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This paper examines legal rules covering protection of corporate shareholders and creditors, the origin of these rules, and the quality of their enforcement in 49 countries. The results show that common-law countries generally have the strongest, and French-civil-law countries the weakest, legal protections of investors, with German- and Scandinavian-civil-law countries located in the middle. We also find that concentration of ownership of shares in the largest public companies is negatively related to investor protections, consistent with the hypothesis that small, diversified shareholders are unlikely to be important in countries that fail to protect their rights.

I. Overview of the Issues

In the traditional finance of Modigliani and Miller (1958), securities are recognized by their cash flows. For example, debt has a fixed promised stream of interest payments, whereas equity entitles its

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owner to receive dividends. Recent financial research has shown that this is far from the whole story and that the defining feature of various securities is the rights that they bring to their owners (Hart 1995). Thus shares typically give their owners the right to vote for directors of companies, whereas debt entitles creditors to the power, for example, to repossess collateral when the company fails to make promised payments.

The rights attached to securities become critical when managers of companies act in their own interest. These rights give investors the power to extract from managers the returns on their investment. Shareholders receive dividends *because* they can vote out the directors who do not pay them, and creditors are paid *because* they have the power to repossess collateral. Without these rights, investors would not be able to get paid, and therefore firms would find it harder to raise external finance.

But the view that securities are inherently characterized by some intrinsic rights is incomplete as well. It ignores the fact that these rights depend on the legal rules of the jurisdictions in which securities are issued. Does being a shareholder in France give an investor the same privileges as being a shareholder in the United States, India, or Mexico? Would a secured creditor in Germany fare as well when the borrower defaults as one in Sri Lanka or Italy, with the value of the collateral assumed the same in all cases? Law and the quality of its enforcement are potentially important determinants of what rights security holders have and how well these rights are protected. Since the protection investors receive determines their readiness to finance firms, corporate finance may critically turn on these legal rules and their enforcement.

The differences in legal protections of investors might help explain why firms are financed and owned so differently in different countries. Why do Italian companies rarely go public (Pagano, Panetta, and Zingales 1998)? Why does Germany have such a small stock market but also maintain very large and powerful banks (Edwards and Fischer 1994)? Why is the voting premium—the price of shares with high voting rights relative to that of shares with low voting rights—small in Sweden and the United States, and much larger in Italy and Israel (Levy 1983; Rydquist 1987; Zingales 1994, 1995)? Indeed, why were Russian stocks nearly worthless immediately after privatization—by some estimates 100 times cheaper than Western stocks backed by comparable assets—and why did Russian companies have virtually no access to external finance (Boycko, Shleifer, and Vishny 1993)? Why is ownership of large American and British companies so widely dispersed (Berle and Means 1932)? The con-

tent of legal rules in different countries may shed light on these corporate governance puzzles.

In recent years, economists and legal scholars have begun to examine theoretically the costs and benefits of alternative legal rules regarding investor rights (e.g., Grossman and Hart 1988; Harris and Raviv 1988; Gromb 1993; Bebchuk 1994). The trouble is, there have been no systematic data available on what the legal rules pertaining to corporate governance are around the world, how well these rules are enforced in different countries, and what effect these rules have. There is no systematic knowledge, for example, of whether different countries actually do have substantially different rules that might explain differences in their financing patterns. Comparative *statistical* analysis of the legal underpinnings of corporate finance—and commerce more generally—remains uncharted territory.

In this paper, we attempt to explore this territory. We examine empirically how laws protecting investors differ across 49 countries, how the quality of enforcement of these laws varies, and whether these variations matter for corporate ownership patterns around the world.

Our starting point is the recognition that laws in different countries are typically not written from scratch, but rather transplanted—voluntarily or otherwise—from a few legal families or traditions (Watson 1974). In general, *commercial* laws come from two broad traditions: common law, which is English in origin, and civil law, which derives from Roman law. Within the civil tradition, there are only three major families that modern commercial laws originate from: French, German, and Scandinavian. The French and the German civil traditions, as well as the common-law tradition, have spread around the world through a combination of conquest, imperialism, outright borrowing, and more subtle imitation. The resulting laws reflect both the influence of their families and the revisions specific to individual countries. As a result of this spread of legal families and the subsequent evolution of the laws, we can compare both the individual legal rules and whole legal families across a large number of countries.

To this end, we have assembled a data set covering legal rules pertaining to the rights of investors, and to the quality of enforcement of these rules, in 49 countries that have publicly traded companies. For shareholders, some of the rules we examine cover voting powers, ease of participation in corporate voting, and legal protections against expropriation by management. For creditors, some of these rules cover the respect for security of the loan, the ability to grab assets in case of a loan default, and the inability of management

to seek protection from creditors unilaterally. In effect, these rules measure the ease with which investors can exercise their powers against management. We also consider measures of the quality of enforcement of legal rules in different countries and of the quality of their accounting systems.

We show that laws vary a lot across countries, in part because of differences in legal origin. Civil laws give investors weaker legal rights than common laws do, independent of the level of per capita income. Common-law countries give both shareholders and creditors—relatively speaking—the strongest, and French-civil-law countries the weakest, protection. German-civil-law and Scandinavian countries generally fall between the other two. The quality of law enforcement is the highest in Scandinavian and German-civil-law countries, next highest in common-law countries, and again the lowest in French-civil-law countries.

Having shown that law and its enforcement vary across countries and legal families, we ask how the countries with poor laws or enforcement cope with this problem. Do these countries have other, *substitute,* mechanisms of corporate governance? These adaptive mechanisms may in fact be incorporated into the law, or they may lie outside the law. One potential adaptation to fewer laws is strong enforcement of laws, but as we pointed out above, this does not appear to be the case empirically. Another adaptation, sometimes referred to as ''bright-line'' rules, is to legally introduce mandatory standards of retention and distribution of capital to investors, which limit the opportunities for managerial expropriation. We find that only French-civil-law countries have mandatory dividends, and German-civil-law countries are the most likely to have legal reserve requirements of all the legal families.

A further response to the lack of legal protections that we examine is a high ownership concentration. Some concentration of ownership of a firm's shares is typically efficient to provide managers with incentives to work and large investors with incentives to monitor the managers (Jensen and Meckling 1976; Shleifer and Vishny 1986). However, some dispersion of ownership is also desirable to diversify risk. As argued by Shleifer and Vishny (1997) and explained further in Section VI, a very high ownership concentration may be a reflection of poor investor protection. We examine ownership concentration in the largest publicly traded companies in our sample countries and find a strong negative correlation between concentration of ownership, as measured by the combined stake of the three largest shareholders, and the quality of legal protection of investors. Poor investor protection in French-civil-law countries is associated with extremely concentrated ownership. The data on ownership concen-

tration thus support the idea that legal systems matter for corporate governance and that firms have to adapt to the limitations of the legal systems that they operate in.

Section II of the paper describes the countries and their laws. Sections III and IV then compare shareholder and creditor rights, respectively, in different countries and different legal traditions. Section V compares the quality of law enforcement and accounting standards in different countries and legal traditions. Section VI focuses on ownership. Section VII presents concluding remarks.

II. Countries, Legal Families, and Legal Rules

Countries

Most studies of corporate governance focus on one or a few wealthy economies (see, e.g., Berglof and Perotti 1994; Kaplan and Minton 1994; Rajan and Zingales 1995; Gorton and Schmidt 1996). However, corporate governance in all of the three economies that scholars typically focus on—the United States, Germany, and Japan—is quite effective. To understand better the role of legal protection of investors, we need to examine a larger sample of countries. To this end, we have assembled as comprehensive a sample as possible of countries that have some nonfinancial firms traded on their stock exchanges. The sample covers 49 countries from Europe, North and South America, Africa, Asia, and Australia. There are no socialist or ''transition'' economies in the sample. A country is selected for inclusion if, on the basis of the WorldScope sample of 15,900 firms from 33 countries and the Moody's International sample of 15,100 non-U.S. firms from 92 countries, that country had at least five domestic nonfinancial publicly traded firms with no government ownership in 1993. We restrict attention to countries that have publicly traded firms since our primary focus is on protecting investor rights, and without public shareholders a discussion of investor rights would be limited. Having at least five nonfinancial private firms is also essential for construction of ownership data.

Legal Families

Comparative legal scholars agree that, even though no two nations' laws are exactly alike, some national legal systems are sufficiently similar in certain critical respects to permit classification of national legal systems into major families of law. Although there is no unanimity among legal scholars on how to define legal families,

> among the criteria often used for this purpose are the following: (1) historical background and development of the legal system, (2) theories and hierarchies of sources of law, (3) the working methodology of jurists within the legal systems, (4) the characteristics of legal concepts employed by the system, (5) the legal institutions of the system, and (6) the divisions of law employed within a system. [Glendon, Gordon, and Osakwe 1994, pp. 4–5]

On the basis of this approach, scholars identify two broad legal traditions that pertain to matters discussed in this paper: civil law and common law.[1]

The civil, or Romano-Germanic, legal tradition is the oldest, the most influential, and the most widely distributed around the world. It originates in Roman law, uses statutes and comprehensive codes as a primary means of ordering legal material, and relies heavily on legal scholars to ascertain and formulate its rules (Merryman 1969). Legal scholars typically identify three currently common families of laws within the civil-law tradition: French, German, and Scandinavian. The French Commercial Code was written under Napoleon in 1807 and brought by his armies to Belgium, the Netherlands, part of Poland, Italy, and western regions of Germany. In the colonial era, France extended its legal influence to the Near East and Northern and sub-Saharan Africa, Indochina, Oceania, and French Caribbean islands. French legal influence has been significant as well in Luxembourg, Portugal, Spain, some of the Swiss cantons, and Italy (Glendon et al. 1994). When the Spanish and Portuguese empires in Latin America dissolved in the nineteenth century, it was mainly the French civil law that the lawmakers of the new nations looked to for inspiration. Our sample contains 21 countries with laws in the French civil tradition.

