THE JOURNAL OF FINANCE • VOL. LIV, NO. 2 • APRIL 1999

Corporate Ownership Around the World

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ABSTRACT

We use data on ownership structures of large corporations in 27 wealthy economies to identify the ultimate controlling shareholders of these firms. We find that, except in economies with very good shareholder protection, relatively few of these firms are widely held, in contrast to Berle and Means's image of ownership of the modern corporation. Rather, these firms are typically controlled by families or the State. Equity control by financial institutions is far less common. The controlling shareholders typically have power over firms significantly in excess of their cash flow rights, primarily through the use of pyramids and participation in management.

IN THEIR 1932 CLASSIC, *The Modern Corporation and Private Property*, Adolph Berle and Gardiner Means call attention to the prevalence of widely held corporations in the United States, in which ownership of capital is dispersed among small shareholders, yet control is concentrated in the hands of managers. For at least two generations, their book has fixed the image of the modern corporation as one run by professional managers unaccountable to shareholders. The book stimulated an enormous "managerialist" literature on the objectives of such managers, including the important work of Baumol (1959), Marris (1964), Penrose (1959), and Williamson (1964), as well as Galbraith's (1967) popular and influential account. More recently, the modern field of corporate finance has developed around the same image of a widely held corporation, as can be seen in the central contributions of Jensen and Meckling (1976) or Grossman and Hart (1980). The Berle and Means image has clearly stuck.

In recent years, several studies have begun to question the empirical validity of this image. Eisenberg (1976), Demsetz (1983), Demsetz and Lehn (1985), Shleifer and Vishny (1986), and Morck, Shleifer and Vishny (1988) show that, even among the largest American firms, there is a modest concentration of ownership. Holderness and Sheehan (1988) have found in the United States several hundred publicly traded firms with majority (greater

*Harvard University. We are grateful to Alexander Aganin, Carlos Berdejo-Izquierdo, David Grossman, Bernardo Lopez-Morton, Tatiana Nenova, Ekaterina Trizlova, and David Witkin for help with assembling the data, to Lucian Bebchuk, Marco Becht, Mihir Desai, Oliver Hart, Louis Kaplow, Mark Roe, Roberta Romano, René Stulz, Robert Vishny, Luigi Zingales, and two anonymous referees for advice, and to the NSF for financial support.

than 51 percent) shareholders. Holderness, Kroszner and Sheehan (1999) have found, moreover, that management ownership in the United States today is higher than it was when Berle and Means wrote their study.

Studies of other rich countries reveal more significant concentration of ownership in Germany (Edwards and Fischer (1994), Franks and Mayer (1994), and Gorton and Schmid (1996)), Japan (Prowse (1992), Berglof and Perotti (1994)), Italy (Barca (1995)), and seven OECD countries (European Corporate Governance Network (1997)). In developing economies, ownership is also heavily concentrated (La Porta et al. (1998)). This research suggests that in many countries large corporations have large shareholders and, further, that these shareholders are active in corporate governance (e.g., Kang and Shivdasani (1995), Yafeh and Yosha (1996)), in contrast to the Berle and Means idea that managers are unaccountable.[1]

As a result of this research, the Berle and Means image of the modern corporation has begun to show some wear. Still, we have relatively little systematic evidence about the ownership patterns of large publicly traded firms in different countries, and we lack a comparative perspective on the relevance of the Berle and Means description of the firm. This paper attempts to provide some such evidence. Specifically, we look at the ownership structures of the 20 largest publicly traded firms in each of the 27 generally richest economies, as well as of some smaller firms so that we can keep size constant across countries. We focus on the largest firms in the richest economies precisely because, for these firms, the likelihood of widely dispersed ownership is the greatest—and we find that this is indeed the case. Our principal contribution is to find wherever possible the identities of the *ultimate* owners of capital and of voting rights in firms, so when shares in a firm are owned by another company, we examine the ownership of that company, and so on.[2] For most countries, this is the only way to understand the relationship between ownership and control. These data enable us to address, in a comparative perspective, four broad questions related to the Berle and Means thesis.

First, how common are widely held firms in different countries, as opposed to firms that have owners with significant voting rights? Second, to the extent that firms have significant owners, who are they? Are they families, the government, financial institutions, or other, possibly widely held, firms? How often do banks control companies—a big issue in corporate finance in light of the extensive discussion of the German corporate governance model? Third, how do these owners maintain their power? Do they use shares with superior voting rights that enable them to exercise control with

[1] There is a parallel theoretical literature on the role of large shareholders, including Shleifer and Vishny (1986), Stulz (1988), Grossman and Hart (1988), Harris and Raviv (1988), Bebchuk (1994), and Burkart, Gromb, Panunzi (1997, 1998).

[2] La Porta et al. (1998) examine first level ownership of the 10 largest publicly traded firms in 49 countries, but do not look for the ultimate owners. This paper attempts to establish the identities of the ultimate owners.

only limited ownership of capital? Alternatively, do they create complicated cross-ownership patterns to reduce the threat to their control? Or do they build pyramids, whereby they control firms through a chain of companies—another form of separating ownership of capital and control? By answering these questions empirically, we hope to provide a comprehensive description of ownership patterns of large firms in rich countries.

The fourth question we address is: What explains the differences between countries in their ownership patterns? Why, for example, is the Berle and Means image of a widely held firm so much more descriptive of the United States than of Mexico or Italy? Our earlier work (La Porta et al. (1997, 1998)) suggests that the Berle and Means widely held corporation should be more common in countries with good legal protection of minority shareholders (which are often the rich common law countries). In these countries, controlling shareholders have less fear of being expropriated themselves in the event that they ever lose control through a takeover or a market accumulation of shares by a raider, and so might be willing to cut their ownership of voting rights by selling shares to raise funds or to diversify. In contrast, in countries with poor protection of minority shareholders, losing control involuntarily and thus becoming a minority shareholder may be such a costly proposition in terms of surrendering the private benefits of control that the controlling shareholders would do everything to keep control. They would hold more voting rights themselves and would have less interest is selling shares in the market.[3] In view of this analysis, we assess the relationship between ownership concentration and minority shareholder protection in terms of the voting rights of the principal shareholders rather than their cash flow rights.[4]

Relatedly, we evaluate the relationship between shareholder protection and the incidence of various control arrangements, including cross-shareholdings, differential voting rights, and pyramids. The theory in this area is not completely developed, but some articles do help us think about the data. Grossman and Hart (1988) and Harris and Raviv (1988) suggest that deviations from one-share one-vote should be larger when private benefits of control are higher, which must be the case in countries with poorer shareholder protection. Wolfenzon (1998) argues that pyramids should also be more common in countries with poor shareholder protection, because it is easier for controlling shareholders there to make minority shareholders in existing firms pay for starting up new firms as partial subsidiaries without fully sharing with these minorities the benefits of a new venture. Pyramids and multiple classes of stock are of course two different ways of separating cash flow and control rights in firms.

[3] Bebchuk (1998) establishes in a formal model that dispersed ownership is unstable when private benefits of control are large because raiders would gain control of companies with dispersed ownership at low prices and extract these benefits of control.

[4] The distinction between control and cash flow rights is due to Grossman and Hart (1986). For the various ways in which the controlling shareholders can divert resources to themselves, and thereby obtain the "private benefits of control," see Shleifer and Vishny (1997).

The controlling shareholders face strong incentives to monitor managers and maximize profits when they retain substantial cash flow rights in addition to control. These incentives, emphasized by Jensen and Meckling (1976) and Shleifer and Vishny (1986), also restrain the diversion of corporate resources by the controlling shareholders, and enhance the value of minority shares.

In our empirical work, we find that the Berle and Means corporation is far from universal, and is quite rare for some definitions of control. Similarly, the so-called German model of bank control through equity is uncommon. Instead, controlling shareholders—usually the State or families—are present in most large companies. These shareholders have control rights in firms in excess of their cash flow rights, largely through the use of pyramids, but they also participate in management. The power of these controlling shareholders is evidently not checked by other large shareholders. The results suggest that the theory of corporate finance relevant for most countries should focus on the incentives and opportunities of controlling shareholders to both benefit and expropriate the minority shareholders.

The next section of the paper describes our data, and presents a number of examples of ownership patterns in particular companies. Section II presents the basic results on the incidence of various ownership structures around the world. Section III concludes.

I. Data

A. *Construction of the Database*

This paper is based on a new database of ownership structures of companies from 27 countries. As we detail below, the data on corporate ownership are often difficult to assemble, and this limitation determines many of the choices we make. We generally use the richest countries based on 1993 per capita income, but exclude a number of them that do not have significant stock markets (e.g., Kuwait, United Arab Emirates, Saudi Arabia).[5] For each country, we collect two samples of firms. The first sample consists of the top 20 firms ranked by market capitalization of common equity at the end of 1995 (with some exceptions detailed below). This sample runs into the objection that the largest companies in some countries are much larger than the largest companies in other countries. This is a particularly serious issue for a study of ownership because larger companies presumably have less concentrated ownership, and hence we should be careful that our measures of block ownership do not simply proxy for size. Accordingly, the second sample collects, whenever possible, the smallest 10 firms in each country with market capitalization of common equity of at least $500 million at the end of 1995. We call the first sample "large firms" and the second sample "medium firms." For countries with small stock markets, the two samples intersect.

[5] If we include the poorer countries, the incidence of family and State control would only be higher, and the prevalence of widely held firms significantly lower.

Moreover, for six countries (Argentina, Austria, Ireland, New Zealand, Greece, and Portugal) we do not have 10 publicly traded firms with capitalizations above $500 million. Overall, we have 540 large firms in the large firm sample, and a total of 691 different firms (out of a possible maximum of 810).[6]

There are a few additional restrictions on these samples of companies. First, for both samples, we exclude all affiliates of foreign firms. A firm is defined as an affiliate of a foreign company if at least 50 percent of its votes are directly controlled by a single foreign corporate owner. Further, we exclude banks and utilities from the sample of medium firms, to prevent the domination of this sample by these two industries. Finally, by construction, neither sample includes companies that are owned either wholly privately or wholly by the government, and therefore are not listed. This restriction biases our results toward finding fewer firms with significant government and family ownership than actually exist.

As a rule, our companies come from the WorldScope database. In four countries for which WorldScope coverage is limited (Argentina, Israel, Mexico, and the Netherlands), we use other sources (see the Appendix for data sources). We generally rely on annual reports, 20-F filings for companies with American Depositary Receipts (ADRs), proxy statements, and, for several countries, country-specific books that detail ownership structures of their companies. We also found the Internet to be very useful because many individual companies (e.g., in Scandinavia), as well as institutions (e.g., the Paris Bourse and *The Financial Times*) have Web sites that contain information on ownership structures. Virtually all of our data are for 1995 and 1996, though for a few observations the data do come from the earlier years, and for a few from 1997. Since ownership patterns tend to be relatively stable, the fact that the ownership data do not all come from the same year is not a big problem.

For several countries, our standard procedures do not work because disclosure is so limited. For Greece and Mexico, we cannot work with the 20 largest firms because we do not have enough ownership data. For Greece, we take the 20 largest corporations for which we could find ownership data (mostly in *Bloomberg Financial Systems*). For Mexico, we take the 20 largest firms that have ADRs. For Israel, we rely almost entirely on Lexis/Nexis and Internet sources. For Korea, different sources offer conflicting information on corporate ownership structures of business groups (chaebols). We were advised by Korean scholars that the best source for chaebols contains information as of 1984, so we use the more stale but reliable data.

To describe control of companies, we generally look for all shareholders who control more than 10 percent of the votes. The cutoff of 10 percent is used because (1) it provides a significant threshold of votes; and (2) most

[6] Note that medium firms are, on average, larger in countries with smaller stock markets than in countries with larger stock markets because the latter countries have more firms with capitalizations just above $500 million. In the medium firm sample, therefore, the size bias is toward finding less ownership concentration in countries with poor shareholder protection.

countries mandate disclosure of 10 percent, and usually even lower, ownership stakes. For most countries and companies, we have some information on smaller shareholdings, but focus only on shareholders who control more than 10 percent of the votes. In many cases, the principal shareholders in our firms are themselves corporate entities and financial institutions. We then try to find the major shareholders in these entities, then the major shareholders in the major shareholders, and so on, until we find the ultimate controllers of the votes. In some cases, the ultimate controller is the State, a widely held financial institution, or a widely held corporation. In other cases, it is an individual or a family. We do not attempt to get inside families, and assume that every family owns and votes its shares collectively.

B. Definitions of Variables

We ask whether firms have substantial owners. We do not try to measure ownership concentration, because a theoretically appropriate measure requires a model of the interactions between large shareholders, which we do not have. Rather, we try to define owners in a variety of ways, summarized in Table I and discussed in this subsection. In the following subsection, we illustrate these definitions using several companies from our sample.

Our definitions of ownership rely on voting rights rather than cash flow rights. Recall that Berle and Means want to know who controls the modern corporation: shareholders or managers. We too want to know whether corporations have shareholders with substantial voting rights, either directly or through a chain of holdings. This idea motivates our definitions.

