The Separation of Ownership and Control

An Analysis of Ultimate Ownership in Western European Corporations

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Abstract.

We analyze the ultimate ownership and control of 3,740 corporations in five Western European countries. We document that families are the most pronounced type of controlling shareholders in Western Europe. In fact, they control 43.9 percent of Western European firms. We also document a significant concentration of wealth within a small number of families. We report that, in Western Europe, pyramids and cross-holdings are used to gain control, and hence a significant separation of ownership from control is achieved but not to the benefit of controlling owners.

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1. Introduction.

Recent studies suggest that the Berle and Means's (1932) model of widely dispersed ownership is not common even in developed countries.[1] Large shareholders control a significant number of firms in many countries, including many wealthy ones.[2] To examine the nature and pattern of control by large shareholders, La Porta, Lopez-de-Silanes and Shleifer (1999a) traced the chain of ownership to ultimate owners for a limited sample of 30 firms per country for 27 countries and documented the nature of the ultimate controlling owners and the means they used to enhance control. Their findings suggested that ownership and control can be separated through deviations of one-share-one-vote, pyramiding and cross-holdings to the benefit of the large shareholders. A follow-up study by Claessens, Djankov, and Lang (2000) contributed to the literature by expanding the sample size to 2,980 listed firms in nine East Asian countries.[3] They documented the overwhelming control of wealth by a small number of families and confirmed a significant separation of ultimate ownership and control.

Since Western European countries have a different corporate culture and organization and the degree of sophistication of general investors is more advanced than in East Asia, it would be interesting to document the ultimate ownership structure for a sizable sample. The *European Corporate Governance Network* (ECGN) has initiated the investigation by sponsoring several studies on individual countries. However, in compliance with a regulation of the European Union (directive on large shareholdings, #88/627/EEC),[4] the ownership measures used in these studies do not allow us to trace the 'true' ultimate owners, nor do they allow us to compute appropriate measures of integrated ownership and control. Hence the separation of ownership and control cannot be documented and the means used to achieve this separation cannot be analyzed. This paper provides a contribution to the literature by constructing the ultimate ownership data for a large sample of listed Western European firms, and documenting the nature of controlling owners and the separation of ownership from control. Differences from East Asia as well as the 27

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[1] See Shleifer and Vishny (1997).
[2] Shleifer and Vishny (1986), Holderness *et al.* (1999), Morck, Shleifer and Vishny (1988).
[3] Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand.
[4] See the literature review section for details.

countries analyzed by La Porta *et al.* (1999a) are reported (comparative results are summarized in Appendix A). This paper provides a second contribution to the literature by documenting the agency problem resulting from the separation of ownership from control. Finally, following in the footsteps of Claessens *et al.* (2000), this study further contributes to the literature by releasing new ultimate ownership data for future research.[5]

We start with the literature review and then follow with data construction. From various sources, we collect ultimate ownership data for France, Germany, Italy, Spain and the UK, for all listed firms. As a result, at least 75 percent of the listed firms are included in our sample in each market. In particular, we collect ultimate ownership data for 3,740 Western European firms, more than the 2,980 Asian firms covered by Claessens *et al.* (2000), and significantly more than La Porta *et al.*'s (1999a) small sample of 870 (mainly large) firms in 27 countries. In contrast with the study of La Porta *et al.* (1999a), we include a large number of medium- and small-sized corporations, and we include both non-financial and financial companies. Our definitions of ownership from control rely on cash flow and voting rights. For example, if a family owns 15 percent of Firm X which in turn owns 20 percent of Firm Y, we would say that this family owns 3 percent of the cash-flow rights of Firm Y -the product of the two ownership stakes along the chain- and controls 15 percent of Firm Y -the weakest link in the chain of voting rights. We present complex examples to illustrate both cash flow rights and control rights.

We first answer the question "who controls Western European corporations" by analyzing the nature of the ultimate controlling owners. For the whole sample, we report that 38.3 percent of companies are widely-held. Families are the most pronounced types of controlling shareholders in all countries. Families control 43.9 percent of Western European firms, while this proportion is only 38.3 percent in East Asia. However, we document that while family control does not differ significantly across continental European firms, it is significantly less pronounced in the UK. We find that widely-held corporations play a minor role as controlling shareholders in all countries. We also analyze how concentrated family control is. For example, the largest family controls 10.4 percent of the total market capitalization in Italy, 5.94 percent in France, 5.43 percent in Germany, 1.66 percent in Spain, and 1.10 percent in the UK. These results show that in Continental Europe a

[5] The combination of Eastern Asian and Western European ultimate ownership data would allow us to compare the distinctive corporate governance systems of Japan, Germany and the UK with that of the US (see discussion in Shleifer and Vishny, 1997).

relatively small number of families control a sizable number of corporations, while the concentration of control is relatively weak in the UK. In contrast, the concentration of wealth is more significant in East Asia.

We then discuss the means used to achieve a separation of ownership and control. In particular, we report evidence on the use of multiple classes of voting shares, pyramidal structures and cross-holdings.[6] Consistent with previous studies, we report that the magnitude of the deviations from the one-share one-vote, through the use of multiple class voting shares, is generally small. Overall, we report that in our sample pyramids and cross-holdings are used to gain control for 15.01 and 5.95 percent of listed companies respectively. We identify two further means to strengthen ultimate control, namely being the only controlling owner, and having a member of the controlling family as the top manager. In this study, a controlling shareholder is considered the only controlling owner when no other owner controls a minimum of 10 percent of the voting rights. Our data show that 55 percent of companies that are not widely-held have a single ultimate owner and that in more than two-thirds of the family controlled firms the controlling owner is a top manager of the firm. As a result, we document a significant separation of ownership from control for Western European firms. In contrast, a more pronounced use of pyramiding and cross-holdings are used by East Asian firms to enhance control and a higher percentage of East Asian non-widely-held firms have single controlling owners. We observe a more significant separation of ownership from control for East Asian firms than for Western European firms. This result is robust after we control for other exogenous variables.

The separation of ownership from control confronts all corporations with an agency problem. The agency problem for US corporations is between managers and dispersed shareholders, which differs from the agency problem in other countries where it is between controlling owners and minority shareholders (Shleifer and Vishny, 1997). As argued by Claessens *et al.* (1999, 2000), the separation of ownership from control results in expropriation of minority shareholders in East Asia. In contrast, a less significant separation of ownership from control in Western Europe may suggest a less pronounced expropriation. In fact, in sharp contrast

[6] Pyramidal structures are defined as owning one corporation which in turn holds the stock of another - a process that can be repeated a number of times. Cross-holdings occur when a company further down the chain of control has some shares in another company in the same business group which in turns owns companies in the chain.

with East Asian firms, we do not detect significant expropriation in Western European firms. We relate this evidence to the effective ultimate ownership structures advanced by Gomes and Novaes (1999) and Jensen and Meckling (1976).[7] In particular, Gomes and Novaes (1999) argued that the presence of a second large controlling owner represents an effective monitoring device. In addition, Jensen and Meckling (1976) suggested that larger managerial stakes reduce the agency costs. Consistent with their arguments, we find evidence to support the notion that effective monitoring from the second large shareholder and a higher commitment of managerial stakes for Western European firms would weaken the channels that lead to expropriation.

The paper is organized as follows. In section 2 we provide a review of the relevant literature. Section 3 describes the construction of the database. In section 4 we answer the question 'who controls Western European corporations?" In section 5 we discuss the means to separate ownership from control. In section 6, we discuss the relationship between the separation of ownership and control. In section 7, we present evidence of expropriation. In section 8, we analyze how the ultimate ownership structure can reduce the risk of expropriation. In section 9, we conclude the paper.

2. Literature review.

The Berle and Means's (1932) model of widely dispersed ownership has recently been criticized as for being uncommon outside the US.[8] Several studies have documented the nature and consequences of concentrated ownership around the globe. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) examined the three largest (direct) owners for the ten largest firms, in 49 countries. They showed that the three largest direct owners often have absolute control of the largest firms in continental European countries. Though, in the UK, the pattern is quite different. There, the largest owner does not (directly) control more than 19 percent of votes. Moreover, they linked the concentration of ownership to poor investor protection.

La Porta, Lopez-de-Silanes and Shleifer (1999a) identified the ultimate controlling owners for the twenty largest firms, in 27 wealthy economies, as well as for a sample of ten medium size firms, from each country. They reported that the ownership structure of large firms is generally not dispersed. They documented the nature of the ultimate controlling owners and concluded that

[7] Other effective mechanisms not related to ultimate ownership structure are not analyzed in this study.

families represent the most frequent type of controlling shareholder, especially for medium size firms. Their study also documented the means controlling owners used to enhance control. In particular, they reported a marginal use of dual-class shares, and a significant use of pyramids and cross-holdings to achieve control. They further reported that the top management position is often taken by a member of a controlling family for very large firms (73 percent of cases), and the controlling owner is, in 78.7 percent of cases, the only controlling shareholder. These findings suggested that ownership and control can be separated to the benefit of the large controlling owners. Their study, however, was limited to primarily a few of the largest firms. Therefore, it provided little evidence on the governance structure of the vast majority of middle-sized and small corporations, and it also raises a criticism on the robustness of the results.

Claessens *et al.* (2000) contributed to the literature by expanding the sample size to 2,980 (both financial and non-financial) East Asian corporations and by focusing on the separation between ownership and control. For this large sample, they traced back ultimate ownership and control. In particular they examined the extent of deviations from the one-share one-vote rule, the use of pyramiding and cross-holdings, the presence of single versus multiple controlling owners, and the presence of the controlling shareholder as a top manager of the company. Their study showed that more than two-thirds of East Asian firms are controlled by a single shareholder, which often turns out to be a family. For these firms, the controlling shareholder is often a top manager of the firm. Pyramidal structures are very common. In contrast, the use of dual-class shares is rather limited. They documented a significant separation of ultimate ownership and control. They further documented the overwhelming control of wealth by a small number of families. At the extreme, the largest ten families in Indonesia and the Philippines control more than half of the corporate assets (57.7% and 52.5% respectively). The concentration of control in the hands of large families in other countries is also high with the exception of Japan.

A similar attempt in analyzing the ownership structure in Western Europe for a sizable sample also occurred. The *European Corporate Governance Network* (ECGN), in fact, has recently sponsored several studies on the ownership structure within the European Union. These studies include Becht and Boehmer (1998) for German companies, Bianchi, Bianco and Enriques (1998) for Italian companies, Bloch and Kremp (1998) for French companies, Crespi-Cladera and

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[8] See Shleifer and Vishny (1986, 1997), Morck, Shleifer and Vishny (1988) and Holderness *et al.* (1999),

Garcia-Cestona (1998) for Spanish companies, de Jong *et al.* (1998) for Dutch companies, Renneboog (1998) for Belgian companies, and Georgen and Renneboog (1998) for UK companies.

These studies have represented an important step in integrating European ownership data in an international context. However, the compliance with the European Union directive on large shareholdings (88/627/EEC) restricts meaningful cross-country analysis with non-European-Union countries. Even within Europe, to conduct a meaningful cross-country comparison, these studies needed to focus on 'voting blocks', as stated by the European Union directive 88/627/EEC which regulates the disclosure of major holdings in listed companies.

As a matter of fact, the disclosing shareholders do not necessarily correspond either to the direct owners or to the ultimate owners. As a result, the 'voting blocks' do not represent either ultimate ownership or ultimate control stakes. To be more specific, 'voting blocks' do not represent ultimate ownership because (i) they do not take into account the use of multiple voting shares, (ii) they simply add up direct and indirect control stakes without computing an appropriate measure of integrated ownership, and (iii) they do not trace ownership stakes to the ultimate owners.

Moreover, 'voting blocks' do not represent ultimate control stakes. In fact, if the direct owner is a member of a group under consolidated accounts, then this "person" may be exempted from disclosure of his holdings if the disclosure is undertaken by the parent company. For example, the regulation defines the controlling owner as the shareholder who controls the absolute majority (i.e., over 50%) of voting rights, or the shareholder who holds enough voting rights to have a *de facto* control of a company.[9] To highlight the bias that this definition introduces, consider the ultimate control structure of Montedison (Italy). Montedison has two shareholders with a stake above 2%: Compart, with a stake of 33.45%, and Mediobanca, with a stake of 3.77%. Compart is indicated in the Italian supervisory authority's files as the "ultimate" owner of Montedison. However, when we examine Compart's ownership structure, we discover that it has three shareholders with stakes above 10%: Credit (11.01%), Cassa di Risparmio di Roma

[9] For example, the French regulation defines a de facto control when a person or a legal entity owns, directly or indirectly, a fraction of voting rights more than 40% and no other partner or shareholder owns directly or indirectly a fraction more than this. In the context of La Porta *et al.* (1999a), this corresponds to a definition of ultimate control at the 40% level. See Bloch and Kremp (1998) for details.

(10.14%), and Mediobanca (15.26%). According to our definition, Compart is the ultimate controlling shareholder of Montedison at the 20% level. However, according to our 10% cut-off level, Mediobanca would be the largest ultimate owner of Montedison (with a 15.26%+3.77% = 19.03% stake). This example shows how the regulation fails to identify the ultimate controlling owner and to compute the corresponding control stake. The regulation further presents a second source of bias in the computation of ultimate control. For example, if a shareholder A has a *de facto* control of company B with a fraction *b*, which in turn controls C with a stake *c*, then *c* is assumed to be the ultimate control stake regardless of the fraction *b*. We use the same Italian example, Montedison, to illustrate the bias. Compart is the controlling owner of Montedison and Montedison has a 52.65% stake in Edison. Thus, according to the definition of control (see La Porta *et al.* (1999a)) -the weakest link in the chain of voting rights, we would say that Compart, through Montedison, controls 33.45% of Edison. However, according to the disclosure regulation, Compart has a stake of 52.65% of Edison.

