)
Anti-director Rights	-0.0385 ^a (0.0385)	0.1244 ^a (0.0378)	6.0688 ^a (1.6293)	0.5761 ^a (1438)	
One-share = One-vote	0.0044 (0.0461)	0.1433 (0.1278)	0.4189 (7.0938)	0.0226 (0.5267)	
Creditor Rights					0.0518 ^c (0.0287)
Intercept	1.1041 ^a (0.1304)	-0.3219 (0.2614)	20.9494 (17.3374)	-1.1172 (1.4796)	-0.8622 ^a (0.2763)
Observations	45	45	49	41	39
Adjusted R ²	0.4862	0.4549	0.2671	0.4541	0.5993

^a Significant at 1%; ^b Significant at 5%; ^c Significant at 10%