We divide firms into those that are *widely held* and those with *ultimate owners*. We allow for five types of ultimate owners: (1) a family or an individual, (2) the State, (3) a widely held financial institution such as a bank or an insurance company, (4) a widely held corporation, or (5) miscellaneous, such as a cooperative, a voting trust, or a group with *no single controlling investor*. State control is a separate category because it is a form of concentrated ownership in which the State uses firms to pursue political objectives, while the public pays for the losses (Shleifer and Vishny (1994)). We also give widely held corporations and widely held financial institutions separate categories as owners because it is unclear whether the firms they control should be thought of as widely held or as having an ultimate owner. A firm controlled by a widely held corporation or financial institution can be thought of either as widely held since the management of the controlling entity is not itself accountable to an ultimate owner, or as controlled by that management. For these reasons (and because bank ownership is of independent interest), we keep these categories separate.

As a first cut, we say that a corporation has a controlling shareholder (ultimate owner) if this shareholder's direct and indirect voting rights in the firm exceed 20 percent. A shareholder has x percent indirect control over firm A if (1) it directly controls firm B, which in turn directly controls x percent of the votes in firm A; or (2) it directly controls firm C, which in turn controls firm B (or a sequence of firms leading to firm B, each of which has

control over the next one, i.e., they form a control chain), which directly controls x percent of the votes in firm A. Table I provides a more precise definition. The idea behind using 20 percent of the votes is that this is usually enough to have effective control of a firm. Indeed, below we present evidence that, in the majority of cases, our ultimate owners are also part of the management of the firm.

In the simplest case, each sample firm would have an ultimate owner of the above five types. There may, alternatively, be a legal entity that has more than 20 percent voting rights in our sample firm, which itself has a shareholder with more than 20 percent of the votes, and so on. We classify all firms that do not have such a 20 percent chain of voting rights as widely held, and firms with such a chain as having owners. On this definition, if company B has 23 percent of the votes in company A, and individual C has 19 percent of the votes in B, we still classify A as controlled by a widely held corporation (unless C has additional indirect control in A; see the discussion of Korea below). In addition to the definition of ultimate owners using this 20 percent of votes rule, we consider a second definition that relies on a chain of more than 10 percent of voting rights.

The preceding definitions give us a reasonably conservative way to answer the question: Does the firm have shareholders with a substantial amount of control, or does it have *ultimate owners*? But this is not the only interesting aspect of ownership. To evaluate the potential for agency problems between ultimate owners and minority shareholders, we also want to know whether the cash flow ownership rights of the controlling shareholders are substantially different from their voting rights. One way in which the ultimate owners can reduce their ownership below their control rights is by using shares with superior voting rights; another way is to organize the ownership structure of the firm in a pyramid. Finally, the ultimate owners might wish to solidify their control through cross-shareholdings—having the firm own shares in its shareholdings.

We describe the role of multiple classes of shares in the simplest possible way. For each firm in the sample, we ask: What is the minimum percentage of its capital at par value that the immediate shareholder (who might be different from the ultimate owner) needs to own to have 20 percent of the voting rights under the existing structure of share types of that firm (as opposed to what might be allowed by law)? For example, if a firm has 50 percent of its capital in the form of shares that have 100 percent of voting rights, and 50 percent in the form of nonvoting shares, we would say that a shareholder must own at least 10 percent of capital (in the form of the first kind of shares) to have 20 percent of the votes. Note that we are only computing this measure for the firms in the sample; we do not capture a deviation from one-share one-vote if a publicly held corporate shareholder in our sample firm itself has multiple classes of stock.

We say that a firm's ownership structure is a pyramid (on the 20 percent definition) if: (1) it has an ultimate owner, and (2) there is at least one publicly traded company between it and the ultimate owner in the chain of 20 percent voting rights. Thus, if a publicly traded firm B has 43 percent of

Table I
Definition of the Variables

Variable	Description
Antidirector Index	An index aggregating shareholder rights which we label as "antidirector rights." The index is formed by adding one 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 a 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 an Extraordinary Shareholders Meeting is less than or equal to 10 percent; or (6) shareholders have preemptive rights that can only be waived by a shareholders vote. The index ranges from 0 to 6. Source: La Porta et al. (1998).
Widely Held	Equals one if the there is no controlling shareholder. To measure control we combine a shareholder's *direct* (i.e., through shares registered in her name) and *indirect* (i.e., through shares held by entities that, in turn, she controls) *voting* rights in the firm. A shareholder has an *x percent indirect control* over firm A if: (1) it controls directly firm B which, in turn, directly controls x percent of the votes in firm A; or (2) it controls directly firm C which in turn controls firm B (or a sequence of firms leading to firm B each of which has control over the next one; i.e., they form a control chain), which, in turn, directly controls x percent of the votes in firm A. A group of n companies form a *chain of control* if each firm 1 through $n - 1$ controls the consecutive firm. Therefore, a firm in our sample has a controlling shareholder if the sum of a shareholder's direct and indirect voting rights exceeds an arbitrary cutoff value, which, alternatively, is 20 percent or 10 percent. When two or more shareholders meet our criteria for control, we assign control to the shareholder with the largest (direct plus indirect) voting stake.
Family	Equals one if a person is the controlling shareholder, and zero otherwise.
State	Equals one if the (domestic or foreign) State is the controlling shareholder, and zero otherwise.
Widely Held Financial	Equals one if a widely held financial company is the controlling shareholder, and zero otherwise.
Widely Held Corporation	Equals one if a widely held nonfinancial company is the controlling shareholder, and zero otherwise.
Miscellaneous	Equals one if Widely Held, Family, State, Widely Held Financial, and Widely Held Corporation are all equal to zero, and zero otherwise. When it equals one, it includes control by pension funds, mutual funds, voting trusts, management trusts, groups, subsidiaries (firms that, in turn, are at least 50 percent owned by the firm in the sample), nonprofit organizations, and employees.
Cap = 20% V	Minimum percent of the book value of common equity required to control 20 percent of the votes. Source: *Moodys International*.
Cross-Shhs	Equals one if the firm both has a controlling shareholder (i.e., it is not widely held) and owns shares in its controlling shareholder or in a firm that belongs to her chain of control, and zero otherwise.
Pyramid	Equals one if the controlling shareholder exercises control through at least one publicly traded company, and zero otherwise.
%Mkt Fam	Aggregate market value of common equity of firms controlled by families divided by the aggregate market value of common equity of the 20 largest firms in a given country.

Table I—*Continued*

Variable	Description
Firms/Avg Fam	Number of firms among the top 20 controlled by an average family in a given country.
Management	Equals one if a member of the controlling family is also the CEO, Honorary Chairman, Chairman, or Vice-Chairman of the Board, and zero if they do not hold any of the mentioned positions.
%Mkt WHF	Aggregate market value of common equity of firms controlled by widely held financial firms divided by the aggregate market value of common equity of the 20 largest firms in a given country.
Firms/Avg WHF	Number of firms among the top 20 controlled by an average widely held financial firm in a given country.
Independent Financials	Equals one when a (widely held) financial institution controls at least 10 percent of the votes and its control chain is separate from that of the controlling owner, and zero otherwise. More precisely, the variable takes the value of one when the following three conditions are met: (1) it controls at least 10 percent of the votes of the firm; (2) it is not the controlling owner; and (3) its control chain does not overlap with that of the controlling owner.
Associated Financials	Equals one when a (widely held) financial institution controls at least 10 percent of the votes and its control chain overlaps with that of the controlling owner, and zero otherwise. More precisely, equals one when a financial institution meets the following three conditions: (1) it controls at least 10 percent of the votes of the firm; (2) it is not the controlling owner; and (3) its control chain overlaps with that of the controlling owner.
Controlling Shareholder is Alone	Equals one if the firm has a 20 percent controlling owner and no other shareholder has control of at least 10 percent of the votes through a control chain that does not overlap with that of the controlling shareholder. Equals zero if the firm has a shareholder other than the controlling one with at least 10 percent of the votes through a control chain that does not overlap with that of the controlling shareholder. The variable is otherwise set to missing.
Common Law Origin	Equals one if the origin of the commercial law of a country is English Common Law, and zero otherwise. Source: Reynolds and Flores (1989).
Civil Law Origin	Equals one if the origin of the commercial law is the French Commercial Code, the German Commercial Code, or if the commercial law belongs to the Scandinavian commercial-law tradition, the Scandinavian Commercial Code, and zero otherwise. Source: Reynolds and Flores (1989).
Strong Banks	Equals one if commercial banks are allowed to own majority stakes in industrial firms and to invest at least 60 percent of their capital in a portfolio of industrial firms, and zero otherwise. Source: Institute of International Bankers (1997).
Private Claims/ GDP	Ratio of the claims of the banking sector on the private sector to gross domestic product in 1995. Source: International Monetary Fund (1998).
Corporate Dividends are Taxed	Equals one if corporate taxes are levied on dividends received from an investment representing at least 20 percent of the share capital of the dividend-paying corporation, and zero otherwise. Source: Price Waterhouse (1995) and Ernst & Young (1994).
Consolidation for Tax Purposes	Equals one if the tax authorities permit the use of consolidated accounting for tax purposes; that is, they allow corporations to offset the profits of one subsidiary against the losses of another. Source: Price Waterhouse (1995) and Ernst & Young (1994).

Table I—*Continued*

Variable	Description
Restrictions on Cross-Ownership	Equals one if the commercial law places restrictions on cross-ownership or reciprocal ownership, and zero otherwise. Source: Tomsett and Betten (1997).
GDP per Capita	Gross domestic product per capita in dollars in 1995. Source: World Bank (1997).
Corruption Index	Transparency International's corruption perception index for 1996. Average of up to 10 independent surveys on businessmen's perception of the degree of corruption in a given country. Scale from 1 to 10, with lower scores for higher levels of corruption. Source: Transparency International (1996).

the votes in a sample firm A, and an individual C has 27 percent of the votes in firm B, we would say that C controls A, and that the ownership structure is a pyramid. But if B is 100 percent owned by C, we would still call C the ultimate owner, but would not call the ownership structure a pyramid. Pyramids require publicly traded intermediate companies. We also use a parallel definition of pyramids with 10 rather than 20 percent of voting rights.

We say that there is cross-shareholding by sample firm A in its control chain if A owns any shares in its controlling shareholder or in the companies along that chain of control. So, if firm B has 20 percent of the votes in A, a publicly held firm C owns 20 percent of the votes in B, and A owns two percent of the votes in C, we would say that C is the ultimate owner of A, that A is owned through a pyramid, and that there is a cross-shareholding by A. On the other hand, if, instead of A owning 2 percent in C, it were the case that B owned two percent in C, we would not call this a cross-shareholding by A because B is not a firm in our sample. We do not look for cross-shareholdings by firm A in firms outside its control chain because of data limitations.

We use some further measures of ownership which are summarized in Table I, but introduce them later as we present our findings in Section II. First, we present some examples.

C. Examples of Ownership Structures

To describe the database and to illustrate our variables, we present several cases of ownership structures of individual companies, in roughly increasing order of complexity.

Begin with the United States. The three most valuable firms in the United States at the end of 1995, General Electric, AT&T, and Exxon, are all widely held. The fourth most valuable, Microsoft, has three large shareholders (Figure 1): the cofounders Bill Gates (with 23.7 percent of the votes as well as shares) and Paul Allen (with nine percent), and Steven Ballmer (with five percent). We say that Microsoft has an ultimate owner on the 20 percent (as

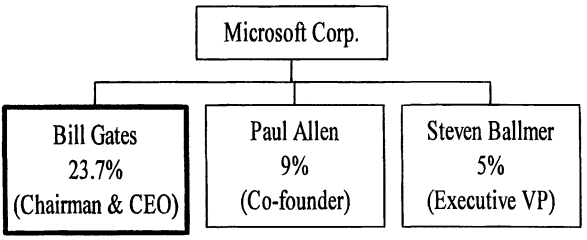

Figure 1. Microsoft Corporation (USA). The principal shareholders of Microsoft (the fourth largest company in the United States) are shown. All shares carry one vote. Under the 20 percent rule, we assign control to Bill Gates and represent his control chain with a thick bordered box.

well as on the 10 percent) definition, namely Bill Gates, and is a family-owned firm. It is obviously not a pyramid, does not have cross-shareholdings, and it takes 20 percent of the capital to amass 20 percent of the votes.

The fourth most valuable company in Canada is Barrick Gold, and it has a more complex ownership structure (Figure 2). Its founder, Chairman, and CEO is Peter Munk, who is also Chairman and CEO of a holding company called Horsham, that owns 16.3 percent of votes and capital in Barrick Gold. Munk controls the publicly traded Horsham with 79.7 percent of its votes, but only 7.3 percent of capital. Even though Munk evidently controls Barrick, we say that Barrick Gold is widely held on the 20 percent definition of control because Horsham only has 16.3 percent of the votes. On the 10 percent definition, Barrick Gold has an ultimate owner, a family. Since Horsham is publicly traded, we call Barrick's ownership structure a pyramid on the 10 percent but not the 20 percent definition. Finally, even though Horsham has multiple classes of stock, it takes 20 percent of Barrick's capital to have 20 percent of the votes, and so the company has a one-share/one-vote structure.[7]

The next example is Hutchison Whampoa, the third most valuable company in Hong Kong (Figure 3). It is 43.9 percent controlled by Cheung Kong Holdings, which happens to be the fifth largest publicly traded company in Hong Kong and is therefore also in our sample. In turn, the Li Ka-Shing family owns 35 percent of Cheung Kong. Hutchison Whampoa and Cheung Kong are thus both family controlled companies, except the former is owned through a pyramid but the latter is not. Note that the Li Ka-Shing family controls three of the 20 largest companies in Hong Kong (also the eleventh-largest Hong Kong Electric Holdings), a number that we keep track of.