Since ECGN ownership data do not trace the meaningful ultimate owners, the separation of cash flow rights and control rights cannot be documented. Moreover, the mechanisms used to separate ownership from control cannot be analyzed. As a matter of fact, the separation of ownership from control in Western Europe should be quite pronounced. This separation argument can be supported by indirect evidence. Several studies report that voting shares trade at a premium over non-voting shares in Western Europe. For example, Zingales (1994) reported that in Italy this premium is 81.5 percent; Megginson (1990) reported a 13.3 percent premium in Britain; Muus and Tyrell (1999) found a 29 percent premium in Germany; while Muus (1998) documented a 51.35 percent premium in France.[10] In comparison with the 4.5 percent premium reported in the US by Lease, McConnell and Mikkelson (1983), the higher control premium among Western European countries may suggest the non-trivial separation of ownership and control.[11]

[10] As for countries not covered in the present study, Horner (1988) documented a 27 percent premium in Switzerland, Lease, McConnell and Mikkelson (1983) found a 5.4 percent premium in the US, Levy (1982) found a 45.5 percent premium in Israel, Rydqvist (1992) found a 6.5 percent premium in Sweden.

[11] The use of non-voting shares varies dramatically across countries. For example, 41 percent of listed firms in Italy use non-voting shares (Zingales, 1994), 26.7 percent of the largest companies use non-voting shares in Germany (Becht and Boehmer, 1998), while only 2.21 percent in France (Muus, 1998), and 0.16 percent in Spain (Crespi-Cladera and Garcia-Cestona, 1998) use them. In all these countries, non-voting and limited voting shares cannot exceed the amount of total voting capital.

3. Data construction.

3.1 Data Sources.

We use several data sources to collect our ownership data. Table 1 reports the data sources for all five countries. We follow the methodology of La Porta *et al*. (1999a) and Claessens *et al.* (2000) to construct our ultimate ownership database. In fact, when we began data collection using only the databases used in previous literature, i.e., Worldscope[12], we found that data coverage was a problem. For example, Worldscope reported full ownership data for only 141 out of 632 Spanish companies listed at the end of 1997. Consequently, we relied on data from the Spanish Stock Exchange regulatory authority's files (Comision Nacional del Mercado de Valores, 1998). This source provides quarterly information on all shareholders with at least 5 percent of control rights, as well as directors' ownership for all listed firms. As for Germany, we primarily relied on Commerzbank's (1997) "Wer gehört zu wem", which provides full ownership data for 13,000 listed and unlisted German companies. This database provides full disclosure of shareholdings over 5 percent. For Italy, we used "Il bollettino" CONSOB (1997) and "Il taccuino dell'azionista" (1997), which provide data on all owners with at least 2 percent of control rights for all the companies listed on the main markets. French and UK data were collected from Worldscope and integrated with the Herald Tribune's (1997) "French Company Handbook 1997", and the "London Stock Exchange Yearbook" (1997), respectively. The French Company Handbook provides information on the main shareholders for the largest 120 French companies. The London Stock Exchange Yearbook provides data on all owners with at least 3 percent of voting rights, as well as directors ownership for all UK listed companies. Worldscope (which reports full ownership data for 3,180 publicly traded firms: 602 in France, 597 in Germany, 197 in Italy, 141 in Spain, and 1643 in the UK) and Extel Financial were used to integrate our data when necessary. The procedure described allowed us to compile direct ownership for 3,802 companies.

[Insert Table 1 about here]

It should be noted that the data-sources we used for Italy, Spain and the UK would allow for full coverage of listed companies. For all countries, with the exception of Spain, the ownership data were collected as of December 1996 or at the end of the 1996 fiscal year. Spanish data were collected as of the end of 1997. In constructing our database, for every country we included all owners who have at least 5 percent of the outstanding ordinary shares of the companies. The choice of a 5 percent cut-off point is mainly driven by the disclosure regulation currently in place in France, Germany and Spain, while the regulation imposes the disclosure of any stakes above 2 percent in Italy, and 3 percent in the UK. This threshold was also used in previous studies.

We imposed two restrictions on our sample. In particular, we excluded all affiliates of foreign companies (i.e., when a foreign company controls at least 50 percent of the votes) since we could not follow their ownership chain. In particular, we excluded 5 companies in France and 6 companies in Germany because they were controlled by a foreign investor (not included in our sample). Also, in several cases we were not able to trace back the ultimate owners because of the use of nominee accounts (especially in the UK). In the UK we excluded 51 companies because of the use of nominee accounts. Thus, after this screening, we are left with 3,740 companies.

Excluding nominee accounts may understate the proportion of widely-held firms in our results. We could go back to the annual reports of companies, but UK companies are not required to disclose the identity of their "true" owners, i.e., they may disclose only these nominee accounts in their reports. Such a search process would be very time consuming but would not solve our problem, because we discover that nominee accounts represent the largest shareholders in only a small proportion of companies (3.1 percent), thus the bias is marginal. Moreover, the proportion of widely-held companies in the UK is substantially higher than in the other sample countries, hence the exclusion of companies using nominee accounts is unlikely to affect the results of our cross-country comparison.

With the exception of "Il Taccuino dell'Azionista" and "Extel Financial", the data sources described do not provide data on multiple classes of shares. For all Italian companies we collect data on multiple classes of shares from Il Taccuino dell'Azionista. Datastream provides these data for the majority of our companies in the remaining countries. However, it does not provide data for companies listed in some markets (i.e., the Spanish outcry market), as well as for dead companies. Also, no data can be found when the limited voting shares are not listed. Thus, we collected additional information from Extel Financial (mainly for large companies) and local newspapers (i.e., Les Echos, Die Welt, ABC, Financial Times). Also, we found that in some cases

[12] Previous studies including Lins and Servaes (1999, 2000) and La Porta *et al.* (1999a) relied primarily on

previous studies provided lists of companies with dual class shares (i.e., Becht and Boehmer, 1998, Crespi-Cladera and Garcia-Cestona, 1998, and Muus, 1998). Finally, in some cases we directly contacted the local Stock Exchanges.

3.2 Computation of cash flow rights and control rights.

In analyzing cash flow and control rights, we look at all shareholders who control at least 5 percent of voting rights. In many cases the controlling shareholders are corporate entities or financial institutions. In these cases we identify their owners, as well as the owners' respective chain of ownership, and so on. If the controlling shareholder is an unlisted company, then we consider the company to be family controlled[13] (with the exception of companies controlled by unlisted financial institutions). Finally, when we encounter individual shareholders, we do not distinguish between family members and use the family group as a unit of analysis. Following previous studies, we look at shareholders who control over 10 percent and 20 percent of votes.

Our definitions of ownership and control rely on cash-flow and voting rights, respectively. These two measures may differ because of the use of dual-class shares, pyramiding structures, and cross-holdings. We define a pyramid as an entity (i.e., a family, or a company) that owns one corporation, which in turn owns another corporation, and so on. Cross-holdings are defined as a condition that exists when a company has a controlling shareholder and owns shares in a firm that belongs to its chain of control. Let's consider a pyramidal structure. For example, if a family owns 15 percent of Firm X, which in turn owns 20 percent of Firm Y, then we would say that the family owns 3 percent of the cash-flow rights of Firm Y -the product of the two ownership stakes along the chain- and controls 15 percent of Firm Y -the weakest link in the chain of voting rights. We can also include cross-holdings in the same example. Suppose that a family owns 15 percent of the publicly traded Firm X, which in turn owns 20 percent of Firm Y. The same family owns 7 percent of Firm Y directly. Then, the family owns 10 percent (O) of cash flow rights of Firm Y -the sum of the products of the ownership stakes along the two chains- and controls 22 percent (C) of Firm Y -the sum of the weakest links along the two chains of voting rights.

Worldscope to collect direct ownership data.

[13] This happens because we generally cannot identify the owners of unlisted companies. We recognize that this procedure biases our measure of ultimate ownership.

3.3 Examples of ownership structures.

We divide corporations into widely-held and with ultimate owners. A widely-held corporation is a corporation which does not have any owner with control rights above the 10 percent or the 20 percent threshold limit. According to La Porta *et al.* (1999a), we allow for five types of ultimate owners: 1) a family or an individual, 2) the State, 3) a widely-held financial institution 4) a widely-held corporation, or 5) a miscellaneous investor (i.e., a charity, a voting trust, a cooperative, a minority foreign investor). In addition, we classify a group of reciprocal holdings. Reciprocal holdings were not extensively analyzed in previous studies, i.e., La Porta *et al.* (1999a). They looked at the very largest companies, but only found a very small number of such cases[14].

We claim that a corporation has an ultimate owner, at the 20 percent threshold, if this shareholder's direct and indirect control rights reach at least 20 percent. From our definition, a company may have more than one significant owner. If, for example, the firm has two owners, each having 12 percent control rights, we would say that the firm is ½controlled by each type of owner at the 10 percent level. At the 20 percent level, however, the firm is widely-held. Now, consider a company with two owners, a family with 20 percent control rights, and a widely-held corporation, with 19 percent of control rights. Once again, at the 10 percent cut-off level we say that the company is ½controlled by each type of owner. However, at the 20 percent level, the firm has only one relevant owner and, in particular, it is family-controlled.

3.3.1 Some cases of ultimate ownership and control within the Agnelli group (Italy)

We start by studying the Agnelli family group (Figure 1), the largest Italian group. The group includes 21 listed companies, as well as a very large number of unlisted firms. Six of these unlisted companies (namely Carfin, Eufin, Fiat Impresit, Gemina Participations, Giovanni Agnelli & C., and Sicind) and some second large owners are displayed in Figure 1 since they take part in the chain of control that involves some listed firms[15]. We start with Fiat S.p.A., the 5th largest

[14]La Porta *et al.* (1999a) located these reciprocal holdings in their "miscellaneous investor" group.

[15]The organizational chart and other valuable information on the Fiat group is available at http://www.fiatgroup.com/it/informazioni/if2informaz-1.htm. The structure of other major Italian (other than State controlled) groups, such as Olivetti and Pirelli can be found at http://www.olivetti.it/group/ and http://www.pirelli.com/company/index.htm, respectively. For every listed firm, a detailed list of controlled companies (either listed or unlisted) can be found for Italy in "Il Taccuino dell'Azionista". As for Germany, Commerzbank's "Wer gehört zu wem" has an appendix that contains a list of companies controlled by each

Italian company at the end of 1996, and the largest Italian car producer. Fiat has a multiple class shares structure which includes voting shares, limited voting shares, and non-voting shares. Fiat has only one major shareholder, Ifi S.p.A, which controls 28.17 percent of Fiat's votes, and owns 14.85 percent of its capital. The ratio of voting to total capital is 52.7 percent (14.85%/28.17%).[16] Ifi is also a listed company (the 20th largest in Italy). It also has a multiple class shares structure. Ifi is controlled by a single major shareholder, Giovanni Agnelli & C. S.p.A. (Agnelli family), with 82.45 percent of control, and 41.23 percent of cash-flow rights.[17] In this case, the ratio of voting to total capital is 50.0 percent (41.23%/82.45%). Through this pyramidal structure, the Agnelli family controls 28.17 percent of Fiat's votes, and owns 6.12 percent of capital. This structure deviates from the one-share one-vote rule. However, there are no cross-holdings. Fiat is entirely family controlled, it has a single controlling shareholder (the Agnelli family), but the company does not have a top manager from the family. In contrast, Ifi is directly controlled by the Agnelli family (since Giovanni Agnelli & C. is wholly owned by the family) without any pyramiding or cross-shareholdings. In this case there are deviations from the one-share one-vote rule, only one controlling shareholder (a family), and the controlling shareholder being a top-manager of the company.

[Insert Figure 1 about here]

Still within the Agnelli family group, Unicem is a more complex case of cross-holdings and use of dual class shares. Unicem is controlled by two major shareholders: Ifi, with a 32.83 percent voting stake (and a 19.42 percent ownership stake), and Ifil, with a 14.81 percent voting stake (and a 8.76 percent ownership stake). Ifil is controlled by Ifi, which controls 14.6 percent of

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firm in the database. At http://www.cnmv.es/english/cnmve.htm, the Comision Nacional del Mercado de Valores provides valuable information on the group affiliations of many Spanish publicly listed firms. The French Company Handbook provides some details about the subsidiaries of the largest 120 French companies. Moreover, Extel Financial has a descriptive section which includes a list of subsidiaries for most of the companies included in our database.

[16] Note that ownership right is equal to = control right*(Voting capital/Total capital).