The German Commercial Code was written in 1897 after Bismarck's unification of Germany, and perhaps because it was produced several decades later, was not as widely adopted as the French code. It had an important influence on the legal theory and doctrine in Austria, Czechoslovakia, Greece, Hungary, Italy, Switzerland, Yugoslavia, Japan, and Korea. Taiwan's laws came from China, which

[1] The religious traditions, such as Jewish law, Canon law, Hindu law, and Muslim law, appear to be less relevant in matters of investor protection. ''Thus the Arabian countries unquestionably belong to Islamic law as far as family and inheritance law is concerned, just as India belongs to Hindu law, but economic law of these countries (including commercial law and the law of contract and tort) is heavily impressed by the legal thinking of the colonial and mandatory powers—the Common Law in the case of India, French law in the case of most of the Arab States'' (Zweigert and Kotz 1987, p. 66). We focus on the principal secular legal traditions in this study.

borrowed heavily from the German code during its modernization. We have six countries from this family in our sample.

The Scandinavian family is usually viewed as part of the civil-law tradition, although its law is less derivative of Roman law than the French and German families (Zweigert and Kotz 1987). Although Nordic countries had civil codes as far back as the eighteenth century, these codes are not used anymore. Most writers describe the Scandinavian laws as similar to each other but ''distinct'' from others, so we keep the four Nordic countries in our sample as a separate family.

The common-law family includes the law of England and those laws modeled on English law. The common law is formed by judges who have to resolve specific disputes. Precedents from judicial decisions, as opposed to contributions by scholars, shape common law. Common law has spread to the British colonies, including the United States, Canada, Australia, India, and many other countries. There are 18 common-law countries in our sample.

To classify countries into legal families, we rely principally on Reynolds and Flores (1989). In most cases, such classification is uncontroversial. In a few cases, while the basic origin of laws is clear, laws have been amended over time to incorporate influences from other families. For example, Ecuador, a French-civil-law country, revised its company law in 1977 to incorporate some common-law rules; Thailand's first laws were based on common law but since received enormous French influence; and Italy is a French-civil-law country with some German influence. Most important for our study, after World War II, the American occupying army ''Americanized'' some Japanese laws, particularly in the company law area, although their basic German-civil-law structure remained. In these and several other cases, we classify a country on the basis of the origin of the initial laws it adopted rather than on the revisions.[2] In the United States, states have their own laws. We generally rely on Delaware law because a significant fraction of large U.S. companies are incorporated in Delaware. In Canada, our data come from Ontario laws, even though Quebec has a system based on French civil law.

[2] The European Community is currently attempting to harmonize West European laws, including those pertaining to corporate governance, by issuing directives (Andenas and Kenyon-Slade 1993; Werlauff 1993). Several countries have changed parts of their laws to adhere to E.C. directives. However, in most instances, the directives are not mandatory, and the countries are given some time to change their laws. Moreover, the E.C. directives accommodate a great deal of diversity among countries. As of 1993–94—the point in time for which we examine the legal rules of the countries in our sample—E.C. harmonization has not generally affected the legal rules that we focus on. The one area in which the E.C. impact has been large, namely mergers and acquisitions, is not an area that we examine in this paper (see below).

Legal Rules

We look only at laws pertaining to investor protection, and specifically only at company and bankruptcy/reorganization laws. Company laws exist in all countries and are concerned with (1) the legal relations between corporate insiders (members of the corporation, i.e., shareholders and directors) and the corporation itself and (2) the legal relations between the corporation and certain outsiders, particularly creditors. Bankruptcy/reorganization laws apply more generally than just to companies but deal specifically with procedures that unfold in the case of failure to pay back debt. All these laws are part of the commercial codes in civil-law countries and exist as separate laws, mainly in the form of acts, in common-law countries.

There are several conspicuous omissions from the data set. First, this paper says little about merger and takeover rules, except indirectly by looking at voting mechanisms. These rules are spread between company laws, antitrust laws, security laws, stock exchange regulations, and sometimes banking regulations as well. Moreover, these rules have changed significantly in Europe as part of E.C. legal harmonization. Until recently, takeovers have been an important governance tool in only a few common-law countries, although the situation may change.[3]

Second, this paper also says little about disclosure rules, which again come from many sources—including company laws, security laws, and stock exchange regulations—and are also intended for harmonization across the European Community. We do, however, look at the quality of accounting standards, which to a large extent is a consequence of disclosure rules.

Third, in this paper we do not use any information from regulations imposed by security exchanges. One instance in which this is relevant is exchange-imposed restrictions on the voting rights for the shares that companies can issue if these shares are to be traded on the exchange.

Finally, a potentially important set of rules that we do not deal with here is banking and financial institution regulations, which might take the form of restricting bank ownership, for example. Much has been made of these regulations in the United States by Roe (1994).

[3] Several readers have pointed to the U.S. state antitakeover laws as evidence of an anti–minority shareholder position in the U.S. legal system that our data do not capture. Even with all these antitakeover laws, the United States and the United Kingdom still have by far the most takeovers of any country in the world, so their laws are evidently not nearly as antitakeover as those elsewhere.

An inspection of company and bankruptcy laws suggests numerous potentially measurable differences among countries. Here we focus only on some of the most basic rules that observers of corporate governance around the world (e.g., American Bar Association 1989, 1993; White 1993; Institutional Shareholder Services 1994; Investor Responsibility Research Center 1994, 1995; Vishny 1994) believe to be critical to the quality of shareholder and creditor legal rights. Moreover, we focus on variables that prima facie are interpretable as either pro-investor or pro-management since this is the dimension along which we are trying to assess countries and legal families. There are obvious differences in rules between countries, such as, for example, tier structures of boards of directors, that we do not examine because we cannot ascertain which of these rules are more sympathetic to shareholders. Investor rights, as well as the other variables we use in this paper, are summarized in table 1. We discuss individual variables in more detail in the sections in which they are analyzed and present all the data on individual rights that we use in the paper in the relevant tables.

Some Conceptual Issues

Our goal is to establish whether laws pertaining to investor protection differ across countries and whether these differences have consequences for corporate finance. This research design immediately poses some conceptual problems. To begin, some scholars, such as Easterbrook and Fischel (1991), are skeptical that legal rules are binding in most instances, since often firms can opt out of these rules in their corporate charters, which effectively serve as contracts between entrepreneurs and investors. Indeed, in many countries, firms can opt out of some of the rules we examine. As a practical matter, however, it may be costly for firms to opt out of standard legal rules since investors might have difficulty accepting nonstandard contracts and, more important, judges might fail to understand or enforce them. The question of whether legal rules matter is fundamentally empirical: if opting out were cheap and simple, we would not find that legal rules matter for patterns of corporate ownership and finance.

A closely related question is whether more restrictive rules, which reduce the choices available to company founders, are necessarily more protective of shareholders than the alternative of greater flexibility. In an environment of perfect judicial enforcement, the benefits of flexibility probably outweigh the risks when entrepreneurs use nonstandard corporate charters to take advantage of investors, since investors can appeal to a court when they are expropriated in an

TABLE 1

VARIABLES

Variable	Description	Sources
Origin	Identifies the legal origin of the company law or commercial code of each country. Equals one if the origin is English common law, two if the origin is the French commercial code, three if the origin is the German commercial code, and four if the origin is Scandinavian civil law	Reynolds and Flores (1989)
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 nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and zero otherwise	Company law or commercial code
Proxy by mail allowed	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 before meeting	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 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, asset 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 be waived only by a shareholders' vote; equals zero otherwise	Company law or commercial code
Percentage of share capital to call an extraordinary shareholders' meeting	The minimum percentage of ownership of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting; it ranges from 1 to 33 percent	Company law or commercial code
Antidirector rights	An index aggregating the shareholder rights we labeled as ''antidirector 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 be waived only by a shareholders' vote. The index ranges from zero to six	Company law or commercial code
Mandatory dividend	Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It takes a value of zero for countries without such a restriction	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; 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 on filing the reorganization petition. Automatic stay prevents secured creditors from gaining possession of their security. It equals zero if such a 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 nonsecured creditors, such as the government and workers, are given absolute priority	Bankruptcy and reorganization laws
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. Equals zero otherwise	Bankruptcy and reorganization laws

TABLE 1 (*Continued*)

Variable	Description	Sources
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 zero to four	Bankruptcy and reorganization laws
Legal reserve	The minimum percentage of total share capital mandated by corporate law to avoid the dissolution of an existing firm. It takes a value of zero for countries without such a restriction	Company law or commercial code
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 Business International Corp. It ''may be taken to represent investors' assessments of conditions in the country in question.'' Average between 1980 and 1983. Scale from zero to 10; with lower scores, lower efficiency levels	Business International Corp.
Rule of law	Assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for less tradition for law and order (we changed the scale from its original range going from zero to six)	International Country Risk guide
Corruption	ICR's assessment of the corruption in government. Lower scores indicate that ''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 zero to 10, with lower scores for higher levels of corruption (we changed the scale from its original range going from zero to six)	International Country Risk guide