[7] Tufano (1996) shows that, among gold-mining firms in North America, those with higher management ownership do more hedging of gold prices. This result is consistent with the dominance of the controlling shareholders' motives rather than minority shareholders' motives in the hedging decisions because costly hedging is more attractive to the undiversified controlling shareholders than to the diversified minority shareholders.

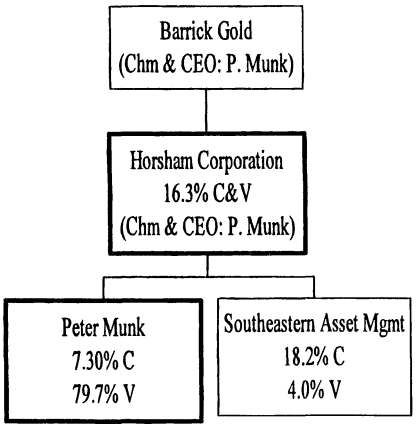

Figure 2. Barrick Gold (Canada). The principal shareholders of Barrick Gold (the fourth largest company in Canada) are shown. All shares in Barrick Gold, but not in Horsham Corporation, carry one vote. Ownership stakes are denoted with "C" and voting stakes with "V." We classify the firm as widely held at the 20 percent level. Under the 10 percent rule, we assign ultimate control to Peter Munk and represent his control chain with thick-bordered boxes.

After the State-controlled NT&T, Toyota Motor is the most valuable company in Japan (Figure 4). Toyota has several nontrivial shareholders, but none of them is very large. Four of these shareholders (Sakura Bank, Mitsui Fire and Marine, Mitsui T&B, and Mitsui Life) are part of the Mitsui Group and together control 12.1 percent of both capital and votes in Toyota. This is a common situation in Japan, and we say that Toyota is widely held on the 20 percent definition, but "miscellaneous" on the 10 percent definition, because that is where we put business groups as well as voting trusts. There are no pyramids or deviations from one-share one-vote here, but Toyota has cross-shareholdings in firms in the Mitsui Group.[8]

Ownership in Japanese companies is straightforward relative to that in Korean ones, as the example of Korea's second largest firm, Samsung Electronics (Figure 5), illustrates. Lee Kun-Hee, the son of Samsung's founder, controls 8.3 percent of Samsung Electronics directly. But he also controls 15 percent of Samsung Life, which controls 8.7 percent of Samsung Electronics, as well as 14.1 percent of Cheil Jedang, which controls 3.2 percent of Samsung Electronics directly and 11.5 percent of Samsung Life. Lee Kun-Hee has additional indirect stakes in Samsung Electronics as well. Because there are no 20 percent ownership chains, we call Samsung Electronics widely held on the 20 percent definition. But we classify it as a family-controlled firm on the 10 percent definition because the total of Lee Kun-Hee's direct

[8] Because Toyota does not have a controlling shareholder, and because we only report cross-shareholdings by the sample firms in the firms in their control chains, Toyota and similar Japanese firms would not appear in Table IV as having cross-shareholdings.

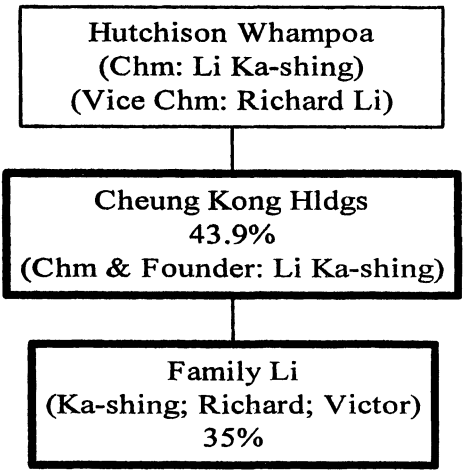

Figure 3. Hutchison Whampoa Ltd. (Hong Kong). The principal shareholders are shown for Hutchison Whampoa Ltd. (the third largest company in Hong Kong). All shares in Hutchison Whampoa and Cheung Kong Holdings carry one vote. Under the 20 percent rule, we assign ultimate control to the Li family and represent their control chain with thick-bordered boxes.

holdings and his holdings in Samsung Life is more than 10 percent of the votes in Samsung Electronics. It is also controlled through a pyramid on that definition because, for example, Samsung Life is publicly traded.

Finally, to illustrate the really complicated cases, we consider the ownership structure of five companies from Continental Europe. We begin with Germany, where the most valuable company is Allianz Insurance (Figure 6). Allianz is a one-share one-vote company with several large shareholders, of whom the largest, with a 25 percent stake, is Munich Reinsurance, the third most valuable company in Germany. However, Allianz has cross-shareholdings in most of its large shareholders, including a 25 percent stake in Munich Reinsurance (Allianz also has a 22.5 percent stake in Dresdner Bank, which has a 10 percent stake in Munich Reinsurance). Allianz presents a difficult case: One could argue that it is widely held because it controls its controlling shareholder, that it is controlled by a widely held financial institution, or that it belongs in the "miscellaneous" category. We allocate it to the first category, while (happily) recognizing that there are only four such controversial cases in the sample, including Munich Reinsurance itself.

The fourth largest company in Germany is Daimler Benz (Figure 7). It is 24.4 percent owned by Deutsche Bank, so its ultimate owner is a widely held financial institution (the largest shareholder in Deutsche Bank is Allianz, with five percent). Other shareholders of Daimler Benz form an enormous pyramid, but we do not call its ownership structure a pyramid because it does not involve publicly traded firms in the control chain and does not lead to the ultimate owner. Although there are other greater than 10 percent

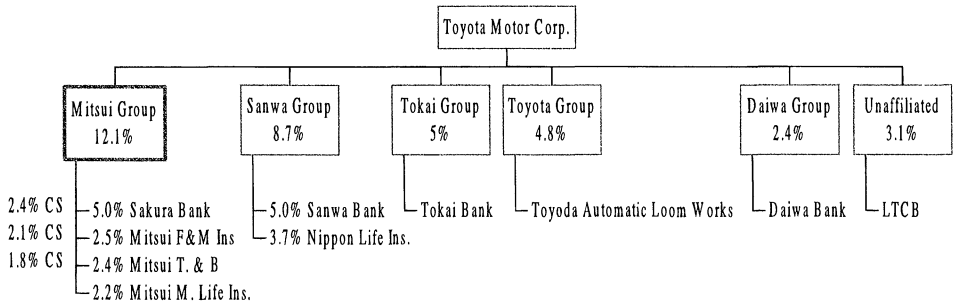

Figure 4. Toyota Motor (Japan). The principal shareholders are shown for Toyota Motor (the second largest company in Japan). All shares carry one vote. Members of the Mitsui group (Sakura Bank, Mitsui F&M, Mitsui T&B, and Mitsui M. Life Ins.) hold 12.1 percent of Toyota's shares. Therefore, under the 10 percent rule, we assign ultimate control to the Mitsui Group and represent its control chain with a thick bordered box. In turn, Toyota Motors owns shares in members of the Mitsui Group (i.e., there are cross-shareholdings). For example, Toyota Motor owns 2.4 percent of the shares of Sakura Bank. Cross-shareholdings are denoted with "CS".

shareholders and chains of shareholders in Daimler Benz, for the purposes of most of our analysis we look only at the largest shareholder, namely Deutsche Bank. Also, by looking only at the banks' own equity ownership, we ignore the voting arrangements that enable Deutsche Bank and other German banks to vote the shares they hold in custody for their brokerage clients, thereby biasing our results in favor of Berle and Means.

The fourth most valuable company in Sweden is ABB (Figure 8). Like five of the top 10 most valuable companies in Sweden, ABB is controlled by the Wallenberg family, characteristically through a pyramid of companies that have shares with differential cash flow and voting rights. Incentive, the 17th most valuable company in Sweden, owns 24.3 percent of capital and has 32.8 percent of the votes in ABB. The Wallenberg Group owns 32.8 percent of the capital, but has 43.1 percent of the votes in Incentive. The Wallenberg Group is a voting arrangement controlled by Investor (which has 35.7 percent of the Group's total of 43 percent of the votes in Incentive). Investor is the fifth most valuable company in Sweden, controlled by the Wallenberg Group with 41.2 percent of the votes. Here we have family control, pyramids, and deviations from one-share one-vote.

ABB is a good company to illustrate how we measure the extent of deviations from one-share one-vote. The company has 24,345,619 shares with 0.1 votes per share and a par value of 50 SEK, as well as 66,819,757 shares with one vote per share and a par value of 5 SEK. Here the cheapest way to buy a 20 percent voting stake is to acquire the second kind of shares only. The number of required votes is 13,850,865 = 0.2 * (24,345,619 * 0.1 + 66,819,757), and each of these votes costs 5 SEK at par value. The par value of the firm is SEK 1,551 billion. Therefore, the cost of buying the required votes as a percentage of the total book value of the firm's capital is

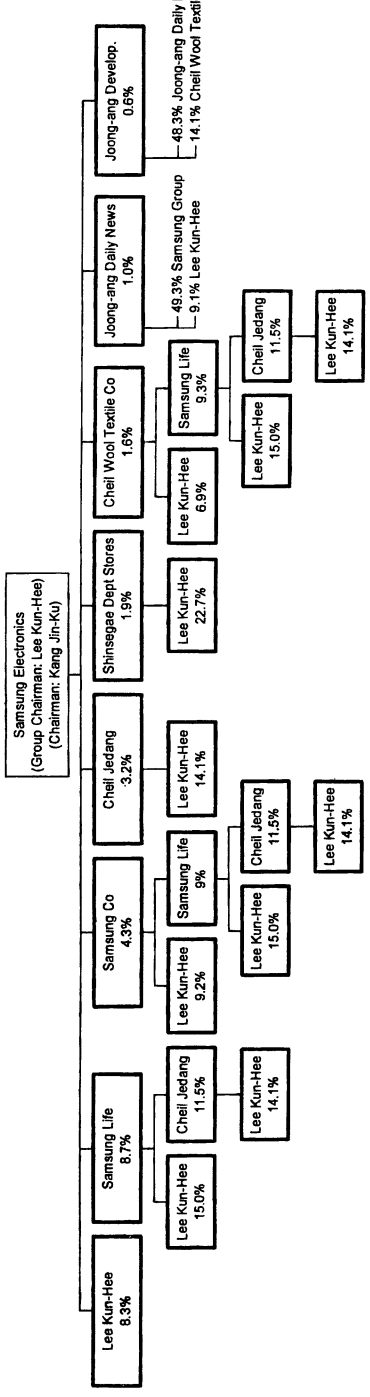

Figure 5. Samsung Electronics (South Korea). The principal shareholders in Samsung Electronics (the second largest company in South Korea) are shown. There are no deviations from the one-share one-vote rule on the graph. We classify the firm as widely held at the 20 percent level. Under the 10 percent rule, we assign ultimate control to Lee Kun-Hee and represent his control chain with thick-bordered boxes.

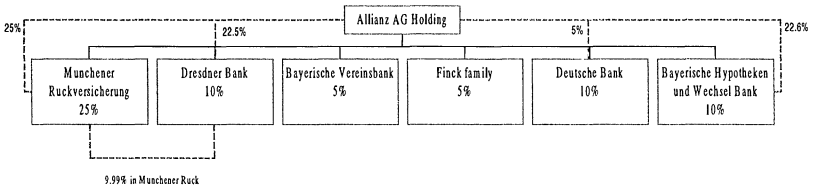

Figure 6. Allianz Holding (Germany). Principal shareholders of Allianz Holdings (the largest company in Germany) are shown. There are no deviations from the one-share one-vote rule on the graph. Allianz and Munchener Ruckversicherung own 25 percent of the shares of each other. Allianz also owns 22.5 percent of Dresdner Bank, which in turn owns 9.99 percent in Munchener Ruckversicherung. We classify Allianz as widely held since it, arguably, controls its largest shareholder.

(SEK 5 * 13,850,864)/(SEK 1,551 billion) = 4.46 percent. To acquire 20 percent of the votes in ABB, one can buy only 4.46 percent of the capital, a sharp deviation from one-share one-vote.

The third most valuable company in Italy is Fiat (Figure 9). Many of its shares are controlled by a voting trust, of which the most important member is Ifi, with 14.8 percent of the capital and 22.3 percent of the votes. Another large shareholder is Ifil, with 6.1 percent of the capital and 9.2 percent of the votes. Ifi is controlled by Giovanni Agnelli and his family, who have 41.2 plus 8.75, or 49.95, percent of the capital and 100 percent of the votes. Ifi also controls Ifil with 26.5 percent of the capital and 52.25 percent of the votes. Here we have family control through pyramids and voting trusts, though no evident cross-shareholdings by Fiat. The majority of Fiat's shares are ordinary, but there are a few savings shares with no voting rights. As a consequence, one can control 20 percent of Fiat's votes with 15.47 percent of its capital.