[17] The Agnelli family's voting stake is actually higher if we consider the number of cross-holdings below 5 percent. In fact, from Bollettino CONSOB we learn that the ultimate control of Giovanni Agnelli & C. in Fiat is 33.45 percent. In particular, in addition to the 28.17 percent stake held through Ifi, the Agnelli family holds a 1.09 percent voting stake through Toro Assicurazioni, a 3.06 percent stake through Ifil, and a 2.22 percent stake through Gepafin. However, while we are aware of all stakes (even those below 5 percent) held by the controlling shareholders in Italy (because of the disclosure regulation), such

votes (and owns 7.97 percent of capital) directly, and controls 37.64 percent of votes (and 20.55 percent of capital) indirectly (through Carfin, a wholly owned non-financial unlisted firm). Since Carfin is wholly controlled by Ifi, we do not consider Ifi's stake in Ifil as a pyramid or cross-holding. Thus, we consider Ifi's stake in Ifil as (entirely) directly held. This combined stake yields a control of 52.24 percent of voting rights (14.6% + Min (100%; 37.64%) = 14.6% + 37.64%), and 28.52 percent of cash-flow rights (7.97% + 20.55% * 100%). We have already shown that Ifi has one major shareholder, the Agnelli family, with 82.45 percent of voting rights and 41.23 percent of cash-flow rights. We say that, through its stake in Ifi, the Agnelli family controls 52.24 percent of Ifil's voting rights (=Min (37.64% + 14.6%; 82.45%)), and 11.76 percent of its cash flow rights (=41.23% * (7.97% + 20.55% * 100%)). This control is exercised through a pyramidal structure, and involves the use of non-voting shares (both within Ifi and Ifil). Then, we notice that Ifi has both a direct stake in Unicem, and an indirect stake, through Ifil, which represents a case of cross-holdings. The combined stakes of Ifi yield control of 47.64 percent of voting rights (32.83% + Min (14.81%; 37.64% + 14.6%) = 32.83% + 14.81%), and 21.92 percent of Unicem's cash-flow rights (19.42% + (7.97% + 20.55% * 100%) * 8.76%). Since Ifi is a family-owned corporation, then Unicem is also family controlled. In particular, we find that the Agnelli family, through the combined use of a pyramidal structure, cross-holdings, and deviations from the one-share one-vote principle, controls 47.64 percent of voting rights (Min (82.45%; 32.83% + 14.81%)), and 9.04 percent (41.23% * 19.42% + 41.23% * (7.97% + 20.55% * 100%) * 8.76%) of cash-flow rights in Unicem. Thus, we conclude that Unicem is family controlled, at both the 10 percent and the 20 percent cut-off levels, with only one controlling shareholder, a pyramidal structure, cross-shareholdings, and multiple class shares. Its ratio of cash-flow to voting rights is 0.1897 (9.04%/ 47.64%). Finally, we note that no member of the Agnelli family has a position of CEO, Honorary Chairman, Chairman, or Vice-Chairman of Unicem.

We may easily go down this pyramid and find that the Agnelli family, through Unicem, controls 47.64 percent of voting (Min (32.83% + 14.81%; 68.81%)) and 6.22 percent of cash-flow rights (9.04% * 68.81%) (respectively) of Cementeria di Augusta. Moreover, the Agnelli family controls 47.64 percent (Min (32.83% + 14.81%; 83.46%)) of voting rights and 6.78 percent (9.04% * 75.05%) of cash-flow rights in Cementeria di Barletta. Both these stakes include

information is generally not available for the other European countries. Thus, to ensure consistency in our pyramiding, cross-holdings, and non-voting shares. In both cases, we observe a single controlling shareholder, but the controlling owner is not a top manager of the company. Finally, within the same group, we study the ultimate control of Snia Fibre. Snia Fibre is a single class shares company, and has one major shareholder, namely Snia BPD, another listed company, with 83.47 percent of ownership and control rights. In turn, Snia BPD is a dual class shares company, and has two major shareholders: Fiat, with 48.87 percent of control, and 43.85 percent of cash-flow rights, and Mediobanca, with 11.26 percent of control, and 10.10 percent of cash-flow rights. Mediobanca is a widely-held financial company, since none of its three major shareholders controls more than 10 percent of voting rights. We have already documented that Fiat is controlled by the Agnelli family. Thus, through Ifi and Fiat, the Agnelli family controls 28.17 percent of Snia BPD voting rights, and 2.68 percent of cash-flow rights. Finally, we find that the Agnelli family, through these three intermediate companies (Ifi, Fiat, and Snia BPD) controls 28.17 percent of Snia Fibre voting rights, and 2.24 percent of cash flow rights. This control stake includes deviations from the one-share one-vote rule, and pyramiding. However, there are no cross-holdings. Thus, Snia Fibre has two major shareholders at the 10 level: a family (Agnelli), and a widely-held financial institution (Mediobanca). At the 20 percent level, however, the Agnelli family is the only controlling owner of Snia Fibre.

3.3.2 Some cases of ultimate ownership and control within the Deutsche Bank - Allianz - Münchener Rückversicherungs group (Germany)

As a second example, we use the Deutsche Bank - Allianz - Münchener Rückversicherungs group, the largest German group (Figures 2 & 3). Allianz is the 2nd largest German firm (insurance); Deutsche Bank is the 9th largest German firm and largest German bank, while Münchener Rückversicherungs is the 11th largest company (also insurance). Indeed, this group presents a very complex ownership structure. The group accounts for more than 50 German listed companies (though, for reasons of space, we report only 44 in Figure 2), and presents a number of cases of reciprocal-holdings. To study this group, we start with the simple case of Daimler Benz, the 3rd largest German company (and the largest car producer), which is a one-share one-vote firm. Daimler Benz has two major shareholders: Deutsche Bank AG, with 22.6 percent of votes, and the Emirate of Kuwait (not reported in Figure 2 for space reason) with 12.96 percent of votes.

data across the different countries, we exclude these stakes from our analysis.

Deutsche Bank is a widely-held financial company, while the Emirate of Kuwait is a (minority) foreign investor, and as such we attribute this stake to the "miscellaneous" category. At the 20 percent level, Daimler Benz has one ultimate owner, namely Deutsche Bank, thus it is controlled by a widely-held financial institution. However, at the 10 percent level, Daimler Benz is ½ controlled by Deutsche Bank, and ½ controlled by the Emirate of Kuwait. In this ownership structure there are no pyramiding, cross-holdings, or deviations from the one-share one-vote rule.

[Insert Figure 2 about here]

Then we analyze three more complex cases in Figure 3, which refer to the ownership structures of Allianz, Dresdner Bank, and Münchener Rückversicherungs (MR). We find that Allianz has four direct owners: Bayerische Vereinsbank, a widely-held financial institution, with a 10 percent ownership and control (O&C) stake; Deutsche Bank, another widely-held financial institution, with a 10 percent O&C stake; MR, with a 25 percent O&C stake; and Dresdner Bank, with a 10 percent O&C stake. We find that Allianz, in turn, holds a 25 percent O&C stake in MR, which is clearly a case of reciprocal holding. Also, Allianz holds an 11.16 percent ownership (and 21.97 percent control) stake in Dresdner Bank. We recognize two reciprocal holdings: MR, which has a 25 percent O&C stake in Allianz, and Dresdner Bank, which has a 10 percent O&C stake.

[Insert Figure 3 about here]

Next, we study the case of Dresdner Bank, with one major shareholder, Allianz, having an 11.16 percent ownership stake and a 21.97 percent control stake. This is clearly a case of a dual-class share company. We have just derived the ultimate ownership of Allianz. Thus, we can easily compute the ultimate ownership and control of Dresdner Bank. In particular, we find that Dresdner Bank has four ultimate owners: Bayerische Vereinsbank, with a 1.116 percent (11.16%*10%) ownership and a 10 percent control stake (Min (10%; 21.97%)); Deutsche Bank, with a 1.116 percent ownership and a 10 percent control stake; MR, with a 2.79 percent ownership (25%*11.16%) and a 21.97 percent control stake (Min (25%; 21.97%)); and Dresdner Bank itself, with a 1.116 percent ownership and a 10 percent control stake. All stakes are held through Allianz, and therefore, represent cases of pyramiding. We have already determined that MR and Dresdner Bank's holdings constitute cases of reciprocal holdings, while Bayerische Vereinsbank and Deutsche Bank are widely-held financial companies. Thus, Dresdner Bank's ownership structure involves deviations from the one-share one-vote rule, the use of pyramiding, and reciprocal holdings. However, there are no cross-holdings.

We end with our most complex case: Münchener Rückversicherungs. MR has four direct owners: Bayerische Vereinsbank, with a 10 percent O&C stake; Deutsche Bank, with a 10 percent O&C stake (as previously mentioned, these are both widely-held financial companies, thus there is no need to trace their ownership further); Allianz, with a 25 percent O&C stake (representing a case of reciprocal holding, with no need to trace ownership back at this level); and Dresdner Bank, with a 10 percent O&C stake. We have just defined the ultimate ownership and control of Dresdner Bank. Therefore, we easily find that, through the Dresdner Bank - Allianz pyramiding, MR has four additional stakeholders: Bayerische Vereinsbank once again, with a 0.1116 percent (11.16%*10%*10%) ownership stake and a 10 percent control stake (Min (10%; 21.97%; 10%)); Deutsche Bank, also with a 0.1116 percent ownership stake and a 10 percent control stake; MR, with a 0.279 percent (11.16%*25%*10%) ownership stake and a 10 percent control stake (Min (10%; 21.97%; 25%)); and Dresdner Bank, with a 0.1116 percent ownership stake and a 10 percent control stake. Notice that we already found that these two latter stakes represent reciprocal holdings. By adding up all these stakes, we find that MR has five ultimate owners: Bayerische Vereinsbank, with a 10.1116 percent ownership (10% + 0.1116%) stake and a 20 percent control stake (10%+ Min (10%; 21.97%; 10%)); Deutsche Bank, also with a 10.1116 percent ownership and a 20 percent control stake; Allianz, with a 25 percent O&C stake (the direct reciprocal holding *alone*[18]); MR, with a 0.279 (10%*11.16%*25%) percent ownership stake and a 10 percent control stake (Min (10%; 21.97%; 25%)); and, Dresdner Bank with a 0.1116 percent ownership stake and a 10 percent control stake. All these holdings but Allianz's involve deviations from the one-share one-vote rule. In addition, the ultimate stakes of Bayerische Vereinsbank and Deutsche Bank also involve pyramiding and cross-holdings. Further, the stakes of MR and Dresdner Bank involve pyramiding and reciprocal holdings, but no cross-holdings.

At this stage a caveat is appropriate. In fact, by following the procedure earlier described, it may happen that the sum of the control stakes by all ultimate shareholders adds up to over 100

[18] As we have already discussed, Allianz's indirect holding is traced back to its controlling shareholders. As such, we do not add it to Allianz's direct stake. In fact, if we considered it as Allianz's indirect holding, too, and added it up to the 25% direct stake, we would count it twice (once within Allianz, and once within Allianz's shareholders). Instead, reciprocal holdings are not traced further back. This is the only way to avoid going on tracing them back forever.

percent. We find 29 such cases (i.e., 0.78 percent of the whole sample) at the 20 percent cut-off level. However, our ownership and control results are not affected by this circumstance. In fact, when we report the ownership and control stakes, we focus on the largest owner only, instead of looking at all large blockholders. As such, the total ownership and control stakes never exceed 100 percent.

4. Who controls Western European corporations?

4.1 The nature of ultimate controlling owners.

We analyze the control structure of Western European corporations (Table 2), and look at the nature of the ultimate controlling owners, according to the 10 percent and the 20 percent cut-off levels. We find large differences in the distribution of ultimate control at the 10 percent level. In Germany, for example, only 4.4 percent of companies are widely-held, in comparison to 26.18 percent in the UK. For the whole sample, we report that 15.13 (38.34) percent of companies are widely-held at the 10 percent (20 percent) cut-off level. Families are the most pronounced controlling shareholders in all countries. In particular, family control is most pronounced in Germany (71.64 percent), and less pronounced in the UK (33.75 percent). Also, we find that while family control does not differ significantly across continental European firms, it is significantly less pronounced in the UK. The highest level of ownership by widely-held financial institutions (32.64 percent) is in the UK, while financial institutions play only a minor role in continental Europe. In comparison with the UK, the State usually plays a more important role as the controlling shareholder in continental Europe. This is especially true for Italy, where the State controls more than 10 percent of votes in almost 10 percent of listed firms. Notice that our figures are generally lower than in La Porta *et al.* (1999a) for two reasons. First, small firms are less likely to be State-controlled and, second, our data are concentrated in a sample period measured after a major privatization wave that took place in the mid-1990s in most continental European countries. We find that widely-held corporations play a minor role as controlling shareholders in almost all countries. Finally, reciprocal holdings are particularly pronounced in Germany accounting for 3.61 percent of cases. The use of the 20 percent threshold raises the proportion of widely-held firms to 38.34 percent for the whole sample, with the figures at 10.37 percent and 68.09 percent in Germany and the UK respectively. As a consequence, family control drops to 43.88 percent for the whole sample, and control by financial institutions also decreases significantly from 21.63 to 10.21 percent, especially in the UK where the drop is from 32.64 to 9.81 percent. We uncover higher State-control and a higher incidence of control by widely-held (non-financial) corporations.

[Insert Table 2 about here]

Some of the differences reported relate to differences in regulations across countries, i.e., differences in the percentages of shares required to entitle shareholders to call an extraordinary meeting, to caps on ownership of financial companies, or to voting caps introduced after the privatization of many corporations in continental Europe. Also, with the exception of Germany, commercial banks in other European countries have historically faced very stringent limits on the ownership of non-financial corporations. Thus, it is not surprising to find the role of widely-held financial institutions greatly diminishes at the 20 percent level for all countries.

Regulations relating to the ownership of financial companies may explain, in part, differences in ownership and control patterns across countries. This happens because of two effects. First, differences in regulation cause the ownership structure of financial firms to differ across countries. Second, since the ownership structure of financial firms differs from that of non-financial firms, the ratio of financial firms to total firms in a particular market will affect our overall results. Therefore, in Table 3, we compare the ownership structure of financial firms and non-financial firms. For the whole sample we report that financial firms are more likely to be widely-held than non-financial companies (22.58 percent versus 13.45 percent). Also, financial firms have a significantly lower ratio of family control (26.6 percent versus 60.51 percent), a higher ratio of control by other widely-held financial institutions (42.49 percent versus 16.91 percent), and they display a relatively more frequent use of reciprocal holdings. This pattern is consistent across all countries. Focusing on non-financial firms, we still find that non-financial firms are more likely to be widely-held in the UK (25.14 percent), than in continental Europe. Also, while families control "only" 38.3 percent of non-financial firms in the UK, the control increases to 77.95 percent of non-financial firms in Italy, 76.37 percent in France, 76.64 percent in Germany, and 74.07 percent in Spain. However, the control of non-financial firms by widely-held financial institutions is significantly higher in the UK than in the other European countries.