Risk of expropriation	ICR's assessment of the risk of ''outright confiscation'' or ''forced nationalization.'' Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for higher risks	International Country Risk guide
Repudiation of contracts by government	ICR's assessment of the ''risk of a modification in a contract taking the form of a repudiation, postponement, or scaling down'' due to ''budget cutbacks, indigenization pressure, a change in government, or a change in government economic and social priorities.'' Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for higher risks	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 seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A minimum of three companies in each country were studied. The companies represent a cross section of various industry groups; industrial companies represented 70 percent, and financial companies represented the remaining 30 percent	International accounting and auditing trends, Center for International Financial Analysis and Research
Ownership, 10 largest private firms	The average percentage of common shares owned by the three largest shareholders in the 10 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	Moodys International, CIFAR, EXTEL, WorldScope, 20-Fs, Price-Waterhouse, and various country sources
GNP and GNP per capita	Gross national product and gross national product per capita in constant dollars of 1994	World Bank and International Monetary Fund
Gini coefficient	Gini coefficient for income inequality in each country. When the 1990 coefficient is not available, we use the most recent available	Deininger and Squire (1996); World Bank (1993*a*, 1993*b*)

unanticipated way. However, with imperfect enforcement, simple, restrictive, bright-line rules, which require only a minimal effort from the judicial system to enforce, may be superior (Hay, Shleifer, and Vishny 1996). Again, the question does not have a clear theoretical answer, and the issue of how legal rules affect corporate finance is ultimately empirical.

Even if we were to find that legal rules matter, it would be possible to argue that these rules endogenously adjust to economic reality, and hence the differences in rules and outcomes simply reflect the differences in some other, exogenous, conditions across countries. Perhaps some countries chose to have only bank finance of firms for political reasons and then adjusted their laws accordingly to protect banks and discourage shareholders. Some individual rules are probably endogenous. However, this is where our focus on the legal origin becomes crucial. Countries typically adopted their legal systems involuntarily (through conquest or colonization). Even when they chose a legal system freely, as in the case of former Spanish colonies, the crucial consideration was language and the broad political stance of the law rather than the treatment of investor protections. The legal family can therefore be treated as exogenous to a country's structure of corporate ownership and finance. If we find that legal rules differ substantially across legal families and that financing and ownership patterns do as well, we have a strong case that legal families, as expressed in the legal rules, actually cause outcomes.

III. Shareholder Rights

We begin by considering shareholder rights from company laws. The rights measures in this section are refined versions of those presented in our working paper (La Porta et al. 1996).[4]

Because shareholders exercise their power by voting for directors and on major corporate issues, experts focus on voting procedures in evaluating shareholder rights. They include voting rights attached to shares, rights that support the voting mechanism against interference by the insiders, and what we call remedial rights. To begin, investors may be better protected when dividend rights are tightly linked to voting rights, that is, when companies in a country are subject to one-share–one-vote rules (Grossman and Hart 1988; Har-

[4] We made two significant changes: we redefined the cumulative voting variable to also cover the right of minority shareholders for proportional representation, and we added a variable on preemptive rights of minority shareholders to buy new issues of stock (see below). In this and the following sections, all dummies have been defined so that 1 means more protective.

ris and Raviv 1988).[5] When votes are tied to dividends, insiders cannot have substantial control of the company without having substantial ownership of its cash flows, which moderates their taste for (costly) diversion of cash flows relative to payment of dividends. There are many ways out of the one-share–one-vote principle that laws in different countries accommodate. Companies can issue nonvoting shares, low- and high-voting shares, founders' shares with extremely high voting rights, or shares whose votes increase when they are held longer, as in France. Companies can also restrict the total number of votes that any given shareholder can exercise at a shareholders' meeting, regardless of how many votes he or she controls. We say that a country has one share–one vote if none of these practices is allowed by law. In our sample, only 11 countries impose genuine one-share–one-vote rules.

The next six rights, which we refer to as antidirector rights, measure how strongly the legal system favors minority shareholders against managers or dominant shareholders in the corporate decision-making process, including the voting process. First, in some countries, shareholders must show up in person or send an authorized representative to a shareholders' meeting to be able to vote. In other countries, in contrast, they can mail their proxy vote directly to the firm, which both enables them to see the relevant proxy information and makes it easier to cast their votes. In Japan, for example, annual shareholder meetings are concentrated overwhelmingly on a single day in late June, and voting by mail is not allowed for some shareholders, which makes it difficult for shareholders to exercise their votes.

Second, in some countries, law requires that shareholders deposit their shares with the company or a financial intermediary several days prior to a shareholder meeting. The shares are then kept in custody until a few days after the meeting. This practice prevents shareholders from selling their shares for several days around the time of the meeting and keeps from voting shareholders who do not bother to go through this exercise.

Third, a few countries allow cumulative voting for directors, and a few have mechanisms of proportional representation on the board, by which minority interests may name a proportional number of directors. The effect of either rule, in principle, is to give more power for minority shareholders to put their representatives on boards of directors.

[5] One of the E.C. directives recommends the adoption of one-share–one-vote rules throughout the Community. It does not appear that this directive is being incorporated into national laws too rapidly.

Fourth, some countries give minority shareholders legal mechanisms against perceived oppression by directors (in addition to outright fraud, which is illegal everywhere). These mechanisms may include the right to challenge the directors' decisions in court (as in the American derivative suit) or the right to force the company to repurchase shares of the minority shareholders who object to certain fundamental decisions of the management or of the assembly of shareholders, such as mergers or asset sales.

Fifth, some countries grant shareholders a preemptive right to buy new issues of stock, which can be waived only by a shareholder vote. This right is intended to protect shareholders from dilution, whereby shares are issued to favored investors at below-market prices.

Sixth, we look at the percentage of share capital needed to call an extraordinary shareholders' meeting.[6] Presumably, the higher this percentage is, the harder it is for minority shareholders to organize a meeting to challenge or oust the management. This percentage varies around the world from 3 percent in Japan to 33 percent of share capital in Mexico.

For each of the first five antidirector rights measures, a country gets a score of 1 if it protects minority shareholders according to this measure and a score of 0 otherwise. We also give each country a 1 if the percentage of share capital needed to call an extraordinary shareholder meeting is at or below the world median of 10 percent. Finally, we add up these six antidirector rights scores into an aggregate score, which ranges from 0 for Belgium to 5 for Canada and the United States, for example.

The last shareholder rights measure, which we treat differently from others, is the right to a mandatory dividend. In some countries, companies are mandated by law to pay out a certain fraction of their declared earnings as dividends. Because earnings can be misrepresented within the limits allowed by the accounting system, this measure is not as restrictive as it looks. The mandatory dividend right may be a legal substitute for the weakness of other protections of minority shareholders.

Table 2 presents the data on shareholder rights. The values of all variables are listed by country, and countries are organized by legal origin. Columns in table 2 correspond to particular legal provisions concerning shareholder rights, and the values in the tables are dum-

[6] For the United States, our reliance on Delaware presents a problem since the state leaves up to corporations the percentage of shares needed to call an extraordinary shareholder meeting. We use 10 percent for the United States because the majority of U.S. states (27) use this number.

mies equal to one if the country has shareholder protections in that particular area. Table 2 also presents equality of means tests for all the variables by origin.

An examination of world means of the variables in table 2 suggests that relatively few countries have legal rules favoring outside shareholders. Only 22 percent of the countries have one share–one vote, only 27 percent allow cumulative voting or give minorities a right of proportional board representation, only 18 percent allow voting by mail, only 53 percent have some oppressed minorities mechanism, and only 53 percent give minority shareholders a preemptive right to buy new shares.

The other clear result in table 2 is that, for many variables, the origin of laws matters. The means of shareholder rights variables are statistically significantly different between legal families. The two variables in which most legal families are similar are one share–one vote, which is an uncommon restriction everywhere (and never happens in Scandinavia, which is therefore different), and cumulative voting/proportional representation, which is also uncommon everywhere (and again never happens in Scandinavia). For the other variables, the differences in shareholder rights between legal origins are more substantial.

Specifically, two major findings emerge from table 2. First, along a variety of dimensions, common-law countries afford the best legal protections to shareholders. They most frequently (39 percent) allow shareholders to vote by mail, they never block shares for shareholder meetings, they have the highest (94 percent) incidence of laws protecting oppressed minorities, and they generally require relatively little share capital (9 percent) to call an extraordinary shareholder meeting. The only dimension on which common-law countries are not especially protective is the preemptive right to new share issues (44 percent). Still, the common-law countries have the highest average antidirector rights score (4.00) of all legal families. Many of the differences between common-law and civil-law countries are statistically significant. In short, relative to the rest of the world, common-law countries have a package of laws most protective of shareholders.