The last, and possibly most complicated, example we present is Electrabel, the largest listed company in Belgium (Figure 10). Fortunately, voting and cash flow rights are the same here. One can see that 26.34 percent of Electrabel is controlled by Powerfin, the eleventh largest company in Belgium. In turn, 60 percent of Powerfin is owned by Tractebel, which is the third largest company in Belgium, and which also controls 16.2 percent of Electrabel directly. But who owns Tractebel? The Belgian bank, Générale de Belgique, owns 27.5 percent of the company directly, and also controls 8.02 percent of the votes held by Genfina. Générale de Belgique does not itself enter the Belgian sample because it is 49.4 percent owned by a French bank, Compagnie de Suez, and hence is defined to be a foreign affiliate. Thus, through this pyramid, Electrabel is controlled by a widely held financial institution. Tractebel, however, has an additional significant set of owners. Actually, 20 percent of its shares are owned by Electrafina, the twelfth largest company in Belgium. Electrafina, in turn, is controlled with a 46.6 percent stake by Groupe Bruxelle Lambert, a holding company that is the ninth largest in Belgium. Groupe Bruxelle Lambert is in turn controlled with

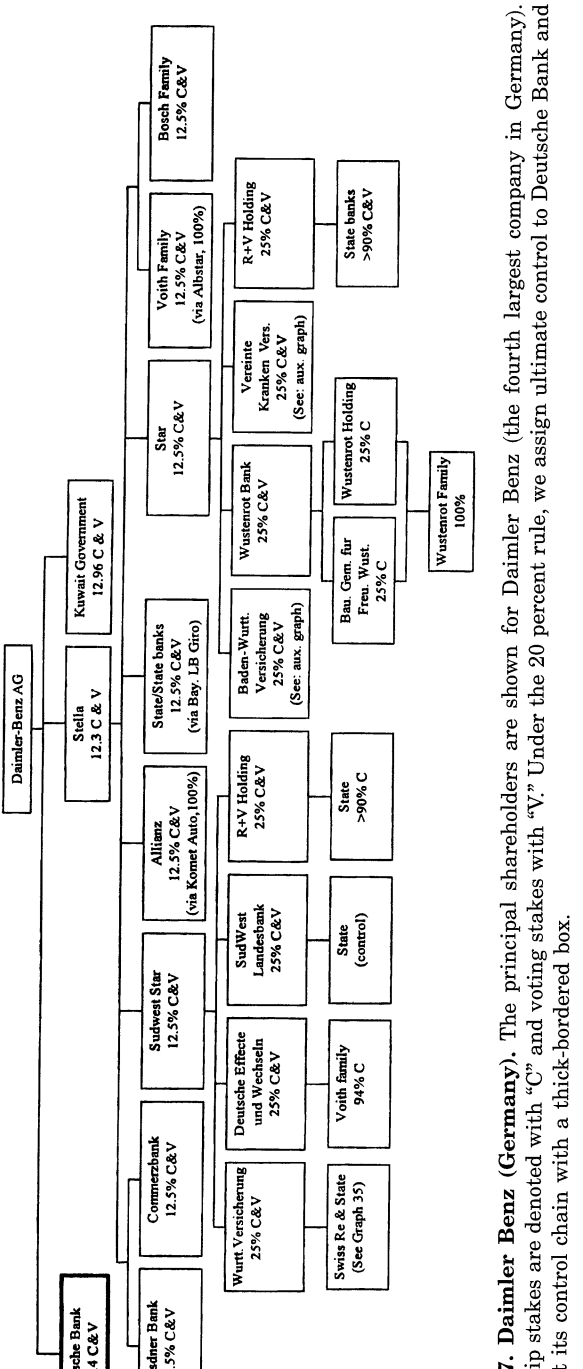

Figure 7. Daimler Benz (Germany). The principal shareholders are shown for Daimler Benz (the fourth largest company in Germany). Ownership stakes are denoted with "C" and voting stakes with "V." Under the 20 percent rule, we assign ultimate control to Deutsche Bank and represent its control chain with a thick-bordered box.

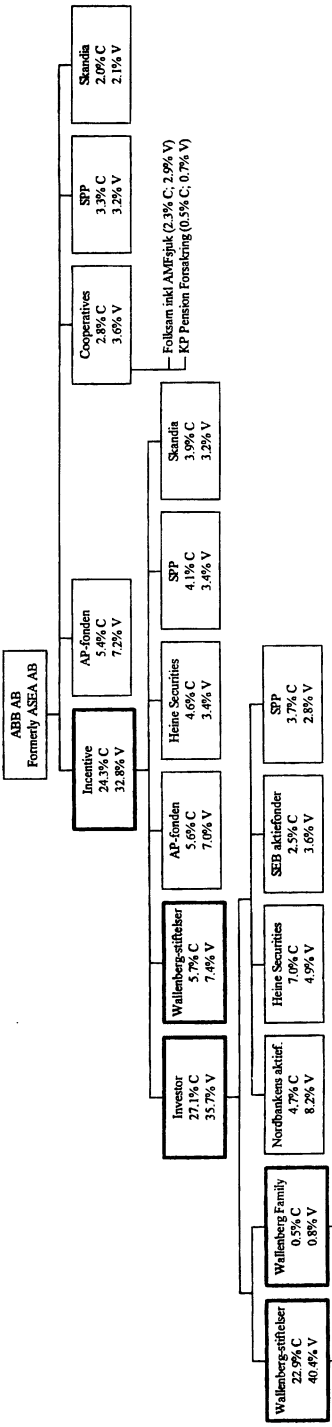

Figure 8. ABB AB (Sweden). The principal shareholders in ABB AB (the fourth largest company in Sweden) are shown. Ownership stakes are denoted with "C" and voting stakes with "V." Under the 20 percent rule, we assign ultimate control to the Wallenberg family and indicate its control chain with thick-bordered boxes.

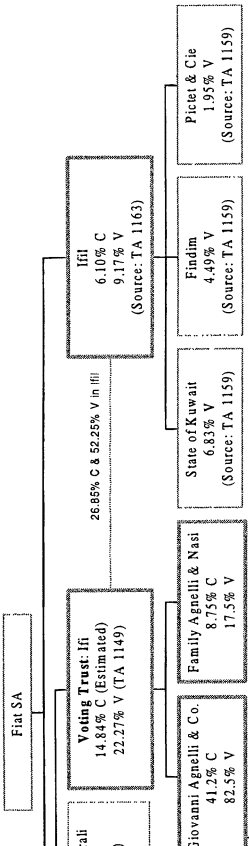

Figure 9. Fiat Spa (Italy). Principal shareholders in Fiat Spa (the third largest company in Italy) are shown. Ownership stakes are denoted with "C" and voting stakes with "V." A voting trust formed by Mediobanca, Deutsche Bank, Generali, Ifi, and Ifil controls 39.44 percent of the votes in Fiat. Members of the Agnelli family control 100 percent of the votes in Ifi, Fiat's largest shareholder. In addition, Ifi controls 52.25 percent of the votes in Ifil, Fiat's second largest shareholder. Therefore, we assign ultimate control (under the 20 percent rule) to the Agnelli family and indicate its control chain with thick-bordered boxes.

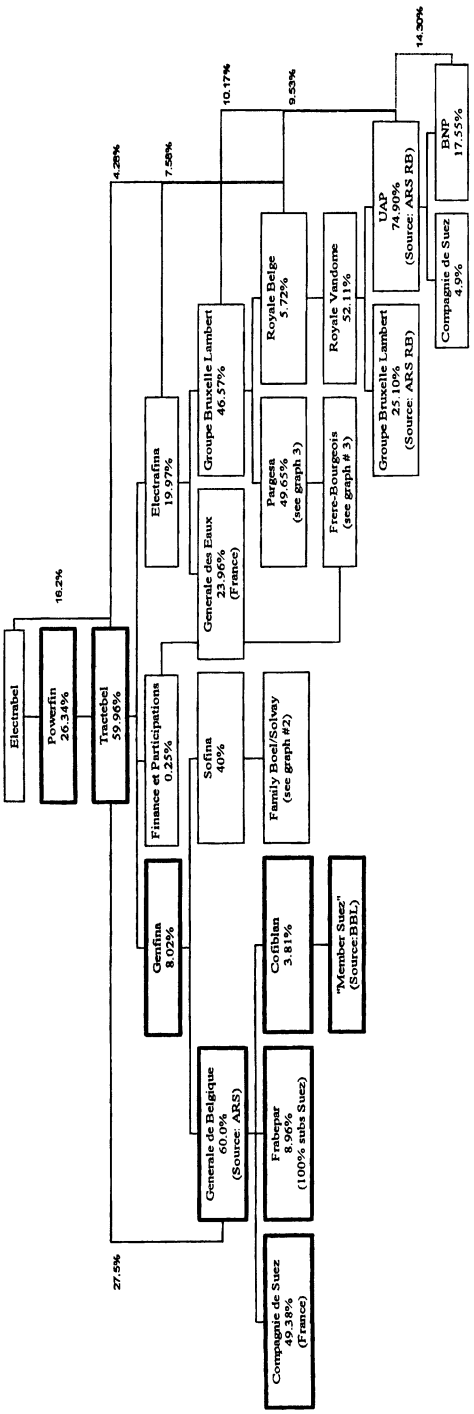

Figure 10. Electrabel SA (Belgium). Principal shareholders are shown for Electrabel SA (the largest company in Belgium). There are no deviations from the one-share one-vote rule on the graph. Under the 20 percent rule, we assign ultimate control to Compagnie de Suez because it is the largest shareholder in Tractebel. In turn, Tractebel owns directly 16.2 percent of Electrabel and controls Powerfin's 26.34 percent stake by virtue of its 59.96 percent investment in Powerfin. We represent Suez's control chain with thick-bordered boxes.

49.7 percent by Pargesa, a Swiss-listed holding controlled by the Belgian Frere family. Thus the Freres can also be viewed as the owners of Electrabel, except that we count only the largest ultimate owner, and hence Electrabel goes to Compagnie de Suez. There are many other relationships between the various companies in these pyramids, which are presented in Figure 10. Electrabel offers a good reason to look only at the largest shareholders rather than measure ownership concentration.

The preceding examples are not intended to prejudge the reader's opinion as to the relative frequency of widely held versus owner-controlled firms, but rather to show how complicated ownership structures can be, and to illustrate our biases toward classifying firms as widely held. In the next section, we abstract from the many subtleties of ownership and present the simple statistics on the relative frequency of different arrangements.

II. Results

A. Who Owns Firms?

Tables II and III present the basic information from our sample on who the ultimate owners of firms are in different countries. We divide the 27 countries in the sample into 12 with better than median shareholder protection using the scores from La Porta et al. (1998) (four and five), and 15 with median and worse than median protection (zero, one, two, and three). These scores aggregate a number of legal shareholder protections used in different countries (Table I). The good protection subsample is dominated by common law countries, and the bad protection subsample by civil law countries. We describe average ownership patterns for each country, and then compare average patterns for the world (meaning the 27 rich countries), the good protection countries, and the bad protection countries. We have two tables because we do each calculation for the large and the medium firm samples.

Within each country, for a given sample and a given definition of control, we classify every firm following the rules described in the previous section as one of six types: widely held, family-controlled, State-controlled, controlled by a widely held financial institution, controlled by a widely held corporation, or miscellaneous. We then compute and report the frequency of each type of firm in each country, and take appropriate averages. The t-tests comparing groups of countries treat each country's average as one observation.

Table II, Panel A, shows that, for the sample of large firms, and using the 20 percent definition of control, 36 percent of the firms in the world are widely held, 30 percent are family-controlled, 18 percent are State-controlled, and the remaining 15 percent are divided between the residual categories. To us, the fact that only slightly more than one-third of the firms in the richest countries, selected for their large size and using the stiff 20 percent chain definition of control, are widely held suggests that the image of the Berle and Means corporation as the dominant ownership structure in the world is misleading. It is true that, on this definition, all 20 firms in the United

Table II

Control of Large Publicly Traded Firms around the World

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. Panel A (B) presents means for each variable using 20 (10) percent as the criterion for control for a sample of the 20 largest firms (by stock market capitalization of equity at the end of 1995) in 27 countries. (Definitions for each of the variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector rights.