[Insert Table 3 about here]

We then examine the relationship between concentration of control and firm size. We use market capitalization as a proxy to identify the largest twenty, the median fifty, and the smallest fifty companies in each country sample. Consistent with previous studies, we find that size is a relevant factor in explaining the ownership patterns of firms. In Table 4 we report comparisons among countries. We find that family ownership decreases with size in each country. Family control is weak among the largest companies in the UK and in Italy. Notice, however, that in Italy, State control is a substitute for family control among the very largest firms. We also find that large firms are more likely to be widely-held than small firms in all our sample countries. In the UK, we find that 90 percent of large firms are widely-held at the 20 percent cut-off level, while only 10 percent of smaller firms are widely-held at the 10 percent cut-off level.

[Insert Table 4 about here]

Our results are, to some extent, different from those of La Porta *et al.* (1999a). For example, at the 10 percent cut-off level, we report a lower proportion of widely-held firms among the largest twenty companies in Germany (25 percent versus 35 percent) and in the UK (70 percent versus 90 percent), and a higher proportion in France (35 percent versus 30 percent), Italy (20 percent versus 15 percent) and Spain (40 percent versus 15 percent). Spain’s dramatic difference is largely related to the privatization process that took place in 1996-97 with the creation of a number of widely-held companies. In effect, our data show that in Spain the State controls 10 percent of the largest corporations, compared to the 45 percent documented by La Porta *et al.* (1999a). The effects of the privatization wave emerge, with varying intensity, in all our sample countries. In fact, State control is less pronounced than in La Porta *et al.* (1999a) in all continental European countries. Also, we report a more pronounced family control in France, Germany and in the UK, while control by widely-held financial institutions is more pronounced in Italy. These differences between our results and La Porta *et al.*'s (1999a) are qualitatively similar when we look at middle sized firms. We suspect these differences are largely related to the great variability in the ownership patterns of small and medium-sized firms, which were not detected in the small sample used by La Porta *et al.* (1999a) when they examined 10 companies in each country. Our sample better reflects this variability because of the inclusion of 50 medium sized firms and 50 small firms for each country.

4.2 How concentrated is family control?

In their study, Claessens *et al.* (2000) showed that in East Asia the control of listed assets is in the hands of a small number of families. Previous studies on the Italian market (Brioschi, Buzzacchi e Colombo, 1989) have shown that, in the mid-eighties, more than one-fourth of total market capitalization could be traced to the control of three single families. To investigate this issue further, we calculate the number of firms under the ultimate control of each family (Table 5). We find that Italy has the largest number of firms controlled by a single family (1.46 on average), while the UK has the lowest (1.11). However, these figures do not give a sufficiently clear picture of the concentration of control. This can be better analyzed by looking at the value of total assets controlled by the largest family groups in each country. We find that the largest family controls 10.40 percent of the total market capitalization in Italy, 5.94 percent in France, 5.43 percent in Germany, 1.66 percent in Spain, and 1.10 percent in the UK. Also, the ten largest families control 29.18 percent of corporate assets in France, 21.29 percent in Germany, 20.18 percent in Italy, 10.92 percent in Spain, and 4.85 percent in the UK. These results show that a relatively small number of families control most of the Western European corporations in continental Europe, while the concentration of control is relatively weak in the UK. However, these figures are generally lower than for East Asian firms with the exception of Japan. For example, the largest family controls 17.1 percent of the corporate assets in the Philippines, 16.6 percent in Indonesia, 11.4 percent in Korea, 4.0-9.4 percent for other countries except for Japan that it is only 0.5 percent. The ten largest families control 57.7 percent of corporate assets in Indonesia, 52.5 percent in the Philippines, 18.4-46.2 percent for other countries with the exception of Japan where the ratio is only 2.4 percent.

[Insert Table 5 about here]

More importantly, these families significantly influence the economic policy of governments. For example, Italy's Agnelli family, which controls the largest Italian industrial group, including 10.1 percent of Italian listed firms, has two representatives in the Italian parliament. Also, Silvio Berlusconi, the largest controlling owner of four large Italian companies (including the largest Italian private television broadcasting company, Mediaset, a large insurance company, Mediolanum, a grocery store, Standa, and a periodical/publisher, Arnoldo Mondadori), is the former President of the Italian Government and a leading political exponent.

In France, the Pinault-Printemps-Redoute Group, the French Government, and the State-controlled bank Crédit Lyonnais were involved in an interesting case of exploitation of a strong market position and strong links with politicians (in particular with French President Chirac) for the purpose of obtaining free money and a particularly large financing exposure. In 1986 François Pinault, the controlling shareholder of Pinault SA, the 16th largest French company, obtained a 500 million FF grant from the French Government (US$80 million), via a cash contribution of 250 million FF and a tax exemption of 250 million FF. In 1992, the French Government deepened its commitment to Pinault, by acquiring a 25 percent stake in Pinault through its controlled bank Crédit Lyonnais (and, in turn, Clinvest), corresponding to an investment of 2 billion FF. By 1997, Crédit Lyonnais' credits and stakes in Pinault reached a value of 12 billion FF (US$2.14 billion). Notice the high commitment of the bank, which corresponded to 20.91 percent of Pinault's total assets of 57.38 billion FF; while debt financing represented 25.23 percent of Pinault's total debt of 39.64 billion FF. Following the criticism of Crédit Lyonnais' excessive commitment to Pinault, in 1998 the bank sold back its stake in Artemis, the holding of the Pinault's group, to François Pinault for 4.1 billion FF.[19]

Though in this study we do not report extensive evidence of large controlling families influencing governments, these cases support the evidence reported by Claessens *et al.* (2000) that concentration of control in the hands of a few families represents an important lobby demanding preferential treatments by government agencies, and leading to the possibility of "crony capitalism".

5. Means to achieve separation of ownership and control.

In this section we discuss the mechanisms used to achieve a separation between ownership and control, with reference to the use of multiple class voting shares, pyramidal structures, cross-holdings, and reciprocal-holdings. Consistent with previous studies, we report that the magnitude of the deviations from the one-share one-vote rule, through the use of multiple class voting shares, is generally small[20] (Table 6, Own=20%Con denotes percent of the total capital (or book value of

[19] See Gay and Monnot (1999), and Calvi and Meurice (1999).

[20] These figures do not account for the use of multiple voting shares. Actually, the practice of issuing multiple voting shares is outlawed in Italy, Spain and in the UK. After May 1998 it was also outlawed in Germany. Though this practice was generally illegal in Germany even before 1998 (thus, also during our

equity) necessary to control 20 percent of votes). This evidence holds even in countries, such as Italy, where the use of dual class shares is very popular (Zingales, 1994). We report that, though in Italy 86 out of 208 companies (41.35 percent) use non-voting or limited voting shares, the Own=20%Con ratio is only 18.38 percent. The use of dual-class shares is relatively important in Germany, where it accounts for 18.83 percent of Own=20%Con ratio. However, in the UK, we observe a lesser use of dual-class share structures (Own=20%Con ratio = 19.19 percent). Non-voting shares are practically not used in France and Spain. In fact, we find that only two, out of 632 Spanish companies, use non-voting shares.[21] As reported in Table 6, the Own=20%Con ratio is significantly different across our sample countries at the 1 percent level, though the difference is not significant between Italy and Germany. However, it must be noted that in this study, we do not account for the presence of company-specific voting caps[22], the use of the so-called *golden shares,*[23] informal alliances (i.e., voting blocks) or transfer restrictions on shares.

[Insert Table 6 about here]

We find that, in some countries, many companies use dual class shares. Italy is at one extreme with 41.35 percent of listed firms having dual class shares outstanding, and Spain is at the

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sample period), prior to May 1998 companies could be authorized to issue shares with multiple voting rights by the State authorities. This was, for example, the case of Rwe AG, which at the end of 1996, had some outstanding multiple voting stocks with a *20 voting right, and Siemens AG, whose multiple voting shares carried a *6 voting power. Also, multiple voting shares were issued in Germany by Bewag, Frankisches Uberlandwerk, Hamburger Hochbahn, Hamburgische Electricitats Werke, Lech Elektrizitatswerke, and Uberlandwerk Unterfranken. Instead, multiple voting shares are legal in France. In fact, the French regulation provides the possibility of granting two votes for ordinary registered shares, whose transfer is restricted in some respects, and only if these shares have been held for at least two consecutive years (four years for publicly traded companies). However, these multiple voting stocks do not represent in France a special category of stocks. As such, we cannot incorporate these multiple voting rights in our analysis, though we recognize their relevance as a means for enhancing the separation between ownership and control.

[21] Similar evidence is reported for Spain in Crespi-Cladera and Garcia-Cestona (1998) and for France in Muus (1998).

[22] Voting caps are, for example, used by Basf (2.62 percent), Bayer (5 percent), Deutsche Bank (5 percent), Linde (10 percent), Mannesmann (5 percent), Phoenix (10 percent), Schering (3.51 percent), and Volkswagen (20 percent) in Germany, and Telefonica (10 percent) in Spain. In Italy, voting caps exist by law for co-operative banks, while they are rather common for recently privatized companies, such as Comit (3 percent) and Credit (3 percent).

[23] As reported in Crespi-Cladera and Garcia-Cestona (1998) in some recently privatized Spanish companies, such as Repsol, Telefonica, and Endesa, the State held these golden shares. The use of golden shares is widespread among privatized companies also in Italy, as it emerges from the recent vicissitudes of Telecom Italia and Enel.

other extreme with only 0.16 percent of companies having multiple class shares. Non-voting and limited voting shares are rarely used in France (2.64 percent of firms), while they are quite popular in the UK (24.61 percent). The low Own=20%Con ratios reported earlier thus signal that, even though the use of multiple class shares is quite common, the incidence of non-voting and limited voting shares on the total share capital is quite small.

In our sample, we report that pyramids are used to gain control of 15.01 percent of listed companies, when we define ultimate control at the 20 percent level. Pyramidal structures are particularly pronounced in Italy (22.22 percent of cases) and Germany (21.71 percent). The UK is at the other extreme with only 4.93 percent of controlling shareholders exercising control through a pyramidal structure. These figures are significantly lower than for East Asian firms where 38.7 percent of East Asian corporations exercise control through a pyramid. Our results are also lower than in La Porta *et al.* (1999a). This difference is related to the fact that we analyze all companies, while La Porta *et al.* (1999a) focus on the very largest companies, where shareholders are more likely to exercise control through pyramidal structures.

For the whole sample with 20 percent cut-off level, we report that 5.95 percent of controlling shareholders enhance their control through the use of cross-holdings, while it is only 10.1 percent for East Asian corporations. For example, 8.47 percent of Italian listed companies have cross-holdings. Also, cross-holdings are observed in 6.97 percent of German companies, 6.45 percent of Spanish companies, 6.31 percent of UK companies, and 3.07 percent of French companies.

Carrying the analysis further than previous studies, we also study reciprocal holdings, which occur when company X holds a stake in company Y which, in turn, holds a stake in company X, or when company X directly holds a stake in its own share capital. At the 20 percent cut-off level, we report that 0.87 percent of our companies use reciprocal holdings. Their use is particularly pronounced in Germany, where we observe that the largest controlling shareholder displays reciprocal holdings in 2.69 percent of cases[24]. The use of reciprocal holdings is very marginal in the other countries, where regulations actually set a 10 percent cap on these stakes.

We identify two further means of strengthening ultimate control (though we do not include them in our calculations of control), namely being the only controlling owner, and having a

[24] This figure rises to 3.37 percent if we also include minority ultimate owners (see Table 2).

member of the controlling family as the CEO, Honorary Chairman, Chairman, or Vice-Chairman of the company. In this study, a controlling shareholder is the only controlling owner when there is no other owner who controls at least 10 percent of the voting rights. Our data show that 54.69 percent of companies which are not widely-held have a single ultimate owner at the 20 percent cut-off point. At the two opposite extremes are France where 64.75 of non-widely-held companies have a single ultimate owner, and Spain, where only 44.30 percent of companies have a single ultimate owner. In contrast, 67.8 percent of East Asian corporations are controlled by a single ultimate controlling shareholder.

Finally, we check whether a member of the controlling family is the CEO, Honorary Chairman, Chairman, or Vice-Chairman of the board. For this purpose we only analyze family controlled firms since we cannot collect information on officers and directors appointed by other shareholders, such as the State, financial institutions or other corporations. The only way to obtain information on family membership is by looking at the last name of the director. This method is likely to bias our results towards an under-estimation of family affiliation inside the boards of family-controlled firms. Moreover, our results may also be biased because smaller companies are more likely to have an owner who is also the CEO or Board Chairman. Keeping these drawbacks in mind, we document that in more than two-thirds of the family controlled firms the controlling owner is a top manager of the firm. The proportion is highest in Italy and the UK, and lowest in Germany.