Second, along a broad range of dimensions, French-civil-law countries afford the worst legal protections to shareholders. Although they look average on one share–one vote (29 percent) and cumulative voting (19 percent) and better than average on preemptive rights (62 percent), they have the lowest (5 percent) incidence of allowing voting by mail, a low (57 percent, though not as low as German-civil-law countries) incidence of not blocking shares for shareholder meetings, a low (29 percent, though not as low as Nor-

TABLE 2

SHAREHOLDER RIGHTS AROUND THE WORLD

Country	One Share–One Vote	Proxy by Mail Allowed	Shares Not Blocked before Meeting	Cumulative Voting/ Proportional Representation	Oppressed Minority	Preemptive Right to New Issues	Percentage of Share Capital to Call an Extraordinary Shareholder Meeting	Antidirector Rights	Mandatory Dividend
	A. Shareholder Rights (1 = Investor Protection Is in the Law)								
Australia	0	1	1	0	1	0	.05[a]	4	.00
Canada	0	1	1	1	1	0	.05	5	.00
Hong Kong	0	1	1	0	1	1	.10	5	.00
India	0	0	1	1	1	1	.10	5	.00
Ireland	0	0	1	0	1	1	.10	4	.00
Israel	0	0	1	0	1	0	.10	3	.00
Kenya	0	0	1	0	1	0	.10	3	.00
Malaysia	1	0	1	0	1	1	.10	4	.00
New Zealand	0	1	1	0	1	0	.05	4	.00
Nigeria	0	0	1	0	1	0	.10	3	.00
Pakistan	1	0	1	1	1	1	.10	5	.00
Singapore	1	0	1	0	1	1	.10	4	.00
South Africa	0	1	1	0	1	1	.05	5	.00
Sri Lanka	0	0	1	0	1	0	.10	3	.00
Thailand	0	0	1	1	0	0	.20[b]	2	.00
United Kingdom	0	1	1	0	1	1	.10	5	.00
United States	0	1	1	1	1	0	.10	5	.00
Zimbabwe	0	0	1	0	1	0	.05	3	.00
English-origin average	**.17**	**.39**	**1.00**	**.28**	**.94**	**.44**	**.09**	**4.00**	**.00**
Argentina	0	0	0	1	1	1	.05	4	.00
Belgium	0	0	0	0	0	0	.20	0	.00
Brazil	1	0	1	0	1	0	.05	3	.50
Chile	1	0	1	1	1	1	.10	5	.30
Colombia	0	0	1	1	0	1	.25	3	.50
Ecuador	0	0	1	0	0	1	.25	2	.50
Egypt	0	0	1	0	0	0	.10	2	.00
France	0	1	0	0	0	1	.10	3	.00
Greece	1	0	0	0	0	1	.05	2	.35

Indonesia	0	0	1	0	0	0	.10	2	.00
Italy	0	0	0	0	0	1	.20	1	.00
Jordan	1	0	1	0	0	0	.25	1	.00
Mexico	0	0	0	0	0	1	.33	1	.00
Netherlands	0	0	0	0	0	1	.10	2	.00
Peru	1	0	1	1	0	1	.20	3	.00
Philippines	0	0	1	1	1	0	open	3	.00
Portugal	0	0	1	0	0	1	.05	3	.00
Spain	0	0	0	1	1	1	.05	4	.00
Turkey	0	0	1	0	0	0	.10	2	.00
Uruguay	1	0	0	0	1	1	.20	2	.20
Venezuela	0	0	1	0	0	0	.20	1	.00
French-origin average	**.29**	**.05**	**.57**	**.29**	**.29**	**.62**	**.15**	**2.33**	**.11**
Austria	0	0	0	0	0	1	.05	2	.00
Germany	0	0	0	0	0	0	.05	1	.00
Japan	1	0	1	1	1	0	.03	4	.00
South Korea	1	0	0	0	1	0	.05	2	.00
Switzerland	0	0	0	0	0	1	.10	2	.00
Taiwan	0	0	0	1	1	0	.03	3	.00
German-origin average	**.33**	**.00**	**.17**	**.33**	**.50**	**.33**	**.05**	**2.33**	**.00**
Denmark	0	0	1	0	0	0	.10	2	.00
Finland	0	0	1	0	0	1	.10	3	.00
Norway	0	1	1	0	0	1	.10	4	.00
Sweden	0	0	1	0	0	1	.10[b]	3	.00
Scandinavian-origin average	**.00**	**.25**	**1.00**	**.00**	**.00**	**.75**	**.10**	**3.00**	**.00**
Sample average	**.22**	**.18**	**.71**	**.27**	**.53**	**.53**	**.11**	**3.00**	**.05**
	B. Tests of Means (*t*-Statistics)								
Common vs. civil law	−.72	3.03*	4.97*	.15	5.59*	−.91	1.48	5.00*	−2.55**
English vs. French origin	−.87	2.82*	3.87*	−.05	5.45*	−1.08	−2.53**	4.73*	−2.67**
English vs. German origin	−.85	3.29*	5.00*	.00	2.83*	.46	2.54**	3.59*	.00
English vs. Scandinavian origin	1.84***	.50	.00	2.55**	17.00*	−1.09	−1.00	1.91***	.00
French vs. German origin	−.22	1.00	−1.78***	−.22	−.96	1.23	2.64**	.00	2.67**
French vs. Scandinavian origin	2.83**	−1.37	−3.87*	2.82**	2.83	−.48	2.43**	−1.06	2.67**
German vs. Scandinavian origin	1.58	−1.00	−5.00*	1.58	2.23***	−1.27	−4.62*	−1.08	.00

NOTE.—Variables are defined in table 1.
[a] As a percentage of votes.
[b] As a percentage of the number of shares.
* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

dic countries) incidence of laws protecting oppressed minorities, and the highest (15 percent) percentage of share capital needed to call an extraordinary shareholders' meeting. The aggregate antidirector rights score is the lowest (2.33) for the French-civil-law countries. The difference in this score between French civil law and common law is large and statistically significant. It is interesting to note that France itself, except for allowing proxy voting by mail and having a preemptive right to new share issues, does not have strong legal protections of shareholders. These results suggest that shareholders in the two most widely spread legal regimes—common law and French civil law—operate in very different legal environments.

The German-civil-law countries are not particularly protective of shareholders either. They have a relatively high frequency of one-share–one-vote rules (because of East Asia), require few votes to call an extraordinary meeting, and offer preemptive rights in a third of the cases. But they usually block shares before shareholder meetings, never allow voting by mail, and have oppressed minority mechanisms in only half of the countries. The average antidirector score for this family is 2.33, exactly the same as that for the French family. In Scandinavia, no country has oppressed minority protections, a one-share–one-vote restriction, or a cumulative voting/proportional representation mechanism, and only Norway allows voting by mail. At the same time, no country blocks shares before a shareholder meeting, and three out of four give shareholders preemptive rights. The average Scandinavian antidirector rights score is 3.

The one remedial measure in table 2, namely mandatory dividend, shows that mandatory dividends are used *only* in French-civil-law countries. This result is broadly consistent with the rest of our evidence and suggests that mandatory dividends are indeed a remedial legal protection for shareholders who have relatively few other legal rights.

The results in panel B of table 2 suggest that the differences in the various measures of shareholder rights between different legal families are often significant and almost always significant when common- and civil-law families are compared. One further question is whether the difference in scores by legal origin just reflects differences in per capita income levels. To address this question, table 3 divides all countries into the bottom 25 percent, middle 50 percent, and top 25 percent by gross national product per capita. The results show, in particular, that antidirector rights scores are independent of per capita income, rejecting the notion that legal rules that are more protective of investors are a reflection of higher per capita income.

In sum, common-law countries have the relatively strongest, and

TABLE 3

DEVELOPMENT AND INVESTOR RIGHTS

Countries Sorted by GNP per Capita	GNP per Capita	One Share–One Vote	Antidirector Rights	Mandatory Dividend	Creditor Rights	Legal Reserve as a Percentage of Capital
	A. Means					
Bottom 25%	705	.17	2.92	.08	3.18	.15
Mid 50%	9,465	.32	3.16	.05	2.13	.16
Highest 25%	25,130	.08	2.75	.00	1.83	.15
Total average	11,156	.22	3.00	.05	2.30	.15
	B. Tests of Means (*t*-Statistics)					
Bottom 25% vs. mid 50%	−4.59*	−.97	−.56	.54	2.08**	−.20
Bottom 25% vs. top 25%	−18.63*	.60	.30	1.48	2.49**	−.05
Mid 50% vs. top 25%	−7.44*	1.58	.85	2.02***	.69	.16

* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

the French-civil-law countries the weakest, protections of shareholders, independent of per capita income. Minority shareholders in Australia can vote by mail, can trade their shares during a shareholders' meeting, are protected from certain expropriations by directors, and need to organize only 5 percent of the votes to call an extraordinary meeting. Minority shareholders in Belgium, in contrast, cannot vote by mail, have their shares blocked during the shareholder meeting, are not protected from expropriation by directors, and need 20 percent of share capital to call for an extraordinary meeting. The differences between legal families come out clearly from this analysis of shareholder rights.

IV. Creditor Rights

Conceptually, creditor rights are more complex than shareholder rights, for two reasons. First, there may be different kinds of creditors, with different interests, so protecting rights of some creditors has the effect of reducing the rights of others. For example, in the case of a default, senior secured creditors may have a simple interest in getting possession of collateral no matter what happens to the firm, whereas junior unsecured creditors may wish to preserve the firm as a going concern so that they can hope to get some of their money back if the firm turns a profit. In assessing creditor rights, we 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.