Panel A: 20% Cutoff						
Country	Widely Held	Family	State	Widely Held Financial	Widely Held Corporation	Miscellaneous
Argentina	0.00	0.65	0.15	0.05	0.15	0.00
Australia	0.65	0.05	0.05	0.00	0.25	0.00
Canada	0.60	0.25	0.00	0.00	0.15	0.00
Hong Kong	0.10	0.70	0.05	0.05	0.00	0.10
Ireland	0.65	0.10	0.00	0.00	0.10	0.15
Japan	0.90	0.05	0.05	0.00	0.00	0.00
New Zealand	0.30	0.25	0.25	0.00	0.20	0.00
Norway	0.25	0.25	0.35	0.05	0.00	0.10
Singapore	0.15	0.30	0.45	0.05	0.05	0.00
Spain	0.35	0.15	0.30	0.10	0.10	0.00
U.K.	1.00	0.00	0.00	0.00	0.00	0.00
United States	0.80	0.20	0.00	0.00	0.00	0.00
High antidirector avg.	0.4792	0.2458	0.1375	0.0250	0.0833	0.0292
Austria	0.05	0.15	0.70	0.00	0.00	0.10
Belgium	0.05	0.50	0.05	0.30	0.00	0.10
Denmark	0.40	0.35	0.15	0.00	0.00	0.10
Finland	0.35	0.10	0.35	0.05	0.05	0.10
France	0.60	0.20	0.15	0.05	0.00	0.00
Germany	0.50	0.10	0.25	0.15	0.00	0.00
Greece	0.10	0.50	0.30	0.10	0.00	0.00
Israel	0.05	0.50	0.40	0.00	0.05	0.00
Italy	0.20	0.15	0.40	0.05	0.10	0.10
South Korea	0.55	0.20	0.15	0.00	0.05	0.05
Mexico	0.00	1.00	0.00	0.00	0.00	0.00
Netherlands	0.30	0.20	0.05	0.00	0.10	0.35
Portugal	0.10	0.45	0.25	0.15	0.00	0.05
Sweden	0.25	0.45	0.10	0.15	0.00	0.05
Switzerland	0.60	0.30	0.00	0.05	0.00	0.05
Low antidirector avg.	0.2733	0.3433	0.2200	0.0700	0.0233	0.0700
Sample average	0.3648	0.3000	0.1833	0.0500	0.0500	0.0519
Test of Means (t-statistic)						
Low vs. high antidirector	−1.95	1.09	1.20	1.70	−2.38	1.40

Table II—*Continued*

Panel B: 10% Cutoff						
Country	Widely Held	Family	State	Widely Held Financial	Widely Held Corporation	Miscellaneous
Argentina	0.00	0.65	0.20	0.10	0.05	0.00
Australia	0.55	0.10	0.05	0.05	0.25	0.00
Canada	0.50	0.30	0.00	0.00	0.15	0.05
Hong Kong	0.10	0.70	0.05	0.05	0.00	0.10
Ireland	0.45	0.15	0.00	0.05	0.05	0.30
Japan	0.50	0.10	0.05	0.00	0.00	0.35
New Zealand	0.05	0.45	0.25	0.05	0.20	0.00
Norway	0.05	0.25	0.40	0.10	0.00	0.20
Singapore	0.05	0.45	0.45	0.00	0.00	0.05
Spain	0.15	0.25	0.45	0.15	0.00	0.00
U.K.	0.90	0.05	0.00	0.05	0.00	0.00
United States	0.80	0.20	0.00	0.00	0.00	0.00
High antidirect. avg.	0.3417	0.3042	0.1583	0.0500	0.0583	0.0875
Austria	0.05	0.15	0.70	0.00	0.00	0.10
Belgium	0.00	0.50	0.05	0.35	0.00	0.10
Denmark	0.10	0.35	0.20	0.05	0.00	0.30
Finland	0.15	0.10	0.35	0.25	0.00	0.15
France	0.30	0.20	0.20	0.20	0.10	0.00
Germany	0.35	0.10	0.30	0.25	0.00	0.00
Greece	0.05	0.65	0.30	0.00	0.00	0.00
Israel	0.05	0.50	0.40	0.00	0.05	0.00
Italy	0.15	0.20	0.50	0.00	0.00	0.15
South Korea	0.40	0.35	0.15	0.00	0.05	0.05
Mexico	0.00	1.00	0.00	0.00	0.00	0.00
Netherlands	0.30	0.20	0.05	0.00	0.10	0.35
Portugal	0.00	0.50	0.25	0.20	0.00	0.05
Sweden	0.00	0.55	0.10	0.30	0.00	0.05
Switzerland	0.50	0.40	0.00	0.05	0.00	0.05
Low antidirector avg.	0.1600	0.3833	0.2367	0.1100	0.0200	0.0900
Sample average	0.2407	0.3481	0.2019	0.0833	0.0370	0.0889
			Test of Means (t-statistic)			
Low vs. high antidirector	−1.92	0.88	1.05	1.50	−1.50	0.06

Kingdom, 18 out of 20 in Japan, and 16 out of 20 in the United States fit the widely held description. Still, in Argentina, Greece, Austria, Hong Kong, Portugal, Israel, or Belgium, there are hardly any widely held firms in this

Table III

Control of Medium-Sized Publicly Traded Firms around the World

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. Panel A (B) presents means for each variable using 20 (10) percent as the criterion for control for a sample of 10 firms with stock market capitalization of common equity at the end of December of 1995 of at least $500 million or higher in 27 countries. (Definitions for each of the variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector rights.

Panel A: 20% Cutoff

Country	Widely Held	Family	State	Widely Held Financial	Widely Held Corporation	Miscellaneous
Argentina	0.00	0.80	0.20	0.00	0.00	0.00
Australia	0.30	0.50	0.00	0.00	0.20	0.00
Canada	0.60	0.30	0.10	0.00	0.00	0.00
Hong Kong	0.00	0.90	0.00	0.00	0.00	0.10
Ireland	0.63	0.13	0.00	0.00	0.13	0.13
Japan	0.30	0.10	0.00	0.00	0.00	0.60
New Zealand	0.57	0.29	0.14	0.00	0.00	0.00
Norway	0.20	0.40	0.20	0.10	0.00	0.10
Singapore	0.40	0.40	0.20	0.00	0.00	0.00
Spain	0.00	0.30	0.20	0.40	0.10	0.00
U.K.	0.60	0.40	0.00	0.00	0.00	0.00
United States	0.90	0.10	0.00	0.00	0.00	0.00
High antidirector avg.	0.3750	0.3850	0.0867	0.0417	0.0358	0.0775
Austria	0.00	0.17	0.83	0.00	0.00	0.00
Belgium	0.20	0.40	0.30	0.10	0.00	0.00
Denmark	0.30	0.40	0.20	0.00	0.00	0.10
Finland	0.20	0.20	0.20	0.10	0.10	0.20
France	0.00	0.50	0.20	0.20	0.00	0.10
Germany	0.10	0.40	0.20	0.20	0.10	0.00
Greece	0.00	1.00	0.00	0.00	0.00	0.00
Israel	0.10	0.60	0.30	0.00	0.00	0.00
Italy	0.00	0.60	0.00	0.00	0.10	0.30
South Korea	0.30	0.50	0.00	0.00	0.20	0.00
Mexico	0.00	1.00	0.00	0.00	0.00	0.00
Netherlands	0.10	0.20	0.10	0.00	0.10	0.50
Portugal	0.00	0.50	0.50	0.00	0.00	0.00
Sweden	0.10	0.60	0.20	0.00	0.00	0.10
Switzerland	0.50	0.50	0.00	0.00	0.00	0.00
Low antidirector avg.	0.1267	0.5047	0.2020	0.0400	0.0400	0.0867
Sample average	0.2370	0.4515	0.1507	0.0407	0.0381	0.0826
			Test of Means (t-statistic)			
Low vs. high antidirector	−2.86	1.24	1.64	−0.45	0.18	0.16

Table III—*Continued*

Panel B: 10% Cutoff						
Country	Widely Held	Family	State	Widely Held Financial	Widely Held Corporation	Miscellaneous
Argentina	0.00	0.80	0.20	0.00	0.00	0.00
Australia	0.10	0.50	0.00	0.10	0.20	0.10
Canada	0.40	0.50	0.10	0.00	0.00	0.00
Hong Kong	0.00	0.90	0.00	0.00	0.00	0.10
Ireland	0.50	0.25	0.00	0.00	0.00	0.25
Japan	0.20	0.10	0.00	0.00	0.00	0.70
New Zealand	0.00	0.86	0.14	0.00	0.00	0.00
Norway	0.10	0.40	0.20	0.10	0.00	0.20
Singapore	0.10	0.60	0.30	0.00	0.00	0.00
Spain	0.00	0.30	0.30	0.40	0.00	0.00
U.K.	0.10	0.60	0.00	0.10	0.00	0.20
United States	0.50	0.30	0.00	0.00	0.00	0.20
High antidirector avg.	0.1667	0.5092	0.1033	0.0583	0.0167	0.1458
Austria	0.00	0.17	0.83	0.00	0.00	0.00
Belgium	0.10	0.40	0.30	0.20	0.00	0.00
Denmark	0.00	0.40	0.20	0.00	0.00	0.40
Finland	0.00	0.20	0.20	0.20	0.10	0.30
France	0.00	0.50	0.20	0.20	0.00	0.10
Germany	0.10	0.40	0.20	0.30	0.00	0.00
Greece	0.00	1.00	0.00	0.00	0.00	0.00
Israel	0.10	0.60	0.30	0.00	0.00	0.00
Italy	0.00	0.80	0.10	0.00	0.00	0.10
South Korea	0.00	0.80	0.00	0.00	0.20	0.00
Mexico	0.00	1.00	0.00	0.00	0.00	0.00
Netherlands	0.10	0.20	0.10	0.00	0.10	0.50
Portugal	0.00	0.50	0.50	0.00	0.00	0.00
Sweden	0.10	0.60	0.20	0.10	0.00	0.00
Switzerland	0.40	0.50	0.00	0.00	0.00	0.10
Low antidirector avg.	0.0600	0.5380	0.2087	0.0667	0.0267	0.1000
Sample average	0.1074	0.5252	0.1619	0.0630	0.0222	0.1204
Test of Means (t-statistic)						
Low vs. high antidirector	−1.83	0.28	1.47	0.20	0.44	−0.65

sample and on this definition. A critic might remark that most of the value of the world stock market is in the United States, United Kingdom, Japan, and other countries with Berle and Means firms, so who cares about Argentina or Austria? We care because to understand corporate governance in

most countries in the world, to appreciate what is essential about the countries where Berle and Means corporations are common, and consequently to see how corporate governance *is changing or can be changed*, it is important to recognize how much of an exception widely held corporations really are.

Among corporations with owners, the principal owner types are the families and the State. The high percentage of companies with State control in this sample is not surprising given that we are sampling the largest firms, and privatization is not finished in most countries. Still, the fact that 70 percent of the largest traded firms in Austria, 45 percent in Singapore, and 40 percent in Israel and Italy are State-controlled is a reminder of massive post-war State ownership around the world. Indeed, the magnitude of State ownership among the largest companies would be even higher if we included firms that are entirely State owned, and hence do not trade publicly. It is perhaps more surprising that by far the dominant form of controlling ownership in the world is not that by banks and other corporations, but rather by families.

A comparison of countries with good and poor shareholder protection shows that widely held firms are more common in countries with good protection: 48 percent versus 27 percent. This difference is statistically significant ($t = -1.95$). Countries with poor shareholder protection have more of most other types of firms, including family-controlled: 34 versus 25 percent ($t = 1.09$), and State-controlled: 22 versus 14 percent ($t = 1.20$). Interestingly, firms in countries with good protection are more commonly controlled by a widely held corporation: eight percent versus two percent ($t = -2.38$). These results suggest that dispersion of ownership goes together with good shareholder protection, which enables controlling shareholders to divest at attractive prices.

Table II, Panel B, presents the results for the sample of large firms using the 10 percent chain definition of control. Under this definition, only 24 percent of the large companies in rich countries are widely held, compared to 35 percent that are family-controlled, 20 percent are State-controlled, and 21 percent are in the three residual categories. We stress that using the 10 percent control chain to define control is not incredibly tough on the Berle and Means thesis; many people would consider 10 percent ownership of a U.S. firm to be sufficient for control. Indeed, 90 percent of the large U.K. firms, 80 percent of the large U.S. firms, and 50 percent of the large Japanese firms remain widely held.[9] Still, in the rich world as a whole, dispersed ownership is rare on this definition.

One finding shown in Panel B is that many Japanese firms shift into the miscellaneous category because, like Toyota, they are controlled by groups with no dominant members. Individual members of these groups hold very

[9] Some seminar participants have argued that the larger the firm, the smaller the percentage of equity needed to control it. If that were the case, many of the firms in the United States, Japan, and the United Kingdom that we designate as widely held would also have controlling shareholders, further diminishing the Berle and Means category. Our sample of medium firms, which holds size roughly constant across countries, addresses this point as well.

small equity stakes in sample companies, and even groups as a whole often have stakes of 10 to 20 percent. In this respect, the Japanese model of ownership seems to be closer to that in other countries with good shareholder protection, like the United States or the United Kingdom, than it is to the continental European model. Specifically, most shares in Japanese firms are owned by small individual shareholders and relatively small corporate shareholders (French and Poterba (1991)), there are few controlling shareholders per se, and even the groups have a relatively small share of the total votes. Of course, the groups may have control in excess of their voting rights because of lending and supply arrangements.

A comparison of countries with good and poor shareholder protection shows that widely held firms remain more common in the former: 34 percent versus only 16 percent in countries with poor shareholder protection ($t = -1.92$). The latter countries have relatively more firms with ultimate owners in almost all categories: family, the State, and financial institutions, though the differences are not statistically significant. The bottom line is that the largest firms typically have ultimate owners, particularly in countries with poor shareholder protection.

What about the medium-sized firms, defined here as those with market valuations above, but near, $500 million? Recall that we focus on these firms in part to address the criticism that firms in countries with good shareholder protection are larger, and hence have more dispersed ownership. Table III presents the results for these firms using the 20 percent chain definition of control. Among the medium firms, the world average incidence of dispersed ownership is 24 percent, compared to 36 percent for the large firms. So going down in size has the same effect as relaxing the strictness of the definition of control: it makes widely held firms more scarce. Note, however, that in the United States and the U.K., though not in Japan, the medium firms remain mostly widely held—a testimony to the attractiveness of selling out in the United States and the U.K.. For medium firms, the percentage of firms controlled by families rises to a world average of 45 percent, making it the dominant ownership pattern.

The comparison of countries with good and poor shareholder protection reinforces this picture. Only 13 percent of the medium firms in poor protection countries are widely held, compared to 38 percent in good protection countries ($t = -2.86$). Families control 39 percent of medium firms in the good shareholder protection countries, and 50 percent in the poor investor protection countries (this difference is not statistically significant). State control is more common in bad protection countries: 20 percent versus nine percent ($t = 1.64$, significant at the 10 percent level). Using even the tough definition of control, we see that medium-sized firms generally have owners, especially in countries with poor shareholder protection.

Table III, Panel B, shows that, if we soften the definition of control by using the 10 percent control chain, only 11 percent of the medium-sized firms in the world are widely held (50 percent in the United States and Ireland.) By contrast, 53 percent of firms are family controlled, 16 percent are State

controlled, and the remaining 20 percent are in other categories. Using this perfectly reasonable definition of control for medium firms makes dispersed ownership truly an exception.

