Coase and the Reform of Securities Markets

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Do legal rules matter for economic outcomes? Can changing the details of specific laws affect overall institutions in a way that will have a significant short-term impact? Is it particularly effective to change securities law and regulation? For all three questions, a common answer in both economics and law is "no." The intellectual underpinning for this position is influential work by Ronald Coase, a Nobel prize winner (Coase 1960). Coase explained the consequences of individuals and private firms being able to enter into contracts as they please. As long as the enforcement costs of these contracts are low, private parties can find ways to contract around the law. Today, three main Coasian positions deny the importance of changing the law underpinning commercial and securities transactions.

Easterbrook and Fischel (1991) argue that firms can commit themselves to treat investors properly through a variety of mechanisms. Law may make things more complicated, but firms and investors can always reach efficient arrangements. As a consequence, all countries should be able to achieve similar and efficient financial arrangements for firms, so the details of the law do not matter.

Also in the Coasian spirit, Berglof and von Thadden (1999) argue that continental European countries have developed institutions that allow companies to find ways to enter enforceable contracts with investors. The law may have shortcomings, but the political process and firm-specific actions can generate other ways of providing effective guarantees to investors – for example, by mandating certain forms of government

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intervention or establishing a particular ownership structure and dividend policy. Bringing United States-type institutions into Europe or into developing and transition countries would not be helpful and could even be disruptive. In this view, the arrangements may differ across countries, but in all cases firms should be able to finance their investment.

Even among scholars who are convinced legal rules matter, there is a Coasian skepticism about whether reforming securities laws would have large effects. Coffee (1999a, 1999b) argues that while U.S. firms derive important advantages from the U.S. legal system, other countries are not converging by changing their rules, presumably because this is both difficult and ineffective. Instead, primarily a process of "functional" convergence occurs, through which firms choose to adopt U.S.-type private contracts with their investors, by issuing American Depositary Receipts, for example.

These Coasian arguments for the irrelevance of legal rules are highly plausible. However, they are rejected by the data. Recent research shows that the legal rules protecting investors matter in many ways, that other institutions do not adapt sufficiently, and that changing domestic legal rules—in particular, through the reform of securities markets—can have a big impact on financial development. We are also moving closer to a theoretical understanding of why exactly these Coasian positions are not correct and what this implies for standard models of economics and finance.

Legal institutions are strongly correlated with financial development. Countries with less protection for minority shareholders have smaller equity markets, other things being equal, and use less outside finance (La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) 1997a and 1998). Across the world, the quality of legal institutions is strongly correlated with "legal origin," meaning whether the country's institutions derive from common law or civil law tradition (LLSV 1998). Protection for minority shareholders is weaker in countries with a civil law tradition.

Legal institutions also affect economic prosperity. For countries that were previously European colonies, Acemoglu, Johnson, and Robinson (2000) find that three-quarters of the difference in income per capita is due to long-standing differences in institutions. Part of this difference is due to legal origin, but for this particular set of countries the way in which they were colonized appears to matter at least as much as who colonized them.

The evidence indicates that other domestic institutions adapt to some extent but not enough to offset weak legal protection. The government has some limited ability to act directly to compensate for weak investor protection, by owning banks, for example (LLS 1999b). Private companies in civil law countries have developed various mechanisms to improve their investor relations, but these mechanisms are far from perfect. In civil law countries, significant loopholes exist through which value can be

"tunneled" legally out of a company (Johnson, La Porta, Lopez-de-Silanes, and Shleifer 2000).

Laws and other institutions providing investor protection are persistent and hard to change. But this does not mean that legal reform is ineffective. Among the countries with relatively strong legal systems, a move is on to establish stronger investor protection for important segments of the stock market. Germany leads the way in this regard, and the initial effects have been impressive (Goyer 1999; Johnson 1999); other European countries are following. Recent changes in Korea have also had positive effects (Cho 2000; Kim 2000).

Among countries with relatively weak legal systems, the evidence indicates that strong stock market regulation can act as an effective substitute for court enforcement of contracts (Glaeser, Johnson, and Shleifer 2001). The danger is that a strong regulator will act in a capricious manner and undermine economic freedom, but Poland provides an example of conditions under which a strong independent stock market regulator can create a well-functioning stock market, despite a weak judiciary. In all the success cases of capital market development, good legal rules are of paramount importance.