In Table 7 we analyze the use of different means to enhance control across countries and types of (largest) controlling owners, with particular reference to companies that are family-controlled, State-controlled, or controlled by widely-held financial institutions at the 10 percent cut-off level. We find that family-controlled firms by and large do not differ across countries in their use of pyramids or cross-holdings as a means to enhance the separation of ownership and control with the exception of Italy. However, we report differences in the use of dual-class shares. Also, we report that families are less likely to be the only controlling owners in Spain, while more likely to be so in Germany and France. By and large, we do not find a significant difference in the use of pyramids and cross-holdings across countries for State-controlled firms. Among these firms we do not find significant differences in the incidence of dual-class shares, with the exception of

Italy. By contrast, we find that the State is very likely to be the only controlling shareholder in Spain, Italy, and France, while it is often backed up by a second large owner in Germany and in the UK. As for firms controlled by widely-held financial institutions, striking differences in their control mechanisms emerge when Germany is compared with the other countries. These peculiarities are probably related to the widespread presence of "universal banks" in Germany.

[Insert Table 7 about here]

6. Separation of ownership from control

The evidence reported up to this point shows that the use of pyramids, cross-holdings, reciprocal holdings, and deviations from the one-share one-vote rule contribute to the separation between ownership and control. In Table 8 we analyze such separation more extensively. We find that the largest ultimate controlling shareholder owns on average 34.6 percent of cash flow rights, and controls 37.75 percent of voting rights. Ownership is higher in Germany, where the largest ultimate owners have 48.54 percent of cash flow rights, while it is lower in the UK, where the largest owner has on average 18.65 percent of cash flow rights. Also the control of voting rights is higher in Germany, where the largest ultimate owner controls, on average, 54.50 percent of voting rights, while in the UK the controlling owner only controls 20.83 percent of votes.

[Insert Table 8 about here]

Table 8, Panel C, documents the ratio of cash-flow to voting-rights, which measures the separation between ownership and control. It shows that separation of ownership and control is highest in Italy and Germany, and lowest in France and Spain.

From a comparative standpoint, ownership and control are, on average, much higher in our sample than for nine East Asian countries. In East Asia, the largest ultimate owner, on average, owns 15.70 percent of cash flow rights, and controls 19.77 percent of voting rights. However, the cash-flow to control rights ratio is higher in Europe than in East Asia.

The lower separation of cash flow rights from control rights in Western Europe may be a mere reflection of size, industry classification and/or country specific characteristics. To examine the robustness of the assertion of a lesser separation of cash flow rights from control rights in Western Europe, in Table 9 we run a set of regressions to control for industry, size and other characteristics in explaining ultimate ownership and control pattern in Western Europe and East

Asia.[25] In Table 9, we present 3 dependent variables: cash flow rights (O), control rights (C) and ratio of cash flow rights to control rights (O/C). Cash flow rights represent the ultimate ownership stakes held by the largest controlling; control rights are the percentage of voting rights controlled by the largest controlling shareholder; the ownership to control rights ratio is the ratio of cash flow rights to control rights. We include *Petroleum-Other* as industry dummies, which are defined following Campbell's (1986) broad industry classification. However, we do not report industry-dummies' coefficients and significance for obvious space reasons. *Ln(sales)* is the natural log of end-1996 sales; the *Europe* dummy = 1 if the corporation is from Western Europe, and = 0 if it is from East Asia; the *Low Protection* dummy = 1 if the company is from a country with poor shareholder protection, and 0 otherwise (Source: La Porta *et al.*, 1997 and 1999b); the *Civil Law* dummy = 1 if the company law or commercial code of the country originates from Roman law, and 0 otherwise (Source: La Porta *et al.*, 1997 and 1999b); the *GSDecile* is the rank decile for Growth of Sales, i.e., the 5-year average growth rate of net sales over 1992-1996. Corporations are partitioned into ten equal-size groups in ascending order of Growth of Sales and ranked 1 – 10 (Source: Worldscope). Financial companies are excluded from the analysis.

[Insert Table 9 about here]

As expected, the size of ultimate ownership and control stakes is negatively related to size. Also the O/C ratio is negatively related to size, suggesting that large firms tend to display a higher degree of separation of ownership from control than small firms, thus a higher use of pyramiding, cross-ownership and deviations from the one-share-one-vote principle. We find that ultimate control is higher in civil than in common law countries (though the difference is not significant), and in countries with poor shareholder protection than in countries with stronger protection of minority shareholders. This relationship holds also for ultimate ownership. However, while the degree of separation of ownership from control (O/C) is higher in countries with poor shareholder protection, it is actually lower in civil than in common law countries. Finally, high growth companies display a more dispersed ownership (and control) than low growth firms, since the controlling shareholder has a greater need to reduce the specific risk among these companies. In addition, high growth companies display a higher alignment of ownership and control. This can be

[25] Asian data were kindly provided by Claessens, Djankov, Fan and Lang. The sample selection criterion and data construction procedures of this paper are the same as in Claessens *et al.* (2000), hence we can

both related to the market's anticipation of the risk of expropriation among the riskiest firms, and to the incapability of the controlling shareholders of these firms to leverage their ownership through complex pyramidal structures.

It should be noted that even after controlling for size, industry, shareholder’s protection, origin of law and growth opportunities, European firms still display a higher concentration of both ownership and control, and a lower separation of ownership from control.

7. Evidence on expropriation

The separation of ownership from control confronts all corporations with an agency problem. Shleifer and Vishny (1997) argued that in the US, the agency problem comes from the conflict between managers and dispersed shareholders, whereas the agency problem in other countries is that between controlling owners and minority shareholders. Claessens *et al.* (1999) relate the separation of ownership from control to the value discount, which measures the loss for minority shareholders.[26] This evidence is consistent with the notion that minority shareholders were expropriated by controlling owners. In light of this evidence, it would be interesting to examine the expropriation hypothesis in Western Europe where a less significant separation of ownership from control is documented.

Expropriation may be an issue in Western Europe. For example, families are the most pronounced type of controlling owner, controlling 43.9 percent of all listed companies (38.3 percent in East Asia). It is also surprising to report that for 67 percent of Western European firms, the top managers are related to the controlling families, while this ratio is only 57 percent for East Asian firms. As shown in Zingales (1994) and Bigelli and Mengoli (1999), this relationship provides well-connected managers with the opportunity to accumulate personal wealth through operations between firms in the same group in Italy. The more pronounced family-controlled firms in Western Europe, together with the powerful and intimate relationship with top managers, further exacerbates the likelihood of expropriation. This argument is supported by indirect evidence. In a recent study, Lins and Servaes (2000) report that Japanese firms diversify less than

simply combine these two data sets to run regressions.

their German or British counterparts. In particular, Japanese firms invest on average in 1.53 two-digit SIC segments, while German and British firms operate in 1.67 and 1.66 segments, respectively. Moreover, several studies report that voting shares trade at a premium over non-voting shares in Western European countries (see discussion in section 2). According to La Porta *et al.* (1999a), the presence of large shareholders in the US is less significant compared with Europe. Because there is a smaller likelihood of expropriation in the US, therefore, it is no surprise to observe a much higher premium in Western Europe than the 4.5 percent premium reported in the US by Lease, McConnell and Mikkelson (1983).

We present anecdotal evidence on the expropriation of minority shareholders for one of our sample firms in Italy. A merger between La Fondiaria Assicurazioni and Compagnia Latina di Assicurazioni in Fondiaria took place in 1995. The boards of directors of these two companies agreed to offer 2 ordinary shares of Fondiaria for 3 ordinary shares in Latina, and 2 non-voting shares of Fondiaria for 3 non-voting shares in Latina. On the announcement day, the stock price of Latina's ordinary shares rose 14.7 percent, while the stock price of non-voting shares dropped 17.7 percent. As a consequence, the voting premium increased substantially. After shareholders of Latina appealed in court, Fondiaria decided to modify the exchange offer by offering 2 new ordinary shares in Fondiaria for 5 shares in Latina, either voting or non-voting. The voting premium of Latina decreased thereafter. Note that this happened even though non-voting shares represented only 4.8 percent of Fondiaria's total share capital.[27]

We examine the expropriation hypothesis by employing the excess value approach of Berger and Ofek (1995) to measure the value loss (gain). We define the excess value (EXV) as the natural logarithm of the ratio of the firm's actual value to its imputed value. Market capitalization, market value of common equity plus book value of debt, is used as the measure of actual firm value. The imputed value is calculated as follows. We first compute the median market-to-sales ratio for each two-digit SIC industry in each country using only single-segment firms[28]. The

[26] In a related study, La Porta *et al.* (1999b) relate the degree of shareholders' protection to the value loss. Their conclusion is consistent with the expropriation hypothesis in that a lesser value loss (i.e. less expropriation) is observed for countries with more investors' protection.
[27] See "Latina nc: concambio corretto?" II Sole 24 Ore, June 25, 1995 and "La fusione Latina – Fondiaria passa l'esame del Tribunale" II Sole 24 Ore, September 26, 1995.
[28] We collect company segment data from Worldscope. We group each company's segments according to the two-digit SIC system. In particular, we initially assign the four-digit SIC codes reported by

market-to-sales ratio is the market capitalization divided by firm sales. We then multiply the level of sales in each segment of a firm by its corresponding industry median market-to-sales ratio.[29] The imputed value of the firm is obtained by summing the multiples across all segments[30].

In constructing the excess value measure, we follow the previous literature and classify firms as single-segment if at least 90 percent of their total sales are derived from one two-digit SIC segment.[31] We exclude multi-segment firms from the sample when they do not report segment sales. We exclude firms whose primary business segment is financial services (SIC 6000-6999) because their segment financial figures are not comparable to non-financial firms.

Claessens *et al.* (1999) argue that the separation of ownership from control can be measured by the ratio of cash flow rights to control rights. In case of either a lesser alignment or more divergence of cash flow rights to control rights, we should observe a value discount which measures the loss to minority shareholders.

We employ the ordinary least-square (OLS) method, and regress the market valuation measure, EXV, on ownership (O) and control (C) rights and O/C, and employ the following regression model:

$$\text{EXV} = \text{Intercept} + b_1{*}\text{O} + b_2{*}\text{C} + b_3{*}(\text{O/C}) + b_4{*}\text{Multiple owners} +$$

$$+\, b_5{*}\text{DivDummy} + b_6{*}\text{CES} + b_7{*}\text{LN(TA)} + u$$

where EXV is excess value, *O* is the ownership (cash-flow) rights of the largest controlling owner, *C* is the control (voting rights) of the largest controlling owner, and *O/C* is the ratio of cash-flow to voting rights of the largest controlling owner. We follow Lang and Stulz (1994) and Lins and Servaes (2000), and include the capital expenditures over sales ratio, *CES*, a *diversification dummy*, and the natural logarithm of total assets (*LN(TA)*) as control variables. Moreover, *Multiple*

Worldscope to the appropriate segments. In many cases we are able to obtain one-to-one matches between SIC codes and segments. Some companies report different numbers of SIC codes from their segment numbers. If a segment can not be associated with any reported SIC code, we determine the segment's SIC code according to its business description. In the second step, we redefine segments at the two-digit SIC level and aggregate segment sales to that level.

[29] In the computation of the industry median market-to-sales ratio, we restrict the number of single-segment firms to be at least three. In some cases, we do not have a sufficient number of firms to compute the medians. In these cases, we use the median value of broader industry groups as defined by Campbell (1996).

[30] All financial data are converted to US dollars using end-year exchange rates. Extreme values of EXV, below 0.25 and above 4, are excluded from the sample.

owners is an indicator variable that equals 1 if there is a second owner who controls at least 10 percent of the voting rights, and zero otherwise. This variable is intended to test for the monitoring role of second large shareholders.

In line with previous studies we find that diversified firms trade at an average 21 percent discount (see Table 10). Moreover, in line with previous evidence, firm value is positively related to the ratio of capital expenditures over sales. However, in contrast to previous evidence, for the whole sample we do not find any significant relationship between excess value and ownership structure variables. Moreover, though our results are not significant, they show some consistency across countries. For example, in four out of five countries, the concentration of cash-flow rights is positively related to excess value, in line with Jensen and Meckling's (1976) argument. Surprisingly, we find that in all countries an increase in the alignment of ownership and control is negatively associated with excess value. This relationship is significant in Spain. This result contrasts with that in East Asia documented by Claessens *et al.* (1999).[32] Our findings suggest that in Western Europe the use of dual-class shares, pyramiding and cross-shareholdings does not lead to a significant expropriation of minority shareholders.

[Insert Table 10 about here]

8. How does ultimate ownership structure contain expropriation?

We argue that if the market is rational about the potential of expropriation related to the separation of ownership from control, then we should observe a different ultimate ownership structure to contain expropriation within an acceptable level in more developed Western European countries. In this study, we looked at governance issues only as they relate to ultimate ownership, however we do not rule out other effective mechanisms not discussed in this paper. Gomes and Novaes (1999) argued that one effective monitoring device related to ultimate ownership is the presence of a second large controlling owner (or multiple large minority owners), because they are likely to represent a threat to the largest shareholder. For example, national laws allow minority

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[31] See, for example, Lins and Servaes (1999, 2000).

[32] Our result contrasts with Grossman and Hart (1988) and Harris and Raviv (1988), who suggest that firm valuation is an increasing function in the ratio of cash-flow to voting rights, as the benefits of expropriation increase with the separation of ownership and control.

shareholders to call an extraordinary general meeting once they reach a threshold quorum[33], or to sue directors in case of self-dealings, as in the case of operations at prices that are not in line with the market. Consistent with this argument, we observe that 45 percent of Western European firms have a second large shareholder, while only 32 percent were reported for East Asian firms.