Not surprisingly, dispersed ownership is even more of an exception in countries with poor shareholder protection, where only six percent of the firms are widely held, compared to 17 percent in countries with good investor protection ($t = -1.83$). In both groups, the predominant ownership pattern is family control. The conclusion from this evidence is inescapable: If we look at the largest firms in the world and use a very tough definition of control, dispersed ownership is about as common as family control. But if we move from there to medium-sized firms, to a more lenient definition of control, and to countries with poor investor protection, widely held firms become an exception. Berle and Means have created an accurate image of ownership of large American corporations, but it is far from a universal image.

B. How are Firms Owned?

In this subsection, we describe some of the mechanisms through which controlling shareholders exercise their power in the large firm sample. We address several related questions. First, how commonly are voting rights separated from cash flow rights through multiple classes of stock, cross-shareholdings, and pyramids? Second, how do families that control firms do so, and in particular is management separate from ownership in these firms? Third, do financial institutions play a bigger role in the control of firms than our earlier discussion has indicated? And finally, who, if anyone, monitors the controlling shareholders? By answering these questions, we hope to provide a more detailed picture of ownership of very large firms, as well as suggest what might be some of the problems in the governance of such firms.

Table IV begins by showing, for each country, the average fraction of book capital needed to control 20 percent of the votes, the incidence of cross-shareholdings by the sample firms, and the frequency of pyramids in firms with controlling owners at the 20 percent control level.

For the large firms, the *magnitude* of deviations from one-share one-vote through shares with differential voting rights tends to be small. In our sample, it takes on average about 18.6 percent of capital to control 20 percent of the votes, assuming that the only mechanism at the disposal of a controlling shareholder is shares with differential voting rights *in the sample firm*.[10] Companies obviously do not use anything like the opportunities for high and low voting shares allowed by national laws (La Porta et al. (1998)).[11] Indeed, even in countries with poor shareholder protection, it takes on average 17.7 percent of capital to buy 20 percent of the votes, compared to 19.7 percent for

[10] We do not, in this calculation, take account of the voting caps and other possible restrictions on voting in different countries.

[11] De Angelo and De Angelo (1985) and Zingales (1994) report similar findings for the United States and Italy, respectively.

Table IV

One-Share One-Vote, Cross-Shareholdings, and Pyramids

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. This table presents means for each variable using 20 percent as the criterion for control for a sample of the 20 largest firms (by stock market capitalization of equity at the end of 1995) in 27 countries. (Definitions for each of the variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector rights.

Country	Cap = 20% V	Pyramid and Not Widely Held	Cross-Shhs
Argentina	19.6013	0.05	0.00
Australia	20.0000	0.14	0.10
Canada	19.3618	0.13	0.00
Hong Kong	19.5107	0.39	0.05
Ireland	20.0000	0.00	0.00
Japan	20.0000	0.00	0.00
New Zealand	20.0000	0.36	0.00
Norway	18.1548	0.13	0.00
Singapore	20.0000	0.41	0.10
Spain	20.0000	0.38	0.00
U.K.	20.0000	.	0.00
United States	19.1927	0.00	0.00
High antidirector avg.	19.6518	0.1808	0.0208
Austria	19.8933	0.47	0.15
Belgium	20.0000	0.79	0.05
Denmark	14.8661	0.08	0.00
Finland	15.7533	0.00	0.00
France	19.9957	0.38	0.00
Germany	18.6137	0.40	0.20
Greece	20.0000	0.11	0.00
Israel	20.0000	0.53	0.00
Italy	18.0399	0.25	0.00
South Korea	20.0000	0.33	0.05
Mexico	16.4490	0.25	0.00
Netherlands	15.0000	0.14	0.00
Portugal	20.0000	0.44	0.05
Sweden	12.6283	0.53	0.10
Switzerland	14.1783	0.00	0.00
Low antidirector avg.	17.6945	0.3137	0.0400
Sample average	18.5644	0.2575	0.0315
	Test of Means (t-statistic)		
Low vs. high antidirector	−2.53	1.64	0.91

good shareholder protection countries ($t = -2.53$). Some countries, particularly in Scandinavia, have much more significant deviations, but the average deviation from one-share one-vote is small. The results suggest that multiple classes of shares are not a central mechanism of separating owner-

ship and control. They are also consistent with the notion that the controlling shareholders may need to hold on to significant cash flow rights as a commitment to limit the expropriation of minority shareholders.

At the same time, fully 26 percent of firms that have ultimate owners are controlled through pyramids. That fraction is 18 percent in countries with good shareholder protection, and 31 percent in countries with poor protection. Relative to shares with differential voting rights, pyramidal ownership appears to be a more important mechanism used by controlling shareholders to separate their cash flow ownership in sample firms from their control rights. These results are consistent with Wolfenzon's (1998) theory on pyramids, which suggests that they can be used by controlling shareholders to make existing shareholders pay the costs, but not share in all the benefits of new ventures, particularly in countries with poor shareholder protection. Through pyramids, more so than through high voting rights shares, controlling shareholders acquire power disproportionate to their cash flow rights.

Finally, with the exception of a few countries, such as Sweden and Germany, cross-shareholdings by sample firms in the firms that control them or in the controlling chain are rare. This is particularly interesting because cross-shareholdings are restricted by law in only six of our sample countries (Belgium, France, Germany, Italy, Korea, and Spain), and, if anything, appear to be *more* common in the countries where they are restricted.[12]

Table V examines the firms that are controlled by families more specifically.[13] The second column shows that in an average country, the *ultimate family owners* control, on average, 25 percent of the value of the top 20 firms. Following up on the predominance of the Wallenbergs in Sweden, we also ask how many of the largest firms a controlling family controls, on average. Our sample average answer is 1.33, though in countries such as Israel and Sweden, an average *ultimate family owner* controls 2.5 of the top 20 firms. Again, this is evidence of very significant control of productive resources by the largest shareholding families.

The next-to-last column of Table V speaks to the crucial issue concerning family control, namely the separation of ownership and management. We ask how often a member of the controlling family is the CEO, the Chairman, the Honorary Chairman, or the Vice-Chairman of the firm that the family controls. We do not catch all the family members by this procedure because a CEO who is married into the family but does not have the same last name would not be recorded as a family member. For the universe as a whole, the answer is that (at least) 69 percent of the time, families that control firms also participate in management. In countries with good shareholder protection, this fraction is 75 percent, whereas in countries with poor protection, it

[12] The Japanese Commercial Code prohibits cross-shareholdings by subsidiaries in their parents, and places restrictions on voting by companies with large cross-shareholdings (Kita (1996)). However, modest cross-shareholdings are not restricted and are widely used.

[13] On preliminary calculations, about one-third of the family-controlled firms are run by their founders, and the rest by the descendants of founders or families that came to own them later.

Table V

Family Control in a Sample of Large Publicly Traded Firms around the World

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. This table presents means for each variable using 20 percent as the criterion for control for a sample of the largest 20 firms (by stock market capitalization of equity at the end of 1995) in 27 countries. (Definitions for each of the variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector rights.

Country	Family	%Mkt Fam	Firms/Avg Fam	Management	Pyramids
Argentina	0.65	0.5258	1.18	0.62	0.00
Australia	0.05	0.1218	1.00	1.00	0.00
Canada	0.25	0.2770	1.25	1.00	0.20
Hong Kong	0.70	0.6342	1.56	0.86	0.50
Ireland	0.10	0.0417	2.00	1.00	0.00
Japan	0.05	0.0287	1.00	1.00	0.00
New Zealand	0.25	0.1511	1.00	0.60	0.40
Norway	0.25	0.1327	1.00	0.80	0.00
Singapore	0.30	0.1514	1.20	0.67	0.67
Spain	0.15	0.1697	1.50	0.67	0.33
U.K.	0.00	0.0000	.	.	.
United States	0.20	0.1827	1.00	0.75	0.00
High antidirector avg.	0.2458	0.2014	1.2441	0.7475	0.1909
Austria	0.15	0.0620	1.50	0.33	0.67
Belgium	0.50	0.4124	1.67	0.50	0.80
Denmark	0.35	0.3167	1.17	0.57	0.14
Finland	0.10	0.0613	1.00	0.50	0.00
France	0.20	0.2569	1.00	0.75	0.25
Germany	0.10	0.0751	1.00	0.50	0.00
Greece	0.50	0.4746	1.00	0.60	0.00
Israel	0.50	0.3099	2.50	0.60	0.60
Italy	0.15	0.1424	1.50	1.00	0.33
South Korea	0.20	0.2160	1.33	0.75	0.50
Mexico	1.00	1.0000	1.05	0.95	0.25
Netherlands	0.20	0.0610	1.00	0.50	0.25
Portugal	0.45	0.3798	1.80	0.44	0.44
Sweden	0.45	0.3545	2.50	0.56	0.78
Switzerland	0.30	0.2874	1.00	1.00	0.00
Low antidirector avg.	0.3433	0.2940	1.4010	0.6367	0.3343
Sample average	0.3000	0.2528	1.3347	0.6859	0.2736
		Test of Means (t-statistic)			
Low vs. high antidirector	1.09	1.06	0.94	−2.33	1.34

is 64 percent ($t = -2.33$). This result shows that the standard problem of separation of ownership and management is not important for most of these firms, which is not to say that controlling shareholders act in the interest of minorities.

Relative to the power of the families, significant ownership of equity by banks is rare, as Table VI illustrates. The first column repeats the results from Table II, Panel A that only five percent of our large firms are controlled by financial institutions (mostly banks, but also insurance companies), and that this number is much higher in countries with poor than with good shareholder protection (seven percent versus two percent). But even in the former countries, bank ownership of equity is surprisingly small outside of Belgium (where it comes from French banks) and Germany. We also note that where banks are controlling shareholders they often control several of the largest firms, as is the case in Belgium, Portugal, and Sweden.

One reason for the scarcity of financial institutions as controlling shareholders in the largest firms may be that such institutions control small, though influential, ownership stakes. We look for financial institutions *outside* the 20 percent control chains in two ways. First, we look for financials that have more than 10 percent of votes, but are not part of the 10 percent control chain (independent financials). As the fourth column of Table VI shows, only six percent of the firms in the sample have such financials as shareholders. Second, we look for financial institutions that are themselves a link in a 10 percent control chain (associated financials). Only three percent of the firms in the sample have such institutions. Thus, even on looser definitions of significant ownership, financial institutions do not play a huge role as *significant shareholders* in governance outside a few countries, most notably Germany (Franks and Mayer (1994)).

These results leave us with a very different picture of separation of ownership and control than that suggested by Berle and Means. Widely held firms appear to be relatively uncommon, unless we look at specific countries, or focus on very restrictive measures of control and very large firms. In contrast, family control is very common. Families often have control rights over firms significantly in excess of their cash flow rights, particularly through pyramids, and typically manage the firms they control. They are, indeed, the ultimate owners with control in the Berle and Means sense. Moreover, financial institutions do not typically appear as controlling shareholders, although they may exercise influence through board representation and lending. The question this evidence raises is: Who keeps the controlling families from expropriating the minority shareholders, especially in countries with weak legal protection of these shareholders, where family control is even more common? *Who monitors the families?*

One possibility is that there are other large shareholders, and that the large shareholders monitor each other, preventing each other from taking too much (see Pagano and Roell (1998)). The second possibility is that no one monitors the families. We can try to distinguish between these possibilities by asking whether family (or other) controlling shareholders have other large shareholders in their firms.

Table VII addresses this question. We say that the 20 percent controlling shareholder has a potential monitor if there is another shareholder that has a nonoverlapping 10 percent chain of control. Thus, we suppose that moni-

Table VI

Control by Financial Institutions in a Sample of Large Firms in Twenty-Seven Countries

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. This table presents means for each variable using 20 percent as the criterion for control for a sample of the 20 largest firms (by stock market capitalization of equity at the end of 1995) in 27 countries. (Definitions for each of the variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector rights.