There is a good theoretical explanation for why the Coasian arguments fail. Ultimately, the only way to enforce a contract between managers and shareholders is through legal action of some kind. If a firm in a weak legal system promises to treat investors well but then suffers an adverse shock, the manager who controls the firm has an incentive to renege on this promise. Absent strong domestic laws and an effective judiciary, or a tough but fair regulator, there is no way to protect investors.

Recent work also explores the theoretical implications of this failure. Standard models need to be modified in important ways to capture the reality of investor protection around the world. These amended models have important implications both for reasonable corporate governance arrangements and for macroeconomic fluctuations. A range of new empirical research topics is also suggested by this work.

Shleifer and Vishny (1997a) review the literature on corporate governance before the recent wave of findings from comparative research. LLSV(2000a) cover the first part of the recent research, which constitutes about 20 papers written through early fall 1999. However, the pace of activity in this area is accelerating. Of the papers covered in this review, about 25 are new and not covered in either of these previous surveys.

The next three sections review the evidence against each of the Coasian positions. The following section explains the latest theoretical findings. The paper then outlines topics for further research and offers conclusions.

The Importance of Legal Rules

The strongest Coasian position is that the details of the law do not matter. If this were true, we should expect to see no significant correlation between legal rules and economic outcomes around the world, controlling for legal enforcement. The evidence conclusively rejects this hypothesis.

Investor Protection

The new literature on the importance of law begins with La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV 1998), who show that systematic differences exist in the legal rights of investors across countries. An important explanatory factor in these differences is the origin of the legal system.

LLSV (1998) propose six dimensions – taken from commercial codes or company laws – to evaluate the extent of protection of minority shareholders against expropriation. First, the rules in some countries allow proxy voting by mail, which makes it easier for minority shareholders to exercise their voting rights. Second, the laws in some countries require shareholders to deposit their shares with a custodian around the time of a shareholder meeting, as a means of preventing shareholders from selling their shares in the days around the meeting. Those shareholders that do not put their shares in custody are not allowed to vote. Thus, countries without such requirements make it easier for shareholders to vote. Third, the law in some countries allows some type of cumulative voting, which makes it easier for a group of minority shareholders to elect at least one director of their choice. Fourth, the law in some countries incorporates a mechanism that gives the minority shareholders who feel oppressed by the board the right to sue or otherwise get relief from the board's decision. In the United States, this oppressed minority mechanism takes the very effective form of a class action suit; other countries provide other ways to petition the company or the courts with a complaint. Fifth, in some countries, the law gives minority shareholders a preemptive right to new issues; this protects their holdings from dilution by the controlling shareholders, who could otherwise issue new shares to themselves or to friendly parties. Sixth, the law in some countries requires relatively few shares to call an extraordinary shareholder meeting, at which the board can presumably be challenged or even replaced, whereas in other cases a large equity stake is needed for that purpose. LLSV (1998) aggregate these six dimensions of shareholder protection into an anti-director rights index by simply adding a 1 when the law is protective along one of the dimensions and a 0 when it is not.

The highest shareholder rights score in the LLSV (1998) sample of 49

countries is 5. Investor protection is significantly higher in common law countries, with an average score of 4, compared with an average score of 2.33 in French-origin civil law countries. There is significant variation within each form of legal origin, however. For example, Chile scores 5, Argentina scores 4, Brazil scores 3, and Ecuador scores 2. Latin America on average scores a little higher than the average for other French-origin countries but significantly lower than common law countries (La Porta and Lopez-de-Silanes 1998). In the LLSV (1998) data, no association is found between a country's level of economic development and its anti-director rights score, but a strong association exists between the score and the size of the country's stock market relative to GNP.

LLSV (1998 and 1999a) also find that the legal enforcement of contracts is weaker in countries with a civil law tradition. For example, the efficiency of the judicial system is, on average, 8.15 in English-origin countries (on a scale of 1 to 10, where 10 means more efficient), but only 6.56 in French-origin countries. Legal origin affects investor protection both by the rights available in the laws and by how easy it is to enforce these rights. Enforcement in Latin America is, on average, weaker than in other French civil law countries (La Porta and Lopez-de-Silanes 1998).

Glaeser, Johnson, and Shleifer (2001) look in more detail at Poland and the Czech Republic, which were not included in the original LLSV (1998) sample. They find that the Polish commercial code protected investors more than did the Czech code, but the most important difference was in the design and implementation of securities law. As Pistor (1999), Coffee (1999a), and Black (2000) also argue, protection under the commercial code is complementary to protection under securities law.