We present anecdotal evidence on the role of a second large shareholder for one of our sample firms in the UK, where a number of minority large shareholders tried to protect their interests against the controlling shareholder. In February 1998, six institutional investors of Astec, a UK firm that is the world's leading supplier of electronic power conversion products and components for computing, communications, business equipment and industrial markets, announced that they would take legal action against Emerson Electric (US), the controlling shareholder of Astec. This legal action was taken when Emerson disclosed their intention to increase their stake to 51.1 percent in Astec in order to remove independent directors from the board, and to completely omit dividends in order to undertake an acquisition plan. Emerson declared that they had already paid the control premium when they acquired their 45 percent stake in Astec 10 years earlier, and that they therefore had the right to undertake their desired acquisition plan despite the objection of independent directors and minority shareholders, i.e. the 6 institutional investors.[34] [35]

Moreover, in comparison with East Asia, large shareholders hold significantly larger stakes in the firms they control. Consistent with the argument by Jensen and Meckling (1976) that larger managerial stakes reduce agency costs, the larger stakes work as a commitment to contain the expropriation of minority shareholders. In particular, we find that the largest controlling owner in Western Europe obtains 34.6 percent of cash-flow rights, while controlling 37.8 percent of voting rights. These figures are significantly higher than 15.7 percent for ownership and 19.8 percent for control in East Asia.

In Table 10, we document that the presence of multiple owners has little impact on EXV. Accompanying insignificant ownership variables on EXV, we expect that the presence of a second large shareholder offsets the expropriating nature of large owners. To further test the monitoring

[33] The quorum necessary to call an extraordinary general meeting is 20 percent of paid-in voting capital in Italy, 10 percent in France and in the UK, and 5 percent in Germany and Spain.
[34] See “Six institutions set to start action against Emerson”, *Financial Times*, February 16, 1998.

role of a second large shareholder, we run the regressions splitting between companies with a single controlling owner (Alone), and companies with multiple controlling owners (Multiple). We find that, for companies with the controlling owner alone, the ownership stake held by the largest controlling owner is positively and significantly related to EXV. Consistent with Jensen and Meckling (1976), this evidence suggests that, if there is no monitoring by other large shareholders, the ownership stake works as a powerful commitment to reduce the risk of expropriation. In contrast, when multiple controlling owners are present, the largest owner no longer needs to signal his intention/commitment through an ownership stake, since monitoring by the second large shareholder guarantees the protection of other minority investors. In fact, for companies with multiple owners, no ownership variable is significantly related to excess value. Thus, for these companies, we find evidence consistent with Gomes and Novaes (1999) that multiple owners drive firms to optimize their ownership structure.

To confirm the monitoring role of second large shareholders, in Table 11 we document the average number of controlling shareholders per company and their relationship with the divergence of ownership from control rights. The number of ultimate owners varies from 1.48 in France, to 2.18 in Spain. For the whole sample, we report that companies have on average 1.83 controlling owners at the 10 percent cut-off level. In the same table we show that the number of ultimate owners is negatively (and significantly) correlated with the cash-flow to control rights ratio (correlation coefficient = -0.3095). This means that, when multiple controlling owners are present, firms tend to have a higher separation between ownership and control. This result is consistent with the view that effective monitoring by a second large shareholder and other monitoring devices weaken the channels that lead to expropriation. In particular, when multiple controlling owners are present, firms tend (or "are allowed" by markets) to have a higher separation between ownership and control since there is less need for the controlling owners to signal their best effort through the alignment of cash flow and voting rights. This argument is consistent with the notion that the divergence of ownership from control rights can damage EXV. However the associated stronger monitoring from a second large shareholder compensates the value loss. Hence, we observe an insignificant expropriation.

[35] Astec was eventually acquired by Emerson Electric in 1999.

[Insert Table 11 about here]

Effective monitoring from second large shareholders together with a higher commitment would weaken the channels that lead to expropriation. In particular, we find that deviations from the one-share one-vote rule are rarely adopted, and that the use of pyramiding is much less pronounced in comparison to East Asian firms. In fact, we report that in Western Europe 15.01 percent of controlling shareholders exercise their control through pyramiding, while we observe 38.7 percent of firms with pyramidal structures in East Asia. Finally, we find that cross-holdings are used by 5.9 percent of the largest controlling owners, while we document 10.1 percent of firms with cross-holdings in Asia. A less pronounced use of these structures implies a lower separation of ownership from control, meaning a higher cash flow/control rights ratio (this ratio is 0.877 in West Europe, while it is 0.746 in East Asia), hence less pronounced expropriation.

9. Summary and conclusions

This paper constructed the ultimate ownership data for a large sample of listed Western European firms and compared them with the ultimate ownership structures from East Asia and the 27 countries analyzed by La Porta *et al.* (1999a). The separation of ownership from control confronts all corporations with an agency problem. Amongst US corporations, the agency problem is between managers and dispersed shareholders. Managers can expropriate shareholders by diverting corporate resources for personal consumption, e.g., through excessive perquisites and empire building. In East Asia, the separation of ownership from control is that between controlling owners and minorities shareholders since widely-held corporations are in the minority and the predominant ownership structure is control by a family which often appoints a top manager. Therefore, the salient agency problem in these countries is expropriation of outside shareholders by the controlling shareholder. Corporate wealth can then be expropriated by the insiders who set unfair terms for intra-group sales of goods and services and transfers of assets and control stakes.

In Western Europe, we documented a similar control pattern as in East Asia, if not stronger. However, we fail to document the significant expropriation seen in East Asia. Western Europe appears to have avoided the problems by containing expropriation by its endogenous control mechanisms. In this paper we only look at the monitoring from second large shareholders and ownership commitments of controlling owners. However to contain expropriation, other effective monitoring mechanisms in Western Europe warrant attention. In particular, in light of the argument by Shleifer and Vishny, (1997, p.759) that "large owners gain nearly full control of the corporation, they prefer to generate private benefits of control that are not shared by minority shareholders", it would be crucial to further document the inability of large owners to expropriate minority shareholders under different circumstances.

For example, we may look at dividends because they remove corporate wealth from insider control. This view of dividends is taken by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000), who report that higher dividends are paid by corporations in countries with strong legal protection of minority shareholders, such as those countries with codes based on Common Law rather than Civil Law. A further study could build on their research by relating dividend rates to the discrepancy between the controlling shareholder's ownership rights and her control rights, which can serve as a measure of the corporation's vulnerability to insider expropriation. We could also look at other corporate control events including mergers and acquisitions, leverage recaps and replacement of management, etc., because these events can be effective in monitoring management and therefore would be effective in containing expropriation. In conclusion, the area of expropriation of minority shareholders outside the US is a totally unexplored territory. It warrants further research in this topic.

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Table 1: Data sources

Countries:	Direct Ownership Data:	Dual-Class Shares
France	The Herald Tribune (1997), "French Company Handbook 1997", SFB-Paris Bourse Financial Times (1997): "Extel Financial" Worldscope (1998) http://www.bourse-de-paris.fr/fr/market8/fsg830.htm	Datastream (1999) Financial Times (1997): "Extel Financial" Les Echos (1996) Muus (1998)
Germany	Commerzbank (1997): "Wer gehört zu wem" (http://www.commerzbank.com/navigate/date_frm.htm) Financial Times (1997): "Extel Financial" Worldscope (1998)	Datastream (1999) Financial Times (1997): "Extel Financial" Die Welt (1996) Becht and Boehmer (1998)
Italy	CONSOB (1997): "Bollettino - edizione speciale n. 4/97 - Compagine azionaria delle società quotate in borsa o ammesse alle negoziazioni nel mercato ristretto al 31 dicembre 1996" (http://www.consob.it/trasparenza_soc_quot/trasp_soc_quot.htm) Il Sole 24 ore (1997): "Il taccuino dell'azionista"	Datastream (1999) Il Sole 24 ore (1997): "Il taccuino dell'azionista"
Spain	Comision Nacional del Mercado de Valores (1998): "Participaciones significativas en sociedades cotizadas" (http://www.cnmv.es/english/cnmve.htm)	Datastream (1999) Financial Times (1997): "Extel Financial" ABC (1996) Crespi-Cladera and Garcia-Cestona (1998)
UK	Financial Times (1997): "Extel Financial" London Stock Exchange (1997): "The London Stock Exchange Yearbook" Financial Times Worldscope (1998) http://www.hemscott.com/equities/company/	Datastream (1999) Financial Times (1997): "Extel Financial" Financial Times (1996)

Table 2: Control of publicly traded companies in Europe (percentage of the total number of companies in the sample)

The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997.

Country	Number of Corporations	Widely-Held	Family	State	Widely-Held Corporation	Widely-Held Financial	Miscellaneous	Reciprocal Holdings
				10 Percent Cut-Off				
France	607	6.26 [S, UK]	70.44 [UK]	5.17 [I, UK]	2.66 [UK]	14.60 [G, UK]	0.86 [G, UK]	0.00 [G, I]
Germany	704	4.40 [S, UK]	71.64 [UK]	5.23 [I, UK]	1.21	10.43 [F, I, S, UK]	3.49 [F, S, UK]	3.61 [F, I, S, UK]
Italy	208	5.29 [UK]	64.87 [UK]	9.98 [F, G, S, UK]	2.54 [UK]	15.96 [G, UK]	0.64 [UK]	0.72 [F, G]
Spain	632	11.08 [F, G, UK]	67.33 [UK]	4.24 [I, UK]	1.66	15.07 [G, UK]	0.44 [G, UK]	0.19 [G]
UK	1,589	26.18 [F, G, I, S]	33.75 [F, G, I, S]	0.19 [F, G, I, S]	0.88 [F, I]	32.64 [F, G, I, S]	6.04 [F, G, I, S]	0.32 [G]
Total	3,740	15.13	54.24	3.18	1.45	21.63	3.47	0.89
				20 Percent Cut-Off				
France	607	14.00 [S, UK]	64.83 [S, UK]	5.11 [I, UK]	3.79 [UK]	11.37	0.91 [G]	0.00 [G]
Germany	704	10.37 [S, UK]	64.62 [S, UK]	6.30 [UK]	3.65 [UK]	8.31	3.37 [F, S, UK]	3.37 [F, S, UK]
Italy	208	12.98 [S, UK]	59.61 [UK]	10.34 [F, S, UK]	2.88	12.26	1.20	0.72 [UK]
Spain	632	26.42 [F, G, I, UK]	55.79 [F, G, UK]	4.11 [I, UK]	1.64	11.51	0.47 [G]	0.05 [G]
UK	1,589	68.09 [F, G, I, S]	19.88 [F, G, I, S]	0.09 [F, G, I, S]	0.99 [F, G]	9.81	1.10 [G]	0.03 [G, I]
Total	3,740	38.34	43.88	3.33	2.16	10.21	1.40	0.70

[F, G, I, S, UK]: Significantly different from France, Germany, Italy, Spain, and the UK at the 1 percent level, respectively.

Table 3: Concentration of control: financial versus non-financial companies (10 percent cut-off level)
The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997.

Country	Type of Company	Widely-Held	Family	State	Widely-Held Financial	Widely-Held Corporation	Miscellaneous	Reciprocal Holdings
All	Financial	22.58***	26.60***	3.24	42.49***	0.97	2.24**	1.89***
	Non-financial	13.45***	60.51***	3.16	16.91***	1.56	3.75**	0.66***
	t-value	6.07	-18.14	0.11	17.13	-1.29	-2.27	4.76
France	Financial	15.31***	39.64***	5.82	37.70***	0.51	1.02	0.00
	Non-financial	4.52***	76.37***	5.04	10.15***	3.08	0.83	0.00
	t-value	4.09	-8.28	0.34	8.33	-1.56	0.19	n.a.
Germany	Financial	6.86	42.18***	4.17	33.50***	0.00	3.27	10.02***
	Non-financial	3.99	76.64***	5.41	6.52***	1.41	3.52	2.52***
	t-value	1.31	-8.31	-0.69	11.47	-1.23	-0.14	5.91
Italy	Financial	20.41***	22.45***	9.69	39.29***	6.12**	0.00	2.04*
	Non-financial	0.63***	77.95***	10.06	8.77***	1.44**	0.84	0.31*
	t-value	5.81	-8.78	-0.08	6.05	2.13	-0.95	1.78
Spain	Financial	21.57***	32.29***	7.52*	35.65***	1.50	1.47*	0.00
	Non-financial	9.06***	74.07***	3.61*	11.11***	1.69	0.24*	0.23
	t-value	3.72	-9.53	1.87	7.49	-0.14	1.90	-1.01
UK	Financial	30.00*	17.05***	0.00	49.08***	0.50	2.83***	0.54
	Non-financial	25.14*	38.30***	0.24	28.17***	0.98	6.91***	0.26
	t-value	1.81	-8.18	-1.19	8.24	-1.02	-3.30	1.25

***, **, *: Significantly different between financial and non-financial companies at the 1 percent, 5 percent and 10 percent levels, respectively.
n.a.: Not applicable

Table 4: Concentration of control and company size (10 percent cut-off level)

The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. Size is classified as the largest 20 firms, the median 50 firms, and the smallest 50 firms in terms of market capitalization.