Country	Widely Held Financial	%Mkt WHF	Firms/ Avg WHF	Financ. Inst. Not Dominant		Pyramid
				Independent	Associated	
Argentina	0.05	0.0241	1.00	0.05	0.05	0.00
Australia	0.00	0.0000	.	0.00	0.00	.
Canada	0.00	0.0000	.	0.00	0.00	.
Hong Kong	0.05	0.0838	1.00	0.05	0.00	0.00
Ireland	0.00	0.0000	.	0.15	0.00	.
Japan	0.00	0.0000	.	0.00	0.00	.
New Zealand	0.00	0.0000	.	0.00	0.00	.
Norway	0.05	0.0177	1.00	0.20	0.00	1.00
Singapore	0.05	0.0169	1.00	0.00	0.00	0.00
Spain	0.10	0.0386	1.00	0.05	0.05	0.00
U.K.	0.00	0.0000	.	0.00	0.00	.
United States	0.00	0.0000	.	0.00	0.00	.
High antidirector avg.	0.0250	0.0151	1.0000	0.0417	0.0083	0.2000
Austria	0.00	0.0000	.	0.00	0.10	.
Belgium	0.30	0.4258	3.00	0.25	0.30	1.00
Denmark	0.00	0.0000	.	0.05	0.00	.
Finland	0.05	0.0156	1.00	0.15	0.00	0.00
France	0.05	0.0507	1.00	0.10	0.05	1.00
Germany	0.15	0.1304	1.50	0.10	0.15	0.67
Greece	0.10	0.0317	2.00	0.00	0.00	0.00
Israel	0.00	0.0000	.	0.05	0.00	.
Italy	0.05	0.0442	1.00	0.00	0.00	0.00
Korea (South)	0.00	0.0000	.	0.05	0.00	.
Mexico	0.00	0.0000	.	0.00	0.00	.
Netherlands	0.00	0.0000	.	0.10	0.00	.
Portugal	0.15	0.1021	3.00	0.05	0.00	0.67
Sweden	0.15	0.2074	3.00	0.10	0.05	0.33
Switzerland	0.05	0.0077	1.00	0.00	0.00	0.00
Low antidirector avg.	0.0700	0.0677	1.8333	0.0667	0.0433	0.4074
Sample average	0.0500	0.0443	1.5357	0.0556	0.0278	0.3333
			Test of Means (t-statistic)			
Low vs. high antidirector	1.70	1.53	5.88	0.94	1.40	0.85

Table VII

Probability That the Controlling Shareholder Is Alone

This table classifies countries according to their ranking in antidirector rights. We form two groups of countries: (1) high antidirectors; and (2) low antidirectors, based on whether the country's antidirector index is above the median or not. This table presents means for each variable using 20 percent as the criterion for control for a sample of the 20 largest firms (by stock market capitalization of equity at the end of 1995) in 27 countries. The last column presents the country mean across all observations reported in the table. (Definitions for all other variables are given in Table I.) This table also reports tests of means for countries above and below the median antidirector index and against the sample mean of firms with controlling shareholders.

Country	Family	State	Widely Held Financial	Widely Held Corporation	All
Argentina	0.85	0.33	1.00	0.67	0.75
Australia	1.00	1.00	.	0.80	0.86
Canada	1.00	.	.	1.00	1.00
Hong Kong	0.86	0.00	1.00	.	0.81
Ireland	0.00	.	.	0.50	0.25
Japan	1.00	1.00	.	.	1.00
New Zealand	0.80	0.60	.	0.00	0.50
Norway	0.40	0.71	1.00	.	0.62
Singapore	0.83	1.00	0.00	0.00	0.82
Spain	1.00	1.00	1.00	0.50	0.92
U.K.	.	.	.	.	.
United States	1.00	.	.	.	1.00
High antidirector avg.	0.7939	0.7050	1.0000	0.4957	0.7756
Austria	0.67	0.79	.	.	0.76
Belgium	0.50	1.00	1.00	.	0.71
Denmark	0.43	1.00	.	.	0.60
Finland	0.00	1.00	0.00	1.00	0.73
France	0.75	0.67	0.00	.	0.63
Germany	0.50	0.80	0.33	.	0.60
Greece	0.70	1.00	1.00	.	0.83
Israel	0.70	0.63	.	0.00	0.63
Italy	1.00	1.00	1.00	1.00	1.00
South Korea	0.75	1.00	.	1.00	0.88
Mexico	0.80	.	.	.	0.80
Netherlands	1.00	1.00	.	1.00	1.00
Portugal	0.56	0.80	0.67	.	0.65
Sweden	0.50	1.00	0.00	.	0.43
Switzerland	0.83	.	1.00	.	0.86
Low antidirector avg.	0.6457	0.8990	0.5552	0.8000	0.7396
Sample average	0.7084	0.8251	0.6921	0.6225	0.7548
			Test of Means (*t*-statistic)		
Versus sample mean	−0.44	1.11	−0.75	−0.93	0.00
Low vs. high antidirector	−1.31	1.27	−2.82	1.27	−0.46

toring the controlling shareholder does not require one to be as large. In the example of Electrabel from Section I.C, the Frere family would be classified as a potential monitor of Suez. Using this definition, we find that large shareholders of all kinds, including family, are typically alone. Overall, the controlling shareholder does not have another large shareholder in the same firm in 75 percent of the cases, and this number is 71 percent for family controlling shareholders. These results are inconsistent with the hypothesis that controlling shareholders are usually monitored by other large shareholders.

In sum, this subsection has demonstrated that (1) controlling shareholders often have control rights in excess of their cash flow rights, (2) this is true of families, who are often the controlling shareholders, (3) controlling families participate in the management of the firms they own, (4) banks do not often exercise much control over firms as shareholders, and (5) other large shareholders are usually not there to monitor the controlling shareholders. Family control of firms appears to be common, significant, and typically unchallenged by other equity holders.

C. Alternative Hypotheses

One of our main findings is the higher incidence of widely held Berle and Means firms in countries with good legal protection of minority shareholders. In this subsection, we address a number of questions about the robustness, and possible alternative explanations, of this finding.

All the results we discuss are presented in Table VIII, which shows mean percentages of companies that are widely held in variously classified groups of countries, for our two samples (large and medium) and for the two definitions of widely held firms (20 percent and 10 percent criteria for control).

First, the classification of countries based on the legal rules for protecting minority shareholders may be endogenous. In particular, countries with economically and politically powerful controlling shareholders may enact laws that entrench such shareholders and reduce minority rights. One way to address this concern, suggested by La Porta et al. (1998), is to classify countries based on the origin of their commercial laws rather than on the actual legal rules, because the legal origin is both historically predetermined and highly correlated with shareholder protection. Specifically, common law countries tend to have better protection of minority shareholders than civil law countries do. Accordingly, Panel A of Table VIII divides countries into those with civil and common law origins of commercial laws. The results in Panel A show that, using both samples and both definitions of control, common law countries have a significantly higher fraction of widely held firms than civil law countries do. (In one instance, the difference, while substantively large, is statistically not quite significant; in the other three instances, the difference is both large and statistically significant.) Thus, our results do not appear to be a consequence of the endogeneity of legal rules.

Table VIII

Robustness of the Results

The table reports means and t-statistics for the fraction of widely held firms based on the 20 percent and the 10 percent criteria of control for both the sample of the 20 largest firms (by stock market capitalization of equity at the end of 1995) and the sample of medium firms (i.e., the 10 smallest firms with market capitalization of common stock exceeding U.S.$500 million in 1995). We report means for countries grouped according to the following eight independent criteria: (1) legal origin of commercial code or company law, (2) bank regulation, (3) the size of the banking sector, (4) the existence of taxes on dividends received by a corporation, (5) rules regarding the consolidation of profits of subsidiaries, (6) restrictions on cross-ownership, (7) GDP per capita, and (8) the level of corruption. (Definitions for all criteria are given in Table I.)

		Sample of Large Firms		Sample of Medium Firms	
Country	N	20% Definition of Control	10% Definition of Control	20% Definition of Control	10% Definition of Control
		Panel A: Legal Origin			
Common Law Origin = 1	9	0.4778	0.3833	0.4552	0.2000
Civil Law Origin = 1	18	0.3083	0.1694	0.1278	0.0611
t-statistic common vs. civil law origin		1.4779	2.1900	3.9725	2.3526
		Panel B: Bank Regulation			
Strong Banks = 1	13	0.4154	0.2846	0.2382	0.1000
Strong Banks = 0	14	0.3179	0.2000	0.2357	0.1143
t-statistic strong vs. weak banks		0.8779	0.8533	0.0249	−0.2323
		Panel C: Size of Banking Sector			
Private Claims/GDP ≥ median	14	0.4536	0.3321	0.2765	0.1214
Private Claims/GDP < median	13	0.2692	0.1423	0.1942	0.0923
t-statistic large vs. small banks		1.7292	2.0379	0.8404	0.4752

Panel D: Taxes on Corporate Dividends					
Corp. Dividends are Taxed = 1	9	0.4333	0.2556	0.2444	0.1111
Corp. Dividends are Taxed = 0	18	0.3306	0.2333	0.2331	0.1056
t-statistic tax vs. no tax on corp. div.		0.8726	0.2086	0.1075	0.0852
Panel E: Consolidation of Subsidiaries for Tax Purposes					
Consolidation for Tax Purposes = 1	16	0.3969	0.2656	0.2498	0.1000
Consolidation for Tax Purposes = 0	11	0.3182	0.2045	0.2182	0.1182
t-statistic consolidation vs. no-consolidation		0.6926	0.6014	0.3135	−0.2910
Panel F: Restrictions on Cross-Ownership					
Restrictions on Cross-Ownership = 1	6	0.3750	0.2250	0.1000	0.0333
Restrictions on Cross-Ownership = 0	21	0.3619	0.2452	0.2760	0.1286
t-statistic restricted vs. unrestricted cross-own.		0.0966	−0.1675	−1.5435	−1.3322
Panel G: GDP per Capita					
GDP per Capita ≥ median	14	0.3786	0.2321	0.2357	0.1214
GDP per Capita < median	13	0.3500	0.2500	0.2382	0.0923
t-statistic high vs. low GDP per capita		0.2536	−0.1763	−0.0249	0.4750
Panel H: Corruption Index					
Corruption Index ≥ median (low corruption)	14	0.4321	0.2857	0.3354	0.1500
Corruption Index < median (high corruption)	13	0.2923	0.1923	0.1308	0.0616
t-statistic high vs. low corruption index		1.2797	0.9450	2.2624	1.5000

A second concern is that our results might be a spurious consequence of an association between minority shareholder protection and the more general structure of financial systems. Thus firms in "bank-centered" financial systems might rely on debt finance, making it unnecessary for controlling shareholders to sell their equity to raise funds, but also making legal rules protecting minority shareholders less essential. In contrast, firms in "market-centered" financial systems rely on equity finance, forcing founders to give up control to raise capital, as well as making the protection of minority shareholders necessary. Our finding of greater ownership concentration in countries with poor investor protection might then simply reflect greater reliance on debt rather than equity finance in such countries.[14]

As a preliminary comment, we note that, in general, the distinction between "bank-centered" and "market-centered" financial systems is tenuous. As a legal matter, banks are allowed to underwrite and trade securities in some archetypal market-centered systems, such as the United Kingdom, and are severely restricted in these activities in some archetypal bank-centered systems, such as Japan (Institute of International Bankers (1997)). As an empirical matter, market-centered systems often have better-developed debt markets than bank-centered systems (La Porta et al. (1997)). Despite our skepticism about the usefulness of the distinction, we try to address the concern that our findings are related to it.

To do so, we divide up countries in two distinct ways. First, we look at legal restrictions on bank investment in industrial firms (Institute of International Bankers (1997)). Some countries restrict such investment by prohibiting ownership of controlling stakes; others restrict the amount of capital that banks can invest in the equity of industrial firms. We define the "strong bank" group as consisting of the 13 countries in the sample where banks are allowed to both own majority stakes in industrial firms and invest more than 60 percent of their capital portfolio in such firms (Institute of International Bankers (1997)). The strong bank countries include Austria, Finland, France, Germany, Greece, Ireland, Israel, Korea, Netherlands, New Zealand, Spain, Switzerland, and the United Kingdom. The remaining 14 countries have "weak banks," and they include Argentina, Australia, Belgium, Canada, Denmark, Hong Kong, Italy, Japan, Mexico, Norway, Portugal, Singapore, Sweden, and the United States. Our definition of strong banks gets at the heart of one aspect of bank-centered corporate governance, but there are of course other elements, such as banks' power through lending, as well as less formal mechanisms of restricting banks' power as shareholders. To supplement this legal view of bank-centeredness, we also divide the countries according to whether the ratio of claims of the banking sector on the private sector to GDP in 1995 is above or below the median. This outcome-based measure associates "bank-centered" financial systems with the greater

[14] Rajan and Zingales (1995), however, do not find systematically higher leverage in bank-centered corporate governance systems in seven OECD countries.

reliance on bank finance. Note that, like Rajan and Zingales (1998), we cannot separate the claims of the banking sector on corporations from those on individuals.

Panel B of Table VIII shows that, for all of our samples, there are no significant differences between strong and weak bank countries in the incidence of widely held firms. If anything, there is statistically insignificant evidence that countries with strong banks have more widely held firms. Panel C of Table VIII shows that countries with more bank finance have a greater incidence of widely held firms, in direct contrast to the "bank-centered" financial system hypothesis. This result, however, is consistent with the finding of La Porta et al. (1997) that countries with successful equity markets also have successful debt markets. In short, to the extent we have measured "bank-centeredness" successfully, our results do not appear to be driven by a difference between "bank-centered" and "market-centered" corporate governance.

A third concern is that our results are driven by differences in the tax rules. We have little doubt that tax rules in different countries influence ownership structures. We have more difficulty understanding why tax rules are correlated with the rules protecting minority shareholders, unless the tax rules themselves are endogenous (e.g., concentrated owners may lobby for tax rules that discourage ownership dispersion). Nonetheless, we consider two types of tax rules that might influence the incidence of widely held firms. First, if intercorporate dividends are taxed, as they are in some countries, it may be advantageous for firms to separate completely or to consolidate completely rather than to own equity in each other. This may have the effect of increasing the incidence of widely held firms. Second, if tax rules permit the use of consolidated accounting for tax purposes, it may be more advantageous for firms to own partial equity stakes in other firms, since they would then be able to use the losses in one firm to offset the profits in another. We would thus expect to see more widely held firms in countries where consolidated accounting is prohibited. Panels D and E present the results from dividing countries according to these two aspects of the tax law. We find no evidence that these particular rules influence the incidence of widely held firms.