Slavova (1999) has extended the LLSV work to 21 formerly communist countries of Eastern Europe and the former Soviet Union. Rather than looking directly at the laws, she uses a survey to ask local legal professionals what specific rules are in place and how they are enforced. Her work confirms the analysis of LLSV on the general relationship between shareholder protection and stock market development and the detailed assessment of Glaeser, Johnson, and Shleifer (2001) on Poland and the Czech Republic.

Some controversy remains about what determines legal institutions today and the extent to which legal origin matters. Rajan and Zingales (1999) maintain that politics determine institutions, with relatively little persistence in institutions over time. Berkowitz, Pistor, and Richard (1999) argue that whether the legal systems were voluntarily adopted is more important than legal origin. Acemoglu, Johnson, and Robinson (2000) show that the way in which countries were colonized had a major impact on their institutions.

Outcomes

These measures of investor protection matter for economic outcomes. They have a direct effect on the development of external capital

markets. Both stock markets and debt markets have developed less in countries of French origin (LLSV 1997a). This is evident in outside capitalization (measured as market capitalization owned by outsiders relative to GNP), in domestic listed firms per capita, and in initial public offerings per capita.

For a sample of the largest firms in each country in 1996, LLSV (1997a) find that countries of French legal origin have significantly lower market capitalization relative to sales and to cash flow. Chile is an exception—the ratio of market capitalization to sales is 1.68 and the ratio of market capitalization to cash flow is 8.15, both well above the averages even for English-origin countries. These ratios are 0.63 and 4.18 in Argentina and 0.47 and 4.06 in Mexico.

Subsequent work has found that lower stock market development can reduce growth (Levine and Zervos 1998), that financial development is correlated with growth (Beck, Levine, and Loayza 2000), and that the availability of external finance determines whether a country can develop capital-intensive sectors (Rajan and Zingales 1998b). Wurgler (2000) finds a better allocation of capital to industries in countries with more financial development. Tunneling is a serious issue in India (Bertrand, Mehta, and Mullainathan 2000).

For former colonies, Acemoglu, Johnson, and Robinson (2000) confirm that legal institutions are important for economic performance. However, they find that legal origin per se may be less important than how the colonizing power attempted to use the colony. Colonies suitable for European emigration developed good institutions, while those with high mortality for Europeans developed more exploitative institutions. More generally, they show that original European settler mortality is a valid instrument for current institutions because mortality affected European settlements, settlements determined initial colonial institutions, and these institutions have had persistent effects. Using a two-stage least squares estimation approach, Acemoglu, Johnson, and Robinson (2000) find that three-quarters of the differences across countries in income per capita are due to differences in institutions.

There is also evidence that countries with weaker investor protection suffer greater adverse effects when hit by a shock. Johnson, Boone, Breach, and Friedman (2000) present evidence that the weakness of legal institutions for corporate governance had an adverse effect on the extent of exchange rate depreciations and stock market declines in the Asian crisis. Corporate governance provides at least as convincing an explanation for the extent of exchange rate depreciation and stock market decline as any or all of the usual macroeconomic arguments.

The firm-level evidence supports this view. Mitton (1999) looks at five Asian countries most affected by the 1997–98 crisis and finds that those firms with larger inside ownership and less transparent accounting suffered larger falls in stock price. He also finds that more diversified

firms suffer a greater fall, particularly if they have more uneven investment opportunities (measured in terms of Tobin's Q). This is consistent with, although it does not prove, the view that firms with weaker corporate governance face a larger loss of investor confidence. It may also be the case that more diversified firms are less able to allocate investment properly because of internal politics, as suggested by Scharfstein and Stein (2000), and that these political problems become worse in a downturn. Lins and Servaes (1999) also find a discount for diversified firms in seven emerging markets. Claessens et al. (1999) find a diversification discount for East Asian firms and worse performance for conglomerates during the East Asian crisis.

Following the approach of Mitton (1999), Nalbantoglu and Savasoglu (2000) present evidence that Turkish firms with weaker corporate governance suffered a larger fall in stock price during the 1998 crisis. Siegel (2000) finds similar effects for Mexican firms in the 1994-95 crisis. Thai finance houses with weaker corporate governance were also more prone to collapse in 1997 (Buranapin 2000).