Second, there are two general creditor strategies of dealing with a defaulting firm: liquidation and reorganization, which require different rights to be effective. The most basic right of a senior collateralized creditor is the right to repossess—and then liquidate or keep—collateral when a loan is in default (see Hart 1995). In some countries, law makes it difficult for such creditors to repossess collateral, in part because such repossession leads to liquidation of firms, which is viewed as socially undesirable. In these countries, creditors may still have powers against borrowers, namely their votes in the decisions for how to reorganize the company. The debate between the wisdom of reorganization and liquidation from the social viewpoint has been extensive (Aghion, Hart, and Moore 1992; White 1993; Baird 1995) and has raised the question of whether both procedures or just one is needed to protect creditors. Thus a country with a perfect liquidation procedure but totally ineffective reorganization might be extremely protective of creditors simply because reorganization never needs to be used. 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.

We use five creditor rights variables in this analysis. First, in some countries, the reorganization procedure imposes an automatic stay on the assets, thereby preventing secured creditors from getting possession of loan collateral. This rule obviously protects managers and unsecured creditors against secured creditors and prevents automatic liquidation. In Greece, for example, secured creditors have the right to foreclose on their property when their claim matures and not when the borrower defaults (Houghton and Atkinson 1993, p. 112). In other countries, in contrast, secured creditors can pull collateral from firms being reorganized without waiting for completion of reorganization, a right that is obviously of value to them.

Second, some countries do not assure the secured creditors the right to collateral in reorganization. In these, admittedly rare, countries, secured creditors are in line behind the government and workers, who have absolute priority over them. In Mexico, for example, various social constituencies need to be repaid before the secured creditors, often leaving the latter with no assets to back up their claims.

Third, management in some countries can seek protection from creditors unilaterally by filing for reorganization, without creditor consent. Such protection is called Chapter 11 in the United States and gives management a great deal of power, since at best creditors can get their money or collateral only with a delay. In other countries, in contrast, creditor consent is needed to file for reorganization, and hence managers cannot so easily escape creditor demands.

Finally, in some countries, management stays pending the resolution of the reorganization procedure, whereas in other countries, such as Malaysia, management is replaced by a party appointed by the court or the creditors. This threat of dismissal may enhance creditors' power.

As with shareholder rights, we use one remedial creditor rights measure, namely the existence of a legal reserve requirement. This requirement forces firms to maintain a certain level of capital to avoid automatic liquidation. It protects creditors who have few other powers by forcing an automatic liquidation before all the capital is stolen or wasted by the insiders.

The results on creditor rights are presented in table 4. In general, the protections of creditor rights analyzed here occur more frequently than the protections of shareholder rights. Nearly half of the countries do not have an automatic stay on assets, 81 percent

TABLE 4

CREDITOR RIGHTS AROUND THE WORLD

Country	No Automatic Stay on Assets	Secured Creditors First Paid	Restrictions for Going into Reorganization	Management Does Not Stay in Reorganization	Creditor Rights	Legal Reserve Required as a Percentage of Capital
	A. Creditor Rights (1 = Creditor Protection Is the Law)					
Australia	0	1	0	0	1	.00
Canada	0	1	0	0	1	.00
Hong Kong	1	1	1	1	4	.00
India	1	1	1	1	4	.00
Ireland	0	1	0	0	1	.00
Israel	1	1	1	1	4	.00
Kenya	1	1	1	1	4	.00
Malaysia	1	1	1	1	4	.00
New Zealand	1	0	1	1	3	.00
Nigeria	1	1	1	1	4	.00
Pakistan	1	1	1	1	4	.00
Singapore	1	1	1	1	4	.00
South Africa	0	1	1	1	3	.00
Sri Lanka	1	0	1	1	3	.00
Thailand	1	1	0	1	3	.10
United Kingdom	1	1	1	1	4	.00
United States	0	1	0	0	1	.00
Zimbabwe	1	1	1	1	4	.00
English-origin average	**.72**	**.89**	**.72**	**.78**	**3.11**	**.01**
Argentina	0	1	0	0	1	.20
Belgium	1	1	0	0	2	.10
Brazil	0	0	1	0	1	.20
Chile	0	1	1	0	2	.20
Colombia	0	0	0	0	0	.50
Ecuador	1	1	1	1	4	.50
Egypt	1	1	1	1	4	.50
France	0	0	0	0	0	.10
Greece	0	0	0	1	1	.33
Indonesia	1	1	1	1	4	.00

Italy	0	1	1	0	2	.20
Jordan	na	na	na	na	na	.25
Mexico	0	0	0	0	0	.20
Netherlands	0	1	1	0	2	.00
Peru	0	0	0	0	0	.20
Philippines	0	0	0	0	0	.00
Portugal	0	1	0	0	1	.20
Spain	1	1	0	0	2	.20
Turkey	0	1	1	0	2	.20
Uruguay	0	1	0	1	2	.20
Venezuela	na	1	na	na	na	.10
French-origin average	**.26**	**.65**	**.42**	**.26**	**1.58**	**.21**
Austria	1	1	1	0	3	.10
Germany	1	1	1	0	3	.10
Japan	0	1	0	1	2	.25
South Korea	1	1	0	1	3	.50
Switzerland	0	1	0	0	1	.50
Taiwan	1	1	0	0	2	1.00
German-origin average	**.67**	**1.00**	**.33**	**.33**	**2.33**	**.41**
Denmark	1	1	1	0	3	.25
Finland	0	1	0	0	1	.00
Norway	0	1	1	0	2	.20
Sweden	0	1	1	0	2	.20
Scandinavian-origin average	**.25**	**1.00**	**.75**	**.00**	**2.00**	**.16**
Sample average	**.49**	**.81**	**.55**	**.45**	**2.30**	**.15**
	B. Tests of Means (t-Statistics)					
Common vs. civil law	2.65*	1.04	1.86***	4.13*	3.61*	−4.82*
English vs. French origin	3.06*	1.75**	1.89***	3.55*	3.61*	−5.75*
English vs. German origin	.25	−1.46	1.74***	2.10**	1.43	−5.21*
English vs. Scandinavian origin	1.83***	−1.46	−.11	7.71*	1.71***	−5.90*
French vs. German origin	−1.85***	−3.20*	.37	−.32	−1.29	−2.14**
French vs. Scandinavian origin	.05	−3.20*	−1.18	2.54**	−.60	.59
German vs. Scandinavian origin	1.27	.00	−1.26	1.58	.63	1.37

* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

pay secured creditors first, over half restrict the managers' right to seek protection from creditors unilaterally, and 45 percent remove management in reorganization proceedings.

As in table 2, we see that, for many creditor rights, the legal origin matters. Common-law countries offer creditors stronger legal protections against managers. They have the highest (72 percent) incidence of no automatic stay on assets; with two exceptions, they guarantee that secured creditors are paid first (the German-civil-law and Scandinavian families have no exceptions); they frequently (72 percent, behind only Scandinavia) preclude managers from unilaterally seeking court protection from creditors; and they have far and away the highest (78 percent) incidence of removing managers in reorganization proceedings. The United States is actually one of the most anticreditor common-law countries: it permits automatic stay on assets, allows unimpeded petition for reorganization, and lets managers keep their jobs in reorganization. The average aggregate creditor rights score for common-law countries is 3.11—by far the highest among the four families—but this score is only 1 for the United States.

The French-civil-law countries offer creditors the weakest protections. Few of them (26 percent, tied with Scandinavia) have no automatic stay on assets; relatively few (65 percent) assure that secured creditors are paid first; few (42 percent—still more than German-civil-law countries) place restrictions on managers seeking court protection from creditors; and relatively few (26 percent) remove managers in reorganization proceedings. The average aggregate creditor rights score for the French-civil-law countries is 1.58, or roughly half of that for the common-law family.

On some measures, countries in the German-civil-law family are strongly pro-creditor. For instance, 67 percent of them have no automatic stay, and secured creditors in all of them are paid first. On the other hand, relatively few of these countries (33 percent) prevent managers from getting protection from creditors unilaterally, and most (67 percent) allow managers to stay in reorganization. One view of this evidence is that the German-civil-law countries are very responsive to secured creditors by not allowing automatic stay and by letting them pull collateral. As a consequence of making liquidation easy, these countries rely less on reorganization of defaulting firms, and hence being soft on such firms by letting managers stay may not be a big problem. The overall average creditor rights score of 2.33 for the German family may therefore understate the extent to which secured creditors are protected.

Finally, Scandinavia has an overall average score of 2.00, which is

a bit lower than that of the German family but higher than that of the French.

The evidence on the one remedial pro-creditor legal rule in the sample, the legal reserve requirement, shows that it is almost never used in common-law countries, where other investor protections presumably suffice, but is more common in all civil-law families. Since this requirement is likely to protect unsecured creditors in particular, it is not surprising that it is relatively common in the German-civil-law countries, which tend to be as unprotective as the French-civil-law countries of unsecured creditors. The evidence suggests that, for creditors as well, remedial rights are used as a substitute for the weakness of other investor protections.