Country	Category	Widely-Held	Family	State	Widely-Held Financial	Widely-Held Corporation	Miscellaneous	Reciprocal Holdings
France	All firms	6.26	70.44	5.17	2.66	14.60	0.86	0.00
	Largest 20	35.00 [M,S]	50.00 [S]	0.00	15.00	0.00	0.00	0.00
	Middle 50	6.00 [L]	69.67 [S]	5.00	15.83	3.00	0.50	0.00
	Smallest 50	0.00 [L]	88.93 [L,M]	1.00	10.07	0.00	0.00	0.00
Germany	All firms	4.40	71.64	5.23	1.21	10.43	3.49	3.61
	Largest 20	25.00	30.17 [M,S]	10.83	17.83 [M,S]	0.00	5.00	11.17 [M,S]
	Middle 50	8.00	79.58 [L]	1.33	2.67 [L]	6.00	0.92	1.50 [L]
	Smallest 50	10.00	82.67 [L]	2.67	4.00 [L]	0.00	0.67	0.00 [L]
Italy	All firms	5.29	64.87	9.98	2.54	15.96	0.64	0.72
	Largest 20	20.00 [M,S]	20.00 [M,S]	27.50 [M,S]	30.00	0.00	0.00	2.50
	Middle 50	2.00 [L]	69.67 [L]	5.33 [L]	17.33	4.00	0.67	1.00
	Smallest 50	2.00 [L]	80.67 [L]	4.17 [L]	9.50	2.67	1.00	0.00
Spain	All firms	11.08	67.33	4.24	1.66	15.07	0.44	0.19
	Largest 20	40.00	28.75 [S]	10.00	12.50	8.75	0.00	0.00
	Middle 50	14.00	57.17	8.00	18.83	2.00	0.00	0.00
	Smallest 50	18.00	67.50 [L]	1.00	12.83	0.33	0.00	0.33
UK	All firms	26.18	33.75	0.19	0.88	32.64	6.04	0.32
	Largest 20	70.00 [M,S]	20.00 [S]	0.00	10.00 [M]	0.00	0.00	0.00
	Middle 50	28.00 [L]	21.00 [S]	0.00	41.00	2.67	5.67	1.67
	Smallest 50	10.00 [L]	66.33 [L,M]	0.00	21.00 [L]	0.00	2.67	0.00

[L, M, S]: Significantly different from the Largest 20, the Middle 50, and the Smallest 50 group at the 1 percent level, respectively.

Table 4 (continued): Concentration of control and company size (20 percent cut-off level)
The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. Size is classified as the largest 20 firms, the median 50 firms, and the smallest 50 firms in terms of market capitalization.

Country	Category	Widely-Held	Family	State	Widely-Held Financial	Widely-Held Corporation	Miscellaneous	Reciprocal Holdings
France	All firms	14.00	64.83	5.11	3.79	11.37	0.91	0.00
	Largest 20	60.00 [M, S]	30.00 [M, S]	0.00	10.00	0.00	0.00	0.00
	Middle 50	14.00 [L]	68.00 [L]	6.00	10.00	2.00	0.00	0.00
	Smallest 50	8.00 [L]	77.00 [L]	2.00	9.00	4.00	0.00	0.00
Germany	All firms	10.37	64.62	6.30	3.65	8.31	3.37	3.37
	Largest 20	45.00 [M, S]	15.00 [M, S]	10.00	12.50	0.00	5.00	12.50 [S]
	Middle 50	10.00 [L]	75.00 [L]	2.00	3.00	7.00	1.00	2.00
	Smallest 50	14.00 [L]	81.00 [L]	3.00	2.00	0.00	0.00	0.00 [L]
Italy	All firms	14.90	53.37	10.34	7.21	12.26	1.20	0.72
	Largest 20	35.00 [M,]	20.00 [M, S]	25.00	15.00	0.00	0.00	5.00
	Middle 50	8.00 [L]	63.00 [L]	6.00	14.00	6.00	2.00	1.00
	Smallest 50	14.00	67.00 [L]	6.00	10.00	2.00	1.00	0.00
Spain	All firms	26.42	55.79	4.11	1.64	11.51	0.47	0.05
	Largest 20	45.00	20.83 [S]	10.00	15.00	9.17	0.00	0.00
	Middle 50	34.00	46.00	8.00	10.00	2.00	0.00	0.00
	Smallest 50	36.00	56.00 [L]	2.00	6.00	0.00	0.00	0.00
UK	All firms	68.09	19.88	0.09	0.99	9.81	1.10	0.03
	Largest 20	90.00 [S]	5.00 [S]	0.00	5.00	0.00	0.00	0.00
	Middle 50	72.00	18.00 [S]	0.00	8.00	2.00	0.00	0.00
	Smallest 50	48.00 [L]	42.00 [L, M]	0.00	10.00	0.00	0.00	0.00

[L, M, S]: Significantly different from the Largest 20, the Middle 50, and the Smallest 50 group at the 1 percent level, respectively.

Table 5: How concentrated is family control?

Newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) in France, Germany, Italy, Spain, and the UK are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. The Average Number of Firms per Family refers only to firms in the sample. To avoid discrepancies in the cross-country comparison due to different sample coverage, we have scaled down the control holdings of each family group in the last four columns by assuming that the firms missing from our sample are not controlled by any of the largest fifteen families.

Country	Average Number of Firms per Family	percent of Total Value of Listed Corporate Assets that Families Control			
		Top 1 Family	Top 5 Families	Top 10 Families	Top 15 Families
France	1.18	5.94	22.04	29.18	33.80
Germany	1.24 [UK]	5.43	15.66	21.29	25.01
Italy	1.46 [UK]	10.40	16.83	20.18	21.92
Spain	1.19	1.66	6.97	10.92	13.48
UK	1.11 [G, I]	1.10	3.79	4.85	5.46

[F, G, I, S, UK]: Significantly different from France, Germany, Italy, Spain, and the UK at the 1% level, respectively.

Table 6: Means of enhancing control in Europe (full samples, percentage of total)

The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. *Own=20%Con* is the average minimum percent of the book value of equity required to control 20 percent of the vote; *Dual Class Shares (%)* is the proportion of companies with dual class shares outstanding; *Pyramids with Ultimate Owners* (when companies are not widely-held) equals 1 if the controlling owner exercises control through at least one publicly-traded company, and 0 otherwise; *Cross-Holdings* equals 1 if the company has a controlling shareholder and owns any amount of shares in its controlling shareholder or in another company in its chain of control, and 0 otherwise; *Reciprocal Holdings* equals 1 if the company (directly or indirectly) controls its controlling shareholder, and 0 otherwise; *Controlling Owner Alone* equals 1 if a second owner does not exist who controls at least 10 percent of the stock, and 0 otherwise; *Management* equals 1 if the CEO, Board Chairman or Vice-Chairman are from the controlling family, and 0 otherwise.

Country	N. of Companies in the Sample	Own=20%Con	Dual Class Shares (%)	Pyramids with Ultimate Owners	Cross Holdings	Reciprocal Holdings	Controlling Owner Alone	Management
				10 Percent Cut-Off				
France	607	19.93 [G, I, S, UK]	2.64 [G, I, S, UK]	17.75 [G, I]	2.99 [G, I, S]	0.00 [G]	64.85 [S, UK]	61.99
Germany	704	18.83 [F, S, UK]	17.61 [F, I, S, UK]	24.22 [F, S, UK]	6.84 [F]	2.97 [F, S, UK]	58.40 [S]	60.40
Italy	208	18.38 [F, S, UK]	41.35 [F, G, S, UK]	26.90 [F, S, UK]	11.68 [F, UK]	1.02	56.35 [S]	70.24
Spain	632	20.00 [F, G, I, UK]	0.16 [F, G, I, UK]	14.59 [G, I]	6.94 [F]	0.18 [G]	43.77 [F, G, I, UK]	63.64
UK	1,589	19.19 [F, G, I, S]	24.61 [F, G, I, S]	16.20 [G, I]	6.22 [I]	0.17 [G]	53.20 [F, S]	71.53
Total	3,740	19.34	16.52	18.56	6.24	0.79	54.91	66.04
				20 Percent Cut-Off				
France	607	19.93 [G, I, S, UK]	2.64 [G, I, S, UK]	14.94 [G, UK]	3.07 [G, I]	0.00 [G]	64.75 [S, UK]	62.20 [UK]
Germany	704	18.83 [F, S, UK]	17.61 [F, I, S, UK]	21.71 [F, S, UK]	6.97 [F]	2.69 [F, S, UK]	59.90 [S, UK]	61.46 [UK]
Italy	208	18.38 [F, S, UK]	41.35 [F, G, S, UK]	22.22 [UK]	8.47 [F]	1.13	58.76 [S, UK]	70.00
Spain	632	20.00 [F, G, I, UK]	0.16 [F, G, I, UK]	14.19 [G, UK]	6.45	0.22 [G]	44.30 [F, G, I]	62.50
UK	1,589	19.19 [F, G, I, UK]	24.61 [F, G, I, S]	4.93 [F, G, I, S]	6.31	0.00 [G]	46.96 [F, G, I]	76.22 [G,F]
Total	3,740	19.34	16.52	15. 01	5.95	0.87	54.69	66.78

[F, G, I, S, UK]: Significantly different from France, Germany, Italy, Spain, and the UK at the 1 percent level, respectively.

Table 7: Means of enhancing control in Europe (data are split according to the type of the largest controlling owner; 10 percent cut-off point)

The newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. *Own=20%Con* is the average minimum percent of the book value of equity required to control 20 percent of the vote; *Dual Class Shares (%)* is the proportion of companies with dual class shares outstanding; *Pyramids with Ultimate Owners* (when companies are not widely-held) equals 1 if the controlling owner exercises control through at least one publicly-traded company, and 0 otherwise; *Cross-Holdings* equals 1 if the company has a controlling shareholder and owns any amount of shares in its controlling shareholder or in another company in its chain of control, and 0 otherwise; *Controlling Owner Alone* equals 1 if a second owner who controls at least 10 percent of the stock does not exist, and 0 otherwise.

Country	Own=20%Con	Dual Class Shares (%)	Pyramids with Ultimate Owners	Cross Holdings	Controlling Owner Alone
Panel A: Family-Controlled Companies					
France	19.96 [G, I, UK]	1.61 [G, I, S, UK]	16.13	3.23	63.82 [S, UK]
Germany	18.79 [F, S, UK]	17.62 [F, I, S]	17.03	2.77 [S]	66.73 [S, UK]
Italy	18.39 [G, S, UK]	40.46 [F, G, S, UK]	24.43 [S, UK]	6.87	59.54 [S]
Spain	20.00 [G, I, UK]	0.00 [F, G, I, UK]	11.82 [I]	6.38 [G]	38.77 [F, G, I, UK]
UK	19.26 [F, G, I, S]	21.06 [F, I, S]	13.10 [I]	3.36	52.21 [F, G, S]
Total	19.39	13.02	15.16	4.03	55.93
Panel B: State-Controlled Companies					
France	19.93 [I]	3.23 [I]	35.48	3.23 [UK]	74.19 [G]
Germany	19.61	8.89 [I]	44.44	4.44 [UK]	20.00 [F, I, S]
Italy	18.50 [F, S]	40.91 [F, G, S]	27.27	9.09	77.27 [G]
Spain	20.00 [I]	0.00 [I]	57.69	3.85	88.46 [G, UK]
UK	20.00	0.00	20.00	40.00 [F, G]	20.00 [S]
Total	19.59	10.85	41.09	6.20	56.59
Panel C: Companies Controlled by a Widely-Held Financial Company					
France	19.95 [G, I, UK]	3.49 [G, I, UK]	18.60 [G]	2.33 [G, I]	61.63 [G]
Germany	18.86 [F, S]	20.55 [F, S]	47.95 [F, S, UK]	38.36 [F, S, UK]	31.51 [F, S, UK]
Italy	18.52 [F, S]	41.18 [F, S]	38.24 [UK]	29.41 [F, UK]	38.21
Spain	20.00 [G, I, UK]	1.01 [G, I, UK]	17.17 [G]	11.11 [G]	51.52 [G]
UK	19.02 [F, S]	28.25 [F, S]	10.37 [G, I]	9.76 [G, I]	55.28 [G]
Total	19.21	21.94	16.84	12.63	52.55

[F, G, I, S, UK]: Significantly different from France, Germany, Italy, Spain, and the UK at the 1 percent level, respectively.

Table 8: Concentration of cash-flow and control rights in European corporations (Largest controlling holder)

The newly-assembled data for 3,529 publicly-traded corporations (including both financial institutions and non-financial institutions) where the largest controlling owner has at least 5 percent of voting rights are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997.

A. Cash-Flow Rights						
Country	Number of Corporations	Mean	Standard Deviation	Median	1st Quartile	3rd Quartile
France	604	46.68 [I, UK]	26.69	48.98 [I, S, UK]	24.69	66.00
Germany	690	48.54 [I, S, UK]	31.46	48.89 [I, S, UK]	21.05	75.00
Italy	204	38.33 [F, G, UK]	25.13	39.68 [F, G, UK]	16.61	56.83
Spain	610	42.72 [G, UK]	30.46	32.55 [F, G, UK]	18.50	64.91
UK	1,421	18.65 [F, G, I, S]	15.59	13.80 [F, G, I, S]	8.25	24.05
Total	3,529	34.60	28.06	25.00	11.30	51.25
B. Control Rights						
Country	Number of Corporations	Mean	Standard Deviation	Median	1st Quartile	3rd Quartile
France	604	48.32 [G, UK]	25.55	50.00 [G, S, UK]	28.70	66.00
Germany	690	54.50 [F, I, S, UK]	28.70	50.76 [F, I, S, UK]	27.00	76.91
Italy	204	48.26 [G, UK]	21.00	50.11 [G, S, UK]	31.39	63.15
Spain	610	44.24 [G, UK]	29.59	35.73 [F, G, I, UK]	20.00	65.03
UK	1,421	20.83 [F, G, I, S]	15.19	15.50 [F, G, I, S]	10.99	25.70
Total	3,529	37.75	27.29	28.70	14.67	54.04
C. Ratio of Cash-Flow to Control Rights						
Country	Number of Corporations	Mean	Standard Deviation	Median	1st Quartile	3rd Quartile
France	604	0.930 [G, I, UK]	0.189	1.000 [G, I, UK]	1.000	1.000
Germany	690	0.842 [F, I, S]	0.267	1.000 [F, I, S]	0.709	1.000
Italy	204	0.743 [F, G, S, UK]	0.337	0.971 [F, G, S, UK]	0.548	1.000
Spain	610	0.941 [G, I, UK]	0.178	1.000 [G, I, UK]	1.000	1.000
UK	1,421	0.863 [F, I, S]	0.268	1.000 [F, I, S]	0.833	1.000
Total	3,529	0.877	0.252	1.000	0.900	1.000

[F, G, I, S, UK]: Significantly different from France, Germany, Italy, Spain, and the UK at the 1 percent level, respectively (tests are run for means and medians).