The Role of Other Institutions

The second Coasian view is that even if legal rules matter and are weak in some countries, other governmental or private institutions should adapt to protect investors. The political process can produce investor protection, or it may be the outcome of reasonable private negotiation between firms and investors. Three main mechanisms have been suggested.

First, the government may put pressure on firms to treat investors properly, even though the law does not require it. If expropriation by insiders becomes a problem, a firm can lose other rights, such as favorable tax treatment or even the right to operate. This is the argument made by Berglof and von Thadden (1999) for many European countries. The government could also try to ensure that firms behave by directly owning and running banks. This is consistent with the evidence that government ownership of banks is significantly higher in French-origin legal systems (LLS 1999b).

The problem with this approach is that it requires an honest and effective government, but this is itself an endogenous outcome affected by legal institutions. LLSV (1999a) show that countries with a civil law tradition are likely to have more corruption and less effective government administration. Governments may also say that they want to protect investors, but in a sharp downturn find that they would rather protect entrepreneurs. This is one interpretation of what happened recently in some Asian countries—Malaysia, for example.

Second, ownership may develop in a different way than it does in the United States and in the United Kingdom. In particular, concentrated

outside ownership may allow more effective control over management. In fact, most civil law countries have concentrated ownership. La Porta, Lopez-de-Silanes, and Shleifer (LLS 1999a) show that groups of connected firms are much more usual than stand-alone firms in most countries. These groups typically control at least one company that is publicly traded or otherwise used to raise funds from outside investors, and a number of other companies that are privately held without any outside investors. Some valuable assets are usually kept private.

This type of organization is particularly common in "emerging markets," where the legal protection of minority shareholder rights and creditors is weaker (LLSV 1998). With the exception of Chile, the Latin American countries for which data are available have higher than average ownership concentration (La Porta and Lopez-de-Silanes 1998). Concentrated ownership also plays an important role in some European countries. For example, Gorton and Schmid (1999) find that in Germany, firms are more highly valued when large shareholders own more shares. In 18 emerging markets, Lins (1999) finds that holders of large blocks of shares generally increase firm value.

The problem with this approach is that small minority shareholders are still to be found in most countries with stock markets (see Table 2, LLSV 1997a). If large shareholders actually control management, small shareholders are not protected from expropriation. The experience of the Czech Republic over the past decade suggests that in an environment of weak legal protection, it is easy to gain control over a firm and then strip it of value (Coffee 1999b; Glaeser, Johnson, and Shleifer 2001). Hellwig (1999) explains clearly the deficiencies in protection for small shareholders in Germany and Switzerland.

Third, there may be some reputation-building by firms. For example, by paying higher dividends, companies in civil law countries could establish a reputation for treating shareholders properly. In principle, repeated interaction between managers and shareholders could establish that management can be trusted, and this should increase their ability to raise more capital.

This argument has an important theoretical weakness. Managers may be happy to treat shareholders well when the economy is growing fast, but this does not imply anything about how they will be treated in a downturn. It is very easy to expropriate shareholder value for a few years, and then return to the capital markets. Not surprisingly, the empirical evidence does not support the view that more reputation-building through dividend policy occurs in civil law countries. In fact, LLSV (2000b) show that companies in common law countries pay higher dividends.

Even in countries with established firms, with ample opportunity to build reputation, evidence of tunneling is still seen. Many Indian business groups are structured as ownership pyramids, in which a few firms at the

top control many firms through several layers. Bertrand, Mehta, and Mullainathan (2000) find that Indian firms in ownership pyramids are sensitive to shocks that hit other firms in the pyramid, and the effects are larger when the shock hits a firm lower down the pyramid. Firms higher in these pyramids are more sensitive to shocks than firms lower down the pyramid. This evidence supports the idea that tunneling exists and is more likely to occur when firms are lower down pyramids.

Securities Market Reform

Coffee (1999a) describes an important movement toward "functional convergence," through which firms around the world are adopting U.S.-type mechanisms to protect investors. One of its elements is a move toward issuing American Depositary Receipts, and these do seem to improve access to external capital markets. Lins, Strickland, and Zenner (1999) show that the sensitivity of investment to a firm's cash flow falls when an ADR is issued by a company from a country with a weak legal system and a less-developed capital market (as defined by LLSV 1997a). Reece and Weisbach (1999) show that companies in civil law countries are more likely to list ADRs on an organized exchange in the United States, thereby committing themselves to greater disclosure. This work supports the third Coasian view, that international contracts can get around some of the deficiencies of domestic investor protection. The implication is that while law may matter and domestic institutions cannot adapt, domestic legal reform is irrelevant.