From table 4, we see that the ranking of legal families is roughly the same for creditor and shareholder protections. It is not the case that some legal families protect shareholders and others protect creditors. This result can be confirmed formally by looking at the (unreported) correlations of creditor and shareholder rights scores across countries, which are generally positive. The one possible exception is that German-civil-law countries are protective of secured creditors, though generally not of shareholders. A final interesting result, presented in table 3, is that creditor rights are, if anything, stronger in poorer than in richer countries, perhaps because poor countries adapt their laws to facilitate secured lending for lack of other financing opportunities.

In summary so far, laws differ a great deal across countries, and in particular they differ because they come from different legal families. Relatively speaking, common-law countries protect investors the most, and French-civil-law countries protect them the least. German-civil-law countries are in the middle, though closer to the civil-law group. The one exception is the strong protections that German-civil-law countries afford secured creditors. Scandinavian countries are in the middle as well. The evidence also indicates that these results are not a consequence of richer countries' having stronger investor rights; if anything, the results for creditors are the reverse.[7]

If poor investor protections are actually costly to companies in terms of their ability to raise funds, then do countries compensate for these shortcomings in other ways? We have already shown that French-civil-law countries have a higher incidence of remedial legal protections, such as mandatory dividends and legal reserves. But

[7] We have also examined whether investor rights are a consequence of geography by dividing the world into Australia, Europe, Africa, Asia, and America. They do not appear to be.

there may be other strategies to compensate, at least in part, for investor-unfriendly laws. One of them—examined in Section V—is strict and effective enforcement of the laws that do exist. The other—examined in Section VI—is concentrated ownership.

V. Enforcement

In principle, a strong system of legal enforcement could substitute for weak rules since active and well-functioning courts can step in and rescue investors abused by the management. To address these issues, we examine proxies for the quality of enforcement of these rights, namely estimates of ''law and order'' in different countries compiled by private credit risk agencies for the use of foreign investors interested in doing business in the respective countries. We use five of these measures: efficiency of the judicial system, rule of law, corruption, risk of expropriation—meaning outright confiscation or forced nationalization—by the government, and likelihood of contract repudiation by the government. The first two of these measures obviously pertain to law enforcement proper; the last three deal more generally with the government's stance toward business. Some of these measures have been previously shown to affect national growth rates (Knack and Keefer 1995).

In addition, we use an estimate of the quality of a country's accounting standards. Accounting plays a potentially crucial role in corporate governance. For investors to know anything about the companies they invest in, basic accounting standards are needed to render company disclosures interpretable. Even more important, contracts between managers and investors typically rely on the verifiability in court of some measures of firms' income or assets. If a bond covenant stipulates immediate repayment when income falls below a certain level, this level of income must be verifiable for the bond contract to be enforceable in court even in principle. Accounting standards might then be necessary for financial contracting, especially if investor rights are weak (Hay et al. 1996). The measure of accounting standards we use, like the rule of law measures, is a privately constructed index based on examination of company reports from different countries. Unfortunately, it is available for only 44 countries, 41 of which are in our sample.[8]

[8] The measure of accounting standards we use was published in 1991. At around the same time, European countries began to harmonize their accounting standards under pressure from the European Community. Over time, accounting standards may converge in Europe. However, for the purposes of our analysis of country differences and of determinants of ownership, historical differences in the quality of standards are obviously more important than the future convergence.

Table 5 presents country scores for the various rule of law measures, as well as for their accounting standards. It arranges countries by legal origin and presents tests of equality of means between families. The table suggests that quality of law enforcement differs across legal families. In law enforcement, Scandinavian countries are clearly on top, with German-civil-law countries close behind. These families have the highest scores of any group on the efficiency of the judicial system, the rule of law, corruption, risk of expropriation, and risk of contract repudiation by the government. On all the measures of rule of law, common-law countries are behind the leaders but ahead of the French-civil-law countries. The statistical significance of these results varies from variable to variable.

With quality of accounting, Scandinavia still comes out on top, though common-law countries are second, statistically significantly ahead of the German-civil-law countries. The French family has the weakest quality of accounting.

These results do not support the conclusion that the quality of law enforcement substitutes or compensates for the quality of laws. An investor 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.

An inspection of table 5 suggests that, for the enforcement measures, the level of per capita income may have a more important confounding effect than it did for the laws themselves. In table 6, we investigate whether quality of enforcement is different in different legal families through regression analysis across countries, controlling for each country's level of per capita income. The omitted dummy in the regressions is the one for common-law countries.[9]

By every single measure, richer countries have higher quality of law enforcement. Nonetheless, even when one controls for per capita income, the legal family matters for the quality of enforcement and the accounting standards. A great deal of the cross-sectional variance in these rule of law scores is explained by per capita income and the legal origin. In some cases, these variables together explain around 80 percent of the cross-sectional variation in rule of law scores, with the lion's share of the explanatory power coming from per capita income.

Once income is controlled for, French-civil-law countries still score lower on every single measure, and statistically significantly

[9] We have also estimated these equations using Tobits, with very similar results. One difference is that the Tobit procedure does not produce a standard error on the Scandinavian dummy because all Scandinavian countries have the same values for some of the variables.

TABLE 5

RULE OF LAW

COUNTRY	ENFORCEMENT VARIABLES					ACCOUNTING: Rating on Accounting Standards	GNP PER CAPITA (U.S. $)
	Efficiency of Judicial System	Rule of Law	Corruption	Risk of Expropriation	Risk of Contract Repudiation		
	A. Country Scores						
Australia	10.00	10.00	8.52	9.27	8.71	75	17,500
Canada	9.25	10.00	10.00	9.67	8.96	74	19,970
Hong Kong	10.00	8.22	8.52	8.29	8.82	69	18,060
India	8.00	4.17	4.58	7.75	6.11	57	300
Ireland	8.75	7.80	8.52	9.67	8.96	na	13,000
Israel	10.00	4.82	8.33	8.25	7.54	64	13,920
Kenya	5.75	5.42	4.82	5.98	5.66	na	270
Malaysia	9.00	6.78	7.38	7.95	7.43	76	3,140
New Zealand	10.00	10.00	10.00	9.69	9.29	70	12,600
Nigeria	7.25	2.73	3.03	5.33	4.36	59	300
Pakistan	5.00	3.03	2.98	5.62	4.87	na	430
Singapore	10.00	8.57	8.22	9.30	8.86	78	19,850
South Africa	6.00	4.42	8.92	6.88	7.27	70	2,980
Sri Lanka	7.00	1.90	5.00	6.05	5.25	na	600
Thailand	3.25	6.25	5.18	7.42	7.57	64	2,110
United Kingdom	10.00	8.57	9.10	9.71	9.63	78	18,060
United States	10.00	10.00	8.63	9.98	9.00	71	24,740
Zimbabwe	7.50	3.68	5.42	5.61	5.04	na	520
English-origin average	**8.15**	**6.46**	**7.06**	**7.91**	**7.41**	**69.62**	**9,353**
Argentina	6.00	5.35	6.02	5.91	4.91	45	7,220
Belgium	9.50	10.00	8.82	9.63	9.48	61	21,650
Brazil	5.75	6.32	6.32	7.62	6.30	54	2,930
Chile	7.25	7.02	5.30	7.50	6.80	52	3,170
Colombia	7.25	2.08	5.00	6.95	7.02	50	1,400
Ecuador	6.25	6.67	5.18	6.57	5.18	na	1,200
Egypt	6.50	4.17	3.87	6.30	6.05	24	660
France	8.00	8.98	9.05	9.65	9.19	69	22,490
Greece	7.00	6.18	7.27	7.12	6.62	55	7,390

Indonesia	2.50	3.98	2.15	7.16	6.09	na	740
Italy	6.75	8.33	6.13	9.35	9.17	62	19,840
Jordan	8.66	4.35	5.48	6.07	4.86	na	1,190
Mexico	6.00	5.35	4.77	7.29	6.55	60	3,610
Netherlands	10.00	10.00	10.00	9.98	9.35	64	20,950
Peru	6.75	2.50	4.70	5.54	4.68	38	1,490
Philippines	4.75	2.73	2.92	5.22	4.80	65	850
Portugal	5.50	8.68	7.38	8.90	8.57	36	9,130
Spain	6.25	7.80	7.38	9.52	8.40	64	13,590
Turkey	4.00	5.18	5.18	7.00	5.95	51	2,970
Uruguay	6.50	5.00	5.00	6.58	7.29	31	3,830
Venezuela	6.50	6.37	4.70	6.89	6.30	40	2,840
French-origin average	**6.56**	**6.05**	**5.84**	**7.46**	**6.84**	**51.17**	**7,102**
Austria	9.50	10.00	8.57	9.69	9.60	54	23,510
Germany	9.00	9.23	8.93	9.90	9.77	62	23,560
Japan	10.00	8.98	8.52	9.67	9.69	65	31,490
South Korea	6.00	5.35	5.30	8.31	8.59	62	7,660
Switzerland	10.00	10.00	10.00	9.98	9.98	68	35,760
Taiwan	6.75	8.52	6.85	9.12	9.16	65	10,425
German-origin average	**8.54**	**8.68**	**8.03**	**9.45**	**9.47**	**62.67**	**22,067**
Denmark	10.00	10.00	10.00	9.67	9.31	62	26,730
Finland	10.00	10.00	10.00	9.67	9.15	77	19,300
Norway	10.00	10.00	10.00	9.88	9.71	74	25,970
Sweden	10.00	10.00	10.00	9.40	9.58	83	24,740
Scandinavian-origin average	**10.00**	**10.00**	**10.00**	**9.66**	**9.44**	**74.00**	**24,185**
Sample average	**7.67**	**6.85**	**6.90**	**8.05**	**7.58**	**60.93**	**11,156**
	B. Tests of Means between Origins (*t*-Statistics)						
Common vs. civil law	1.27	−.77	.39	−.46	−.51	3.12*	−.94
English vs. French origin	2.65*	.51	1.79***	.90	1.06	4.66*	.85
English vs. German origin	−.41	−1.82***	−.93	−2.19**	−2.79*	2.22**	−2.86*
English vs. Scandinavian origin	−3.78*	−15.57*	−5.38***	−2.06**	−2.26**	−1.05	−3.24*
French vs. German origin	−2.53*	−2.55*	−2.49*	−3.20*	−3.90*	−2.10**	−3.79*
French vs. Scandinavian origin	−9.34*	−20.80*	−9.77*	−2.94*	−3.17*	−3.32*	−4.28*
German vs. Scandinavian origin	−2.06***	−11.29*	−2.88*	−.63	.10	−2.66**	−.36

* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

TABLE 6

Ordinary Least Squares Regressions: Cross Section of 49 Countries

	Dependent Variable											
	Efficiency of Judiciary System ($N = 49$)		Rule of Law ($N = 49$)		Corruption ($N = 49$)		Risk of Expropriation ($N = 49$)		Repudiation of Contracts by Government ($N = 49$)		Accounting Standards ($N = 41$)	
Independent Variable	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Log of GNP per capita	.8421*	.9763*	1.4761*	1.5541*	1.3088*	1.4020*	.9099*	.9679*	.9951*	1.0976*	4.3348*	5.7747*
	(.1450)	(.1355)	(.1584)	(.1379)	(.1138)	(.0993)	(.0932)	(.0772)	(.0832)	(.0734)	(1.2453)	(1.2908)
Civil-law dummy[a]	...	−1.3774*	...	−.3642	...	−1.1388*	...	−.3855***	...	−.4111***	...	−14.331*
		(.4235)		(.4290)		(.3024)		(.2132)		(.2228)		(2.7407)
French origin	−1.6609*	...	−.5250	...	−1.3236*	...	−.5164**	...	−.6459**	...	−17.366*	...
	(.4796)		(.4563)		(.3190)		(.2518)		(.2520)		(2.9445)	
German origin	−1.0305***	...	−.2715	...	−1.2422*	...	−.0009	...	.3803***	...	−11.890*	...
	(.6033)		(.6312)		(.4749)		(.2097)		(.1946)		(2.9104)	
Scandinavian origin	.2392	...	.7174	...	.4369	...	.0054	...	.1300	...	−1.5272	...
	(.3550)		(.4681)		(.3152)		(.2242)		(.2095)		(4.7556)	
Intercept	1.2677	.1702	−5.6050*	−6.2421*	−3.6367*	−4.3986*	.4732	−.0018	−.7290	−1.5671*	31.807*	19.249
	(1.3598)	(1.2862)	(1.3600)	(1.2087)	(.9881)	(.8711)	(.8431)	(.7181)	(.7250)	(.6493)	(10.844)	(11.442)
Adjusted R^2	.5719	.5185	.7744	.7605	.8442	.8056	.8120	.7998	.8465	.8146	.6125	.5131

Note.—Robust standard errors are in parentheses.

[a] The dummy variable civil law takes a value equal to one when the country belongs to the civil-law tradition (i.e., all French, German, and Scandinavian codes) and zero when the country belongs to the common-law tradition (i.e., English common law).

* Significant at the 1 percent level.

** Significant at the 5 percent level.

*** Significant at the 10 percent level.

lower for almost all measures, than the common-law countries do. However, German-civil-law countries now tend to score lower than the common-law countries on all measures other than repudiation of contracts by government, although the effect is significant only for the efficiency of the judiciary and the accounting standards. Scandinavian countries are similar to common-law countries in rule of law measures. The regression results continue to show that legal families with investor-friendlier laws are also the ones with stronger enforcement of laws. Poor enforcement and accounting standards aggravate, rather than cure, the difficulties faced by investors in the French-civil-law countries.

VI. Ownership

In this section, we explore the hypothesis that companies in countries with poor investor protection have more concentrated ownership of their shares. There are at least two reasons why ownership in such countries would be more concentrated. First, large, or even dominant, shareholders who monitor the managers might need to own more capital, ceteris paribus, to exercise their control rights and thus to avoid being expropriated by the managers. This would be especially true when there are some legal or economic reasons for large shareholders to own significant cash flow rights as well as votes. Second, when they are poorly protected, small investors might be willing to buy corporate shares only at such low prices that make it unattractive for corporations to issue new shares to the public. Such low demand for corporate shares by minority investors would indirectly stimulate ownership concentration. Of course, it is often efficient to have some ownership concentration in companies since large shareholders might monitor managers and thus increase the value of the firm (Shleifer and Vishny 1986). But with poor investor protection, ownership concentration becomes a substitute for legal protection, because only large shareholders can hope to receive a return on their investment.

To evaluate this hypothesis, we have assembled a database of up to the 10 largest (by market capitalization) nonfinancial (i.e., no banks or insurance companies), domestic (i.e., no foreign multinationals), totally private (i.e., no government ownership), publicly traded (i.e., not 100 percent privately held) companies in each country in our sample. For some countries, including Egypt, India, Nigeria, Philippines, and Zimbabwe, we could not find 10 such companies and settled for at least five.

For each company, we collected data on its three largest shareholders and computed the combined (cash flow) ownership stake

of these three shareholders. We did not correct for the possibility that some of the large shareholders are affiliated with each other or that the company itself owns the shares of its shareholders. Both of these corrections would raise effective concentration of cash flow ownership. On the other hand, we also did not examine the complete ownership structure of firms, taking account of pyramidal structures and the fact that corporate shareholders themselves have owners. Doing this is likely to reduce our measure of ownership concentration. Finally, we could not distinguish empirically between large shareholders who are the management, are affiliated with the management, or are separate from the management. It is not clear that a conceptual line between management and, say, a 40 percent shareholder can be drawn.

Subject to these caveats, it is possible to construct measures of ownership concentration for 45 of our 49 countries. For each country, we took the average and the median ownership stake of the three largest shareholders among its 10 largest publicly traded companies. This measure resembles measures of ownership concentration used for American companies by Demsetz and Lehn (1985) and Mørck, Shleifer, and Vishny (1988).

Table 7 presents, by legal origin, this concentration variable for each country. In the world as a whole, the average ownership of the three largest shareholders is 46 percent, and the median is 45 percent. Dispersed ownership in large public companies is simply a myth. Even in the United States, the average for the 10 most valuable companies is 20 percent (which is partly explained by the fact that Microsoft, Walmart, Coca-Cola, and Intel are on the list and all have significant ownership concentration), and the median is 12 percent. The average concentration measure we use is under 30 percent only for the United States, Australia, United Kingdom, Taiwan, Japan, Korea, and Sweden. Presumably, if we looked at smaller companies, the numbers we would get for ownership concentration would be even larger. The finance textbook model of management faced by multitudes of dispersed shareholders is an exception and not the rule.

Table 7 also shows that ownership concentration varies by legal origin. By far the highest concentration of ownership is found in the French-civil-law countries, with the average ownership by the three largest shareholders a whopping 54 percent for the 10 largest nongovernment firms. The lowest concentration, in the German-civil-law countries, is 34 percent. This puzzlingly low concentration comes from East Asia, where as we already mentioned company law has been significantly influenced by the United States, rather than from Germany, Austria, or Switzerland. Scandinavian countries are also

TABLE 7

OWNERSHIP OF 10 LARGEST NONFINANCIAL DOMESTIC FIRMS BY LARGE SHAREHOLDERS: CROSS SECTION OF 49 COUNTRIES

COUNTRY	OWNERSHIP BY THREE LARGEST SHAREHOLDERS		AVERAGE MARKET CAPITALIZATION OF FIRMS (Millions of U.S. $)
	Mean	Median	
	A. Ownership		
Australia	.28	.28	5,943
Canada	.40	.24	3,015
Hong Kong	.54	.54	4,282
India	.40	.43	1,721
Ireland	.39	.36	944
Israel	.51	.55	428
Kenya	na	na	27
Malaysia	.54	.52	2,013
New Zealand	.48	.51	1,019
Nigeria	.40	.45	39
Pakistan	.37	.41	49
Singapore	.49	.53	1,637
South Africa	.52	.52	6,238
Sri Lanka	.60	.61	4
Thailand	.47	.48	996
United Kingdom	.19	.15	18,511
United States	.20	.12	71,650
Zimbabwe	.55	.51	28
English-origin average	**.43**	**.42**	**6,586**
Argentina	.53	.55	2,185
Belgium	.54	.62	3,467
Brazil	.57	.63	1,237
Chile	.45	.38	2,330
Colombia	.63	.68	457
Ecuador	na	na	na
Egypt	.62	.62	104
France	.34	.24	8,914
Greece	.67	.68	163
Indonesia	.58	.62	882
Italy	.58	.60	3,140
Jordan	na	na	63
Mexico	.64	.67	2,984
Netherlands	.39	.31	6,400
Peru	.56	.57	154
Philippines	.57	.51	156
Portugal	.52	.59	259
Spain	.51	.50	1,256
Turkey	.59	.58	477
Uruguay	na	na	na
Venezuela	.51	.49	423
French-origin average	**.54**	**.55**	**1,844**
Austria	.58	.51	325
Germany	.48	.50	8,540
Japan	.18	.13	26,677
South Korea	.23	.20	1,034