Table 9: Determinants of ownership structure. Regression results.

Cash Flow (O) Rights represents the ultimate ownership stake held by the largest controlling shareholder (for companies with an ultimate controlling owner); *Control Rights (C)* is the percentage of voting rights controlled by the largest controlling shareholder; *Ownership to Control Rights Ratio* (O/C) is the ratio of Cash Flow Rights to Control Rights; *Ln(sales)* is the natural log of end-1996 sales; *Europe* dummy = 1 if the corporation is from Western Europe, = 0 if it is from East Asia; *Low Protection* dummy = 1 if the company is from a country with poor shareholder protection, and 0 otherwise (Source: La Porta *et al.*, 1997 and 1999a); *Civil Law* dummy = 1 if the company law or commercial code of the country originates from Roman law, and 0 otherwise (Source: La Porta *et al.*, 1997 and 1999a); *GSDecile* is the rank decile for Growth of Sales, i.e., the 5-year average growth rate of net sales over 1992-1996. We control for industry by including *Petroleum-Other* sector-dummies, defined following Campbell's (1986) broad industry classification. The coefficients and significance of these variables are not reported for space reasons. Corporations are partitioned into ten equal-size groups in ascending order of Growth of Sales and ranked 1 – 10 (Source: Worldscope). Financial companies are excluded from the analysis.

	Cash Flow (O) Rights	*Control Rights (C)*	*Ownership to Control Rights Ratio*
Ln(sales)	-1.75 ***	-1.62 ***	-0.02 ***
	(-9.18)	(-8.80)	(-6.05)
Europe	12.63 ***	12.23 ***	0.05 ***
	(16.00)	(16.06)	(4.00)
Low Protection	21.93 ***	23.01 ***	0.18 ***
	(24.40)	(26.51)	(12.91)
Civil Law	1.69 *	1.47	-0.11 ***
	(1.74)	(1.57)	(-7.16)
GSDecile	-0.39 ***	-0.45 ***	0.008 ***
	(-3.04)	(-3.62)	(3.85)
R^2 adjusted	0.674	0.734	0.879
F	407.44 ***	543.51 ***	1381.0 ***
Number of observations	3336	3336	3221

***, **, *: Significantly different from zero at the 1%, 5%, and 10% level, respectively.

Table 10: Regressions of excess value on ultimate ownership structure variables and firm diversification

The table presents ordinary least squares results. The dependent variable, *excess value*, is computed as the natural logarithm of the firm's actual capitalization to its imputed capitalization. *Cash Flow (O) Rights* is the ultimate ownership stake held by the largest controlling shareholder (for companies with ultimate controlling owner at the 10 percent cut-off level); *Control Rights (C)* is the percentage of voting rights controlled by the largest controlling shareholder; *Ownership to Control Rights Ratio (O/C)* is the ratio of Cash Flow Rights to Control Rights; *Multiple owners* is an indicator variable which equals 1 if there exists a second owner who controls at least 10 percent of the stock, and 0 otherwise; *Diversification dummy* equals 1 if the firm operates in two or more segments (two digits SIC codes), and 0 otherwise; *CES* is the ratio of capital expenditures over sales; *LN(TA)* is the natural logarithm of the firm's total assets. Companies whose main business is in the financial industry (SIC 60-69) are excluded from the analysis. Extreme excess values (actual to imputed value < 0.25 or > 4) are also excluded. Regressions (1)-(8) are run including country dummies. Regression (7) is run for companies with a single controlling owner; Regression (8) is run for companies with multiple controlling owners. T-statistics are reported in brackets below the coefficients.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	All countries						Alone	Multiple	France	Germany	Italy	Spain	UK
Intercept	-0.246**	-0.259**	-0.154	-0.211**	-0.262**	-0.162	-0.199	-0.009	0.124	0.111	-0.168	2.052	-0.502**
	(-2.07)	(-2.18)	(-1.15)	(-1.86)	(-2.56)	(-1.20)	(-1.07)	(-0.04)	(0.34)	(0.46)	(-0.22)	(1.23)	(-2.37)
O	0.001					0.001	0.002**	-0.0002	0.002	0.001	0.006	-0.005	0.002
	(1.30)					(1.60)	(2.01)	(-0.12)	(1.14)	(0.89)	(0.96)	(-0.95)	(0.93)
C		0.001											
		(1.63)											
O/C			-0.040			-0.107	-0.188	-0.028	-0.110	-0.111	-0.161	-1.481**	-0.078
			(-0.59)			(-1.40)	(-1.63)	(-0.25)	(-0.42)	(-0.81)	(-0.43)	(-2.31)	(-0.71)
Multiple owners				-0.032		-0.022			0.003	-0.029	-0.088	-0.231	-0.012
				(-0.95)		(-0.63)			(0.05)	(-0.47)	(-0.48)	(-0.93)	(-0.23)
DIVDUMMY	-0.211***	-0.211***	-0.211***	-0.211***	-0.170***	-0.211***	-0.205***	-0.212***	-0.446***	0.115*	-0.608***	-0.275	-0.250***
	(-6.06)	(-6.06)	(-6.05)	(-6.05)	(-5.25)	(-6.05)	(-4.56)	(-3.84)	(-5.86)	(1.88)	(-3.73)	(-1.03)	(-4.67)
CES	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.002***	0.001**	0.003**	0.001**	0.005	0.005	0.001**
	(3.72)	(3.72)	(3.72)	(3.72)	(3.91)	(3.74)	(3.10)	(2.09)	(2.03)	(2.37)	(0.93)	(0.30)	(2.22)
LN(TA)	0.017*	0.017*	0.013	0.014	0.021**	0.015	0.024**	-0.001	-0.004	-0.016	-0.001	-0.068	0.043***
	(1.73)	(1.77)	(1.38)	(1.47)	(2.53)	(1.56)	(1.97)	(-0.06)	(-0.20)	(-1.04)	(-0.02)	(-0.60)	(2.61)
R^2 adjusted	0.066	0.066	0.065	0.065	0.058	0.066	0.071	0.052	0.107	0.013	0.191	0.206	0.060
F	11.301	11.432	11.121	11.196	12.823	9.275	6.853	3.909	7.024	1.780	2.855	2.301	5.698
P-value of F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102	0.020	0.068	0.000

***, **, *: Significantly different from zero at the 1 percent, 5 percent and 10 percent levels, respectively.

Table 11: Correlation between the number of controlling shareholders, and the cash-flow to control rights ratios

Newly-assembled data for 3,740 publicly-traded corporations (including both financial institutions and non-financial institutions) in France, Germany, Italy, Spain, and the UK are collected from the *French Company Handbook* (1997) for France, *Wer gehört zu wem* (1997) for Germany, *Il Bollettino CONSOB* (1997) and *Il Taccuino dell'Azionista* (1997) for Italy, the *Comision Nacional del Mercado de Valores*' files (1997) for Spain, and *The London Stock Exchange Yearbook* (1997) for the UK. Data are supplemented with information from *Datastream*, *Extel Financial* and *Worldscope*. In all cases, but the Spanish, we collect the ownership structure data as of December 1996 or the end of the 1996 accounting year. Spanish data refer to the end of 1997. The *Number of Controlling Shareholders* (when companies are not widely-held) is the total number of owners at the x percent cut-off level; the *Ratio of Cash-Flow to Control Rights* (see Table 5) is the ratio of the cash-flow rights of the largest controlling owner to the voting rights controlled by the same owner (when companies are not widely-held); the *Correlation Coefficient* is computed between the number of controlling shareholders and the ratio of cash-flow to control rights.

Country	Number of Controlling Shareholders (N)	Ratio of Cash-Flow to Control Rights	Correlation Coefficient
10 Percent Cut-Off			
France	$1.48^{G, S, UK}$	$0.951^{G, I, UK}$	-0.013
Germany	$2.13^{F, I, UK}$	$0.847^{F, I, S}$	-0.486^{***}
Italy	$1.64^{G, S}$	$0.748^{F, G, S, UK}$	-0.133^{*}
Spain	$2.18^{F, I, UK}$	$0.945^{G, I, UK}$	-0.306^{***}
UK	$1.70^{F, G, S}$	$0.859^{F, I, S}$	-0.164^{***}
All	1.83	0.881	-0.3095^{***}
20 Percent Cut-Off			
France	$1.15^{G, S}$	$0.964^{G, I, UK}$	-0.087^{**}
Germany	$1.31^{F, S, UK}$	$0.858^{F, I, S, UK}$	-0.503^{***}
Italy	1.18^{S}	$0.759^{F, G, S, UK}$	-0.042
Spain	$1.48^{F, G, I, UK}$	$0.956^{G, I, UK}$	-0.329^{***}
UK	$1.14^{G, S}$	$0.929^{F, G, I, S}$	-0.174^{***}
All	1.26	0.914	-0.084^{***}

$^{F, G, I, S, UK}$: Significantly different from France, Germany, Italy, Spain, and the UK at the 1% level, respectively.
$^{***}, ^{**}, ^{*}$: Significantly different from zero at the 1 percent, 5 percent and 10 percent levels, respectively.

Figure 1: The Agnelli family group (Italy)

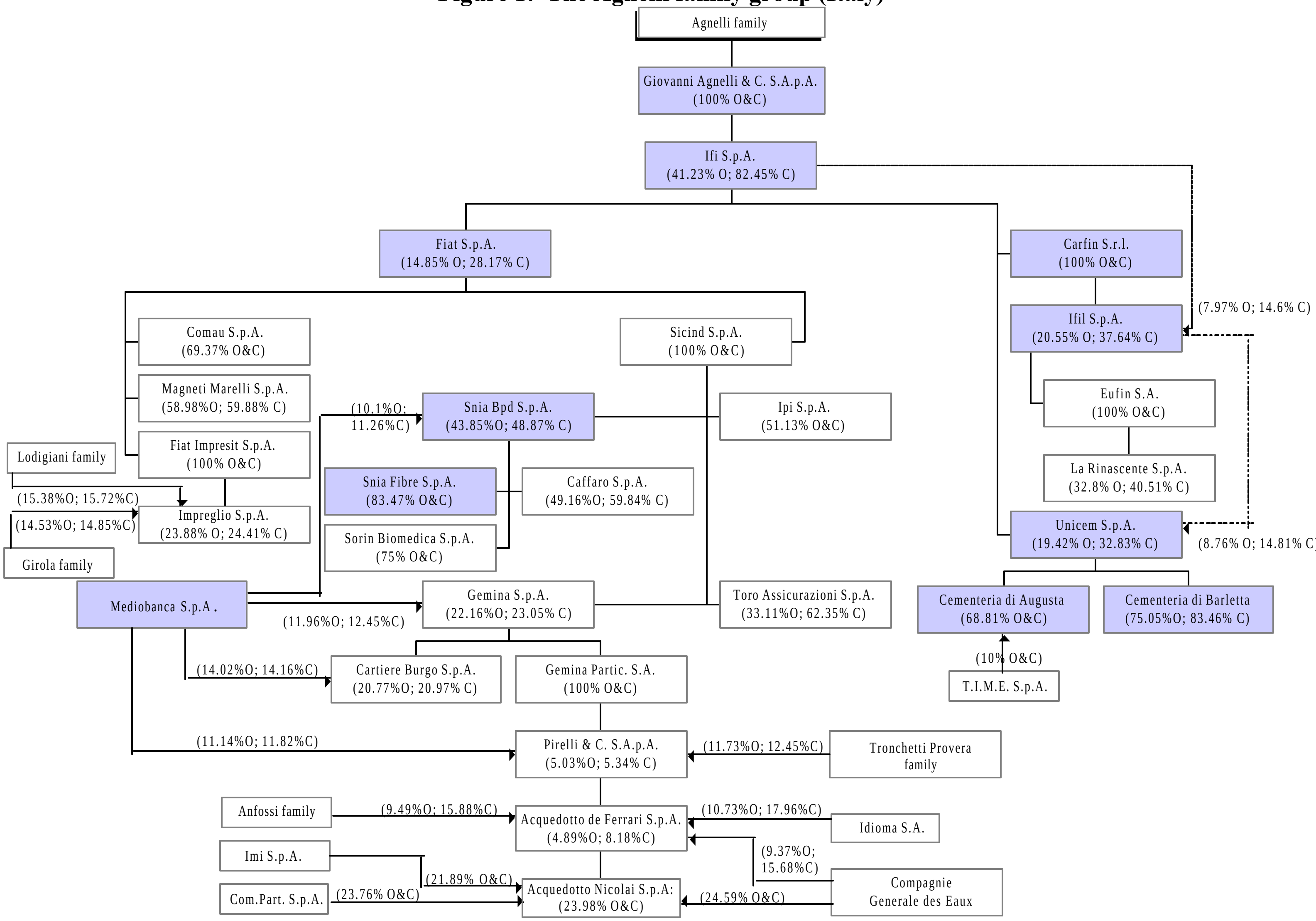


Figure 2: The Deutsche Bank group (Germany)