In fact, however, important processes of securities market reform are at work in many countries, and the evidence suggests that some of these efforts have important effects on investor protection and the financing of firms. We can divide the reforms into two parts, those in countries with strong legal systems and those in countries with weak legal systems.

Strong Legal Systems

In many European countries, the perception is that their stock markets do not attract initial public offerings and that this slows the development of new high technology firms. The debate about how to address this issue has been considerable, but the main problem is that established firms like the existing rules (Hellwig 1999). The current situation enables them to raise capital on favorable terms, in part because they do not have to compete with new firms. Established firms may also have a deep relationship with some financial institutions, such as banks, which does not require the legal protection of small shareholders. Germany, however, has experimented successfully since 1997 with a new segment of the stock market designed for start-ups.

This Neuer Markt represents a significant change in the rules

protecting minority shareholders in Germany (Johnson 1999). The two most important changes are greater disclosure (in English) and the requirement of U.S. Generally Accepted Accounting Principles (GAAP) or International Accounting Standards (IAS) for company accounts. Management of the exchange emphasize the importance of clear and regular disclosure, including briefings for analysts. They enforce a system of disclosure; companies that list on this market know that they have to disclose a good deal and investors know that this will actually happen. It also helps that investment banks play the role of friendly enforcer by being "Designated Sponsors."

The established markets, on the other hand, retain German accounting principles and the old culture of non-disclosure and non-transparency, which is considered more favorable to creditors than to shareholders (Ziegler 2000). All German stock markets are governed by the same law (primarily the Commercial Code, securities law, and insider trading prohibitions). But the Neuer Markt offers new legal rules, in the form of a private contract, to those who agree to participate.

The major effect of this new market has been to allow relatively young technology-based firms to go public in Germany for the first time. Johnson (1999) documents that over 200 firms have gone public in the past three years, more than went public in the first 50 years after World War II. The evidence also shows that the availability of venture capital funding has increased as a result of the development of this "exit" option. Leuz (1999) finds that Neuer Markt firms have lower spreads and higher share turnover than similar-sized firms in other German markets, but he finds no significant difference between firms using IAS or U.S. GAAP accounting within the Neuer Markt. The success of the Neuer Markt in promoting IPOs of technology companies is helping to encourage broader changes in the legal protection of shareholders in Germany (Balz 1999).

Change is also under way in France (Goyer 1999), but it remains unclear how much is really happening. Japan is lagging, but there is definite pressure for change, particularly from international investors (Matsui 1999). Other industrialized countries with strong legal systems are adopting measures similar to those in Germany.

Weak Legal Systems

In countries with weak legal systems, expropriation by insiders of shareholder wealth takes place through relatively open forms of outright theft, transfer pricing, related lending, failure to disclose relevant information when issuing securities, and failure to report earnings properly. What can prevent this when the courts are weak? Recent work suggests that in such financial markets a strong regulator can protect the property rights of outside investors and thereby improve welfare.

The idea of focusing the regulation of securities markets on intermediaries is sometimes credited to James Landis, a contributor to the 1933 Securities Act and the 1934 Securities Exchange Act in the United States (McCraw 1984). Landis reasoned that the U.S. Securities and Exchange Commission by itself could monitor neither the compliance with disclosure, reporting, and other rules by all listed firms, nor the trading practices of all market participants. Rather, the Commission would regulate intermediaries, such as the brokers, the accounting firms, the investment advisers, and the like, who would in turn attempt to assure compliance with regulatory requirements by the issuers and the traders. Moreover, by maintaining substantial power over the intermediaries through its administrative relationships, including the power to issue and revoke licenses, the Commission could force them to monitor market participants.

Glaeser, Johnson, and Shleifer (2001) find that the stringent—and stringently enforced—regulations in Poland, expressed in both company and securities laws, have stimulated rapid development of securities markets and enabled a large number of new firms to go public. Expropriation by insiders has been relatively modest, and the qualitative evaluations of the Polish market have been very positive. In contrast, the lax—and laxly enforced—regulations in the Czech Republic have been associated with the stagnation of markets, the delisting of hundreds of privatized companies from the stock exchange, and no listing of new private companies. Expropriation has apparently been rampant and has acquired the name of tunneling there. Consistent with these concerns, the qualitative assessments of the Czech market have been poor. Starting in 1996, however, the Czech Republic has sharply tightened its regulations. These findings suggest that even countries with relatively weak legal systems can improve the protection of investors, and that this improvement will help firms to obtain external finance.