TABLE 7 (*Continued*)

Country	Ownership by Three Largest Shareholders		Average Market Capitalization of Firms (Millions of U.S. $)
	Mean	Median	
	A. Ownership		
Switzerland	.41	.48	9,578
Taiwan	.18	.14	2,186
German-origin average	**.34**	**.33**	**8,057**
Denmark	.45	.40	1,273
Finland	.37	.34	1,980
Norway	.36	.31	1,106
Sweden	.28	.28	6,216
Scandinavian-origin average	**.37**	**.33**	**2,644**
Sample average	**.46**	**.45**	**4,521**
	B. Tests of Means (*t*-Statistics)		
Common vs. civil law	−1.10	−.91	1.00
English vs. French origin	−3.24*	−2.68*	1.22
English vs. German origin	1.38	1.31	−.20
English vs. Scandinavian origin	1.05	1.22	.46
French vs. German origin	3.87*	3.29*	−2.61**
French vs. Scandinavian origin	3.93*	3.32*	−.61
German vs. Scandinavian origin	−.24	−.06	1.05

NOTE.—A firm is considered privately owned if the state is not a known shareholder in it.
* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

relatively low, with a 37 percent concentration. Finally, common-law countries are in the middle, with a 43 percent average ownership concentration. The differences between the French and other legal families are statistically significant, although other differences are not. In sum, these data indicate that the French-civil-law countries have unusually high ownership concentration. These results are at least suggestive that concentration of ownership is an adaptation to poor legal protection.

In table 8, we examine empirically the determinants of ownership concentration, in two steps. First, we regress ownership concentration on legal origin dummies and several control variables to see whether origin matters. The controls we use are (the logarithm of) GNP per capita on the theory that richer countries may have different ownership patterns; (the logarithm of) total GNP on the theory that larger economies have larger firms, which might therefore have a lower ownership concentration; and the Gini coefficient for a country's income on the theory that more unequal societies have a

TABLE 8

ORDINARY LEAST SQUARES REGRESSIONS: CROSS SECTION OF 49 COUNTRIES

Dependent Variable: Mean Ownership

Independent Variable	Basic Regression	Shareholder and Creditor Rights
Log of GNP per capita	.0077	.0397
	(.0097)	(.0242)
Log of GNP	−.0442*	−.0428*
	(.0119)	(.0118)
Gini coefficient	.0024***	.0027
	(.0014)	(.0023)
Rule of law		−.0143
		(.0115)
Accounting		−.0029***
		(.0016)
French origin	.1296*	.0733
	(.0261)	(.0802)
German origin	−.0113	−.0025
	(.0666)	(.0728)
Scandinavian origin	−.0496	−.0430
	(.0371)	(.0473)
Antidirector rights		−.0315**
		(.0150)
One share–one vote		−.0497
		(.0406)
Mandatory dividend		.2197***
		(.1113)
Creditor rights		−.0128
		(.0171)
Legal reserve required		−.2237**
		(.0766)
Intercept	.7785*	.8686*
	(.1505)	(.2952)
Number of observations	45	39
Adjusted R^2	.5582	.7348

NOTE.—Variables are defined in table 1. Robust standard errors are in parentheses.
* Significant at the 1 percent level.
** Significant at the 5 percent level.
*** Significant at the 10 percent level.

higher ownership concentration. Second, we add to the first regression several measures of legal protections, including accounting standards, enforcement quality, shareholder rights, creditor rights, and remedial rights. Given the large number of variables collected for this paper, we cannot estimate all the possible regressions, and we need to make some choices. We pick ''rule of law'' as our measure of quality of enforcement and use aggregate antidirector and creditor rights scores from tables 2 and 4. The results we present are representative of other specifications.

The first regression in table 8, with all 45 observations, has an

adjusted R^2 of 56 percent. It shows that larger economies have a lower ownership concentration and more unequal countries have a higher ownership concentration, consistent with the conjectured effects of these controls. In addition, this regression confirms the sharply higher concentration of ownership in the French-civil-law countries. The second regression in table 8 adds investor rights, rule of law, and accounting standards. It has only 39 observations because the data on accounting standards are incomplete. Still, the adjusted R^2 rises to 73 percent. The coefficient on the logarithm of GNP remains significant, but not that on the Gini coefficient. The coefficient on the French-origin dummy turns insignificant, which suggests that our measures of investor protections actually capture the limitations of the French-civil-law system. Indeed, countries with better accounting standards have a (marginally) statistically significantly lower concentration of ownership, though rule of law is insignificant. A 20-point increase in the accounting score (roughly the distance between the common-law and French-civil-law averages) reduces average ownership concentration by six percentage points. Countries with better antidirector rights, as measured by our aggregate variable, also have a statistically significantly lower concentration of ownership. A 1.6-point increase in the antidirector rights score (roughly the distance between common-law and French-civil-law averages) reduces ownership concentration by five percentage points. In contrast, one share–one vote is not significant.

The creditor rights score is insignificant. One could argue that when creditor rights are good, bank borrowing becomes more common, and small shareholders can free-ride on the monitoring by banks, making dispersed ownership possible. One could alternatively argue that easier bank borrowing enables firms to finance their investment through debt rather than equity, leading to a higher ownership concentration in equilibrium.

Finally, the regression shows a large positive effect of the mandatory dividend rule and a large negative effect of the legal reserve requirement on ownership concentration. The former variable is correlated with the French origin and the latter with the German origin.

Some of our independent variables, but particularly accounting standards, might be endogenous. Countries that for some reason have heavily concentrated ownership and small stock markets might have little use for good accounting standards, and so fail to develop them. The causality in this case would go from ownership concentration to accounting standards rather than the other way around. Since we have no instruments that we believe determine accounting but not ownership concentration, we cannot reject this hypothesis.

More generally, the only truly exogenous variable in these regressions is the legal origin, and hence the result that is most plausibly interpreted as causal is the positive effect of French origin on ownership concentration.

In sum, the message of this section is that the quality of legal protection of shareholders helps determine ownership concentration, accounting for the higher concentration of ownership in the French-civil-law countries. The results support the idea that heavily concentrated ownership results from, and perhaps substitutes for, weak protection of investors in a corporate governance system. The evidence indicates that weak laws actually make a difference and may have costs. One of these costs of heavily concentrated ownership in large firms is that their core investors are not diversified. The other cost is that these firms probably face difficulty raising equity finance, since minority investors fear expropriation by managers and concentrated owners.

VII. Conclusion

In this paper, we have examined laws governing investor protection, the quality of enforcement of these laws, and ownership concentration in 49 countries around the world. The analysis suggests three broad conclusions.

First, laws differ markedly around the world, though in most places they tend to give investors a rather limited bundle of rights. In particular, countries whose legal rules originate in the common-law tradition tend to protect investors considerably more than the countries whose laws originate in the civil-law, and especially the French-civil-law, tradition. The German-civil-law and the Scandinavian countries take an intermediate stance toward investor protections. There is no clear evidence that different countries favor different types of investors; the evidence rather points to a relatively stronger stance favoring all investors in common-law countries. This evidence confirms our basic hypothesis that being a shareholder, or a creditor, in different legal jurisdictions entitles an investor to very different bundles of rights. These rights are determined by laws; they are not inherent in securities themselves.

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

dards. The quality of law enforcement, unlike the legal rights themselves, improves sharply with the level of income.

Third, the data support the hypothesis that countries develop substitute mechanisms for poor investor protection. Some of these mechanisms are statutory, as in the case of remedial rules such as mandatory dividends or legal reserve requirements. We document the higher incidence of such adaptive legal mechanisms in civil-law countries. Another adaptive response to poor investor protection is ownership concentration. We find that ownership concentration is extremely high around the world, consistent with our evidence that laws, on average, are only weakly protective of shareholders. In an average country, close to half the equity in a publicly traded company is owned by the three largest shareholders. Furthermore, good accounting standards and shareholder protection measures are associated with a lower concentration of ownership, indicating that concentration is indeed a response to poor investor protection.

The ultimate question, of course, is whether countries with poor investor protections—either laws or their enforcement—actually do suffer. Recent research has begun to provide partial answers to this question. King and Levine (1993) and Levine and Zervos (1998) find that developed debt and equity markets contribute to economic growth. In a similar vein, Rajan and Zingales (1998) find that countries with better developed financial systems show superior growth in capital-intensive sectors that rely particularly heavily on external finance. Levine (1998) confirms the King-Levine findings that financial development promotes economic growth using our legal origin variable as an instrument for his measures of financial development. And finally, La Porta et al. (1997) show that countries with poor investor protections indeed have significantly smaller debt and equity markets.[10] Taken together, this evidence describes a link from the legal system to economic development. It is important to remember, however, that while the shortcomings of investor protection described in this paper appear to have adverse consequences for financial development and growth, they are unlikely to be an insurmountable bottleneck. France and Belgium, after all, are both very rich countries.

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[10] La Porta et al. (1997) use the original La Porta et al. (1996) data. We have reconfirmed their results using the refined measures presented in this paper.

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