A fourth concern is that the differences we find in the incidence of widely held firms are a consequence of some other specific aspect of the corporate governance system, and not the protection of minority shareholders. One such aspect is cross-ownership. According to Morck and Nakamura (1998), in Japan, cross-ownership of shares has developed (despite a legal prohibition) as an antitakeover device. According to Bolton and von Thadden (1998), takeovers and concentrated ownership are substitute mechanisms of corporate control because lower ownership concentration makes stock markets more liquid and thus facilitates takeovers. Putting these ideas together, countries that restrict cross-ownership of shares should have more widely held firms, as well as more liquid markets. Panel F shows that, for the large firms, there is no difference in the incidence of widely held firms according to whether

cross-ownership is restricted. For the medium firms, countries that do not restrict cross-ownership have in fact a higher incidence of widely held firms. The data thus do not validate this particular concern.

A more straightforward version of the stock market liquidity argument is that large shareholders in the less liquid markets may be stuck with their equity stakes, whereas in the more liquid markets they can get rid of them more easily (Bhide (1993), Maug (1998)). Perhaps the greater concentration of ownership in poor investor protection countries is a consequence of their lower market liquidity. Market liquidity is itself endogenous, and is likely to be at least in part determined by the legal rules. Since we do not have direct measures of market liquidity, one way to address this concern is to observe that the level of economic development may be a partial proxy for market liquidity, and to verify whether the level of development is related to ownership concentration. This test might also be useful because, in more developed countries, the largest firms tend to be older, and hence if their controlling shareholders were interested in selling out, they have sometimes had a few decades to do so, perhaps long enough to sell at the ask. Panel G presents the results. It reveals no relationship between per capita GDP, our proxy for the level of development, and the incidence of widely held firms in our samples.

A final concern, has to do with the enforcement of legal rules and corruption. One version of this concern, discussed by La Porta et al. (1998), states that the protection of minority shareholders is determined not just by the legal rules but also by the quality of their enforcement. If corruption is a sign of poor enforcement of minority protection, and if it is moreover correlated with poor legal protection, then our results may be picking up the effects of poor law enforcement rather than that of legal rules on ownership concentration. Another version of this concern, suggested by Luigi Zingales, deals with corruption more directly. In most countries, the largest firms operate in a complicated political environment, and need to deal with a large number of laws and regulations that restrict (or subsidize) their activities. In many countries, to avoid the restrictions, or to get the subsidies, firms need to bribe politicians and regulators. Family control may facilitate corruption because it gives the controlling shareholders enormous autonomy in decision making, keeps the potential whistle-blowers out of major corporate decisions, and thus reduces the risk of getting caught. According to this theory, family control is especially important in the most corrupt countries. If these countries also happen to protect minority shareholders poorly, the relationship we have identified might be spurious. In fact, some evidence indicates that French civil law countries, which tend to have particularly poor minority protection, are also relatively more corrupt (see La Porta et al. (1999)). *Prima facie*, then, both versions of the concern about corruption potentially have merit.

The last panel of Table VIII divides countries into those with high and low corruption scores according to an international ranking (Transparency International (1996)). The data show that low corruption countries have a higher incidence of widely held firms, although the results are generally statisti-

cally insignificant. At the same time, if we run a cross-sectional regression with 27 country observations of the percentage of firms that are widely held on the shareholder rights score (or legal origin) and the corruption score, the former is important and significant, but the latter is not.[15] It is likely, therefore, that corruption shows up in Table VIII as weakly related to ownership concentration because it is itself related to legal origin and to minority protection.

In summary, the results suggest that the quality of investor protection, as measured either by the shareholder rights score or by legal origin, is a robust determinant of the incidence of widely held firms. In particular, this measure seems to be a better predictor of ownership concentration than plausible proxies for "bank-centered" corporate governance systems.

III. Conclusion

Our results present a different picture of the ownership structure of a modern corporation than that suggested by Berle and Means and widely accepted in the finance literature. The Berle and Means widely held corporation is only a common organizational form for large firms in the richest common law countries, one of which, the United States, Berle and Means actually had in mind. As we look outside the United States, particularly at countries with poor shareholder protection, even the largest firms tend to have controlling shareholders. Sometimes that shareholder is the State; but more often it is a family, usually the founder of the firm or his descendants.

The controlling shareholders typically have control over firms considerably in excess of their cash flow rights. This is so, in part, because they often control large firms through pyramidal structures, and in part because they manage the firms they control. As a consequence, large firms have a problem of separation of ownership and control, but not the one described by Berle and Means. These firms are run not by professional managers without equity ownership who are unaccountable to shareholders, but by controlling shareholders. These controlling shareholders are ideally placed to monitor the management, and in fact the top management is usually part of the controlling family, but at the same time they have the power to expropriate the minority shareholders as well as the interest in so doing. Cash flow ownership by the controlling shareholder mitigates this incentive for expropriation, but does not eliminate it. As a consequence, equity markets are both broader and more valuable in countries with good legal protection of minority shareholders (La Porta et al. (1997)).

The result that ownership concentration is a consequence of poor legal protection of minority shareholders casts doubt on the theory of Roe (1994), who attributes ownership dispersion in the United States to U.S.-specific policies that discourage ownership concentration undertaken under political

[15] La Porta et al. (1998) also present such a regression using their ownership data.

pressure from the professional corporate managers. The trouble is that the United States shares relatively high ownership dispersion with other countries with good shareholder protection, particularly the other rich common law countries. Roe's U.S.-specific theory of ownership dispersion is unlikely to be the whole story unless U.S.-style antiblockholder policies are common to all the countries with good protection of minority shareholders.

Our analysis raises the obvious question of how the agency conflict between the controlling and the minority shareholders can be reduced. One obvious strategy is to improve the legal environment so as to make expropriation of minority shareholders more difficult. The European Corporate Governance Network (1997) stresses improved disclosure as the crucial element of such a strategy. This is surely an important element of reform, but it does not directly address the problem of poor shareholder protection.[16] The Cadbury Committee (Charkham (1994)) proposes changes in the structure of the boards of directors in European companies. Still other proposals suggest the mandatory requirement of one-share one-vote in European countries. As our evidence indicates, this requirement will not make much difference as long as pyramids remain the principal strategy of separating ownership and control by the controlling shareholders. Indeed, legal reforms may need to be considerably more radical in nature, and give shareholders explicit rights to either prevent expropriation or seek remedy when it occurs, such as the opportunity to sue directors (perhaps through derivative or class action suits) for oppressive conduct (see also Berglof (1997)).

An alternative view is that corporations seeking external capital will opt into legal regimes that are more protective of minorities without explicit legal reforms. The issuance of ADRs in New York by many Mexican and Israeli companies, with the attendant increases in corporate disclosure though not minority shareholder rights, exemplifies this phenomenon. Unfortunately, a New York listing is prohibitively expensive for many companies. Alternatively, companies in countries with good shareholder protection, which have easier access to external funds, may acquire the less valuable companies in countries with poor investor protection, thereby bringing the assets of the latter into a more protective legal regime.[17] Lastly, companies may simply try to change their charters to attract portfolio investors.

Despite these ongoing market adjustments, it seems more likely that the existing ownership structures are primarily an equilibrium response to the domestic legal environments that companies operate in. Moreover, the controlling shareholders generally do not appear to support legal reform that would enhance minority rights; in fact, they typically lobby against it. This may seem puzzling because the value of dividend rights that controlling shareholders retain would increase significantly if minority protections are

[16] In a personal communication, Marco Becht of the European Corporate Governance Network notes that even this reform has proved controversial at the European Commission.

[17] A related phenomenon is for multinational firms to raise funds in countries with good investor protection to finance projects in countries with poor investor protection (Desai (1998)).

improved. The puzzle disappears once it is recognized that, as the potential to expropriate the minority shareholders diminishes, so would the value of control, which may be a significantly larger part of the controlling shareholders' total wealth. Improvement of minority protections are thus, in the first instance, a transfer from the controlling to the minority shareholders. Another potential agent of lobbying for corporate governance reform is the entrepreneurs who are interested in issuing equity in the future, but they do not usually have nearly as persuasive a political voice as the established corporate families. This reasoning makes us skeptical about the imminence of convergence of corporate ownership patterns, and of governance systems more generally, to the Berle and Means model.

Appendix

Panel A classifies the sources of ownership data for each country and gives the year of the ownership data.

Panel B gives a list of books and Internet resources for each country.

Panel A: Sources of Ownership Data

	Data Sources					Year of Data			
Country	Primary Source	Book	Lexis/ Nexis	Internet	Other	Yr < 95	Yr = 95	Yr = 96	Yr = 97
Argentina	8	7	1	0	4[a]	1	7	7	5
Australia	30	0	0	0	0	0	1	28	1
Canada	3	27	0	0	0	0	28	2	0
Hong Kong	27	1	0	1	1[b]	0	9	20	1
Ireland	8	4	0	7	1[c]	0	2	13	5
Japan	0	30	0	0	0	0	21	0	9
New Zealand	9	10	0	0	1[b]	1	3	16	0
Norway	18	0	0	2	0	0	4	16	0
Singapore	28	1	0	1	0	0	8	22	0
Spain	25	0	0	2	1[d]	0	13	13	2
UK	0	30	0	0	0	0	0	30	0
US	30	0	0	0	0	0	0	3	27
High antidirector total	186	110	1	13	4	2	96	170	50
Austria	0	20	0	0	0	0	20	0	0
Belgium	0	30	0	0	0	0	0	30	0
Denmark	6	0	8	5	1[b]	4	5	5	6
Finland	12	0	2	8	0	1	2	17	2
France	20	0	0	10	0	3	17	7	3
Germany	3	0	27	0	0	0	24	5	1
Greece	0	3	1	0	16[e]	1	2	14	3
Israel	14	0	2	0	4[f]	1	6	12	1
Italy	2	26	2	0	0	0	0	30	0
South Korea	0	28	1	0	1[b]	4	1	23	2
Mexico	20	0	0	0	0	0	5	12	3
Netherlands	6	22	1	0	1[g]	0	4	26	0
Portugal	1	0	4	10	5[b]	1	8	9	2
Sweden	0	30	0	0	0	0	0	30	0
Switzerland	1	29	0	0	0	0	0	30	0
Low antidirector total	85	188	48	33	28	15	94	250	23
Sample total	271	298	49	46	32	17	190	420	73

Panel B: Resources	
Country	Book/Internet Resource
Argentina	*Argentina Company Handbook 95/96* (The Reference Press, Austin, Texas).
Australia	*ASX All Ordinary Index. Companies Handbook*, 1997 (Australian Stock Exchange, Sydney, N.S.W.).
Austria	*Hoppenstedt Companies and Executives in Austria* (Lexis/Nexis).
Belgium	*Actionnariat des Sociétés Beleges cotées á Bruxelles, 1996* (Banque Bruxelles Lambert, Department Etudes et Stratégie).
Canada	*Survey of Industrials 1996* (The Financial Post Datagroup, Toronto, Ontario).
	Survey of Mines 1996 (The Financial Post Datagroup, Toronto, Ontario).
Denmark	http://www.huginonline.com/
Finland	http://www.shh.fi/ffn/
	http://www.huginonline.com/
France	*French Company Handbook 1997* (The Herald Tribune, SFB-Paris Bourse).
	http://www.bourse-de-paris.fr/bourse/sbf/emett/acemet.fcgi?GB
Germany	*Hoppenstedt Aktienführer 1997 (Hoppenstedt, Darmstadt, Germany).*
Hong Kong	http://www.ft.com/
Ireland	*The Price Waterhouse Corporate Register, 1997* (Hemmington Scott Publishing, London).
	http://www.hemscott.co.uk/equities/
Italy	*Taccuino Dell'Azionista 1997* (Il Sole 24 Ore Radiocor, Milan, Italy).
Japan	*Industrial Groupings in Japan, The Anatomy of the "Keiretsu,"* 1996–1997 (Dodwell Marketing Consultants, Tokyo).
	Japan Company Handbook, Spring 1997 (Toyo Keizai Inc., Japan).
Korea (South)	Korea Investors Service, Inc., 1990, Seoul, Korea.
	Zaebols in Korea, 1989, Bankers Trust Securities Research, Seoul, Korea.
Netherlands	*Handboek Nederlandse Beursfondsen, 1996/97*, 1997 (Het Financieele Dagblad/HFD Informatie).
New Zealand	*The New Zealand Company Register*, 1996 (Mercantile Gazette Marketing, Christchurch).
	http://www.nzse.co.nz/companies/
Norway	http://www.huginonline.com/
Portugal	http://www.ft.com/
Singapore	*Stock Exchange of Singapore Ltd., Company Handbook*, 1996 (Stock Exchange of Singapore, Research and Publications Department, Singapore).
Spain	*The Maxwell Espinosa Shareholder Directory*, 1994 (S.P.A. Unión Editorial, Madrid).
Sweden	*Ägarna Och Makten I Sveriges Börsföretag*, 1996 (Dagens Nyheter, Stockholm).
	http://www.huginonline.com/
	http://www2.fti.se/foretag/#i
Switzerland	*Swiss Stock Guide*, 1996 (Union Bank of Switzerland, Zurich).
United Kingdom	*The Price Waterhouse Corporate Register*, 1997 (Hemmington Scott Publishing, London).
	http://www.hemscott.co.uk/equities/
United States	http://www.sec.gov/

Superscript letters correspond to the following sources: [a] shareholder meeting records; [b] *WorldScope*; [c] *Irish Times*; [d] *Forbes Magazine*; [e] *Bloomberg* in twelve cases, *Euromoney* and *World Scope* in two cases each; [f] *WorldScope* in three cases, *Moodys International* in one case; [g] *Moodys International*.

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