Korean experience suggests that a German-type approach can have some positive effects even when the legal system is relatively weak. Over the past three years, the government has tried hard to improve the legal rules protecting investors, but this has proved difficult (Cho 2000). The chaebol (large conglomerates) allegedly have continued to transfer funds between subsidiaries, although shareholder lawsuits have had some effect in preventing the most egregious expropriation (Cho 2000). At the same time, a relatively new market (KOSDAQ) with tough rules has developed (Kim 2000). Most of the companies choosing to list on this market have clear ownership structures and, at least so far, no significant allegations have been made of tunneling by these firms. It is too early to tell for sure, but it may be that the creation of a new stock market, with U.S.-type rules, may be a feasible strategy of reform for countries with weak legal institutions.

Recent Theory

The Coasian argument seems extremely powerful. Why does it fail? How does this affect standard models of finance? What is the right way to model firms in countries with weak legal institutions? Does this matter for macroeconomic theory and policymaking?

Law and Regulation

The Coasian argument, in all three versions reviewed here, relies on the crucial assumption that the judiciary is able to enforce both existing property rights and the efficiency-enhancing contracts. But what if the courts are not efficient enough to perform this role because they are underfinanced, unmotivated, unfamiliar with the economic issues, or even corrupt? At the least, it may then be necessary to provide a detailed legal framework to facilitate the work of the courts. In some cases, it may be necessary to go further and create a regulatory framework that empowers a regulator to provide and enforce rules that promote more efficient outcomes. The case for regulation is stronger when the government is more interested in public welfare than in catering to incumbent firms. Glaeser, Johnson, and Shleifer (2001) discuss the incentives to enforce alternative laws and regulations more generally.

It is quite possible for a country to get stuck in an equilibrium with weak law enforcement. For example, Johnson, Kaufmann, and Shleifer (1997) argue that many countries in the former Soviet Union drove firms underground with their high rates of taxation, corruption, and regulation. This undermined the tax base of the government and made it harder to provide reasonable rule of law. Without rule of law, an entrepreneur has less incentive to register his or her firm and pay taxes. Thus, most of the former Soviet Union, but not parts of Eastern Europe, is trapped with weak law enforcement, a large unofficial economy, and a low tax base.

Expropriation and Collapses

While the evidence reviewed above suggests that expropriation by insiders of shareholder wealth is endemic, it is not the case that the cost of stealing is zero in most countries. In fact, we need to understand how standard finance results are modified as the cost of stealing varies.

The original model of expropriation by managers is Jensen and Meckling (1976). Burkhart, Gromb, and Panunzi (1998) introduce the assumption that most diversion by management is costly—for example, because it involves legal maneuvers. LLSV (1999b) model the comparative cost of stealing across countries in a simple static framework. This approach has been developed further by Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) and more recently in a simple dynamic framework by Friedman and Johnson (2000).

Johnson et al. (2000) present a new theoretical explanation for the effects of corporate governance on macroeconomic outcomes. If stealing by managers increases when the expected rate of return on investment falls, then an adverse shock to investor confidence will lead to increased theft and to lower capital inflow and greater attempted capital outflow for a country. These, in turn, will translate into lower stock prices and a depreciated exchange rate.

The model in Friedman and Johnson (2000) puts ideas from Jensen (1986), Myers (1977), and LLSV (1999b) into a dynamic setting. The key assumption is that entrepreneurs can not only tunnel resources out of the firm but also transfer personal funds in to keep the firm afloat. Substantial evidence shows that in moments of crisis, corporate groups prop up particular firms in order to keep them going (Hoshi, Kashyap, and Scharfstein 1991).

When investor protection is weak, Friedman and Johnson (2000) find that the presence of some debt is generally optimal because it reduces theft and can induce propping. Thus debt can serve the role proposed by Jensen (1986) in reducing agency costs, even with no enforceable debt contract (that is, effectively no collateral). However, under other conditions, debt may induce entrepreneurs to loot the company. Thus, an "overhang" of debt can develop, with the negative features analyzed by Myers (1977). When the legal system is weaker, Friedman and Johnson (2000) show that the debt–equity ratio will usually be higher, even though this increases the probability that the firm will collapse. In weaker legal systems, the entrepreneur will also make investments that increase the cost of renegotiation, because this raises the cost of defaulting on a loan, increases the feasible amount of debt, and expands the amount of feasible investment.

In this model, weaker legal institutions lead to fewer projects being financed. But weak legal institutions can also contribute to economic crises. Having weak protection of investor rights does not make shocks more likely, but it does mean that negative shocks have larger effects on the overall economy. In this view, institutions matter for a particular aspect of volatility—whether countries can suffer large collapses. Reasonable corporate finance arrangements in a weak legal environment can lead to a bimodal distribution of outcomes, that is, either the economy does well or it collapses.

The data are broadly supportive. Kim and Stone (1999) find that countries with more corporate debt suffered larger falls in output during the Asian crisis of 1997-98. Other work suggests both that aggregate corporate debt was higher in countries with weaker corporate governance and that it was higher within Asian countries for firms with weaker corporate governance. Lee, Lee, and Lee (1999), for example, demonstrate that corporate leverage was higher for chaebol companies than for non-chaebol, and highest for the largest chaebol. More work is needed to

link the debt numbers more precisely to corporate governance, but this is now under way.

This research is part of a broader movement looking at the macroeconomic implications of institutions. Blanchard (1999a) argues that institutions in Western Europe were appropriate and well-functioning but could not handle the shocks they received in the 1970s and 1980s. In his view, a functional set of institutions became dysfunctional because of a particular set of shocks. More generally, Blanchard (1999b) suggests future research should examine how different institutions mean that the fundamentals of macroeconomics will differ across countries. Caballero and Krishnamurthy (1999) provide one early attempt to formalize these ideas, emphasizing implications of the underinvestment in appropriate collateral that occurs as a result of weak property rights in some countries.

Group Structures

Wolfenzon (1998) develops a model in which entrepreneurial expropriation is consistent with the development of pyramidal ownership. This is the first formalization of ownership structures that are pervasive around the world (LLS 1999a). Bebchuck (1999) develops a model in which diffuse control structures are unstable and concentrated ownership tends to develop.

Kim (1999) offers an alternative model of group formation. In his model, firms borrow from banks and then decide whether or not to form conglomerates in which their debts are cross-guaranteed. After one period, the bank decides whether to liquidate or to bail out firms that cannot make an initial payment on the loan. Risk-averse firms have an incentive to join a group, because this will make banks less likely to liquidate them. In this model, groups offer a form of insurance for individual entrepreneurs.

These models suggest further issues for research. Are groups formed by a single individual or by a number of individuals agreeing to support each other? How exactly does the formation of groups affect the relationship with providers of external finance? What kind of transaction takes place between companies inside groups?

Conclusions

Law definitely matters. Countries with more investor protection have better-developed financial markets and more growth. They may also be less prone to economic collapse. The determinants of law are complex, but the origin of the legal system is always important and often the dominant factor.

Legal origin is not destiny. Other institutions can adapt to some extent. Civil law European countries have become rich with more govern-

ment ownership and more concentrated ownership than is seen in common law countries. But it is a fallacy to infer that these institutions can always and everywhere develop.

Legal reform works. Why does Chile have better investor protection and more developed capital markets than other countries in Latin America? Presumably because of a process of legal and institutional change over the past 30 years. The change may come slowly, and setbacks may occur (for example, in Chile in the early 1980s), but a sustained effort to improve investor protection will definitely pay off.

We are not arguing that all countries could or should become just like the United States. But we see countries around the world adopting investor protection measures modeled on U.S. securities law and regulation along important dimensions. The evidence suggests that when these measures are implemented in an enforceable way, they can change both the extent of investor protection and the ability to obtain external finance. Properly designed U.S.-type securities market rules can work even in countries with quite different legal systems, such as Germany, Poland, and Korea.

By giving us a clear framework to think about contracts, Ronald Coase made a huge contribution to many issues, including international corporate governance. It is an indication of the power of his approach that research is now advancing by trying to reject Coasian arguments about how firms are financed around the world. The Coasian idea that private contracts can attain efficient outcomes is powerful and in many instances correct. The right question is this: How can we make it easier for the private sector to write its own efficient contracts? But sometimes this can only be achieved through changing the broader legal rules that underpin capital markets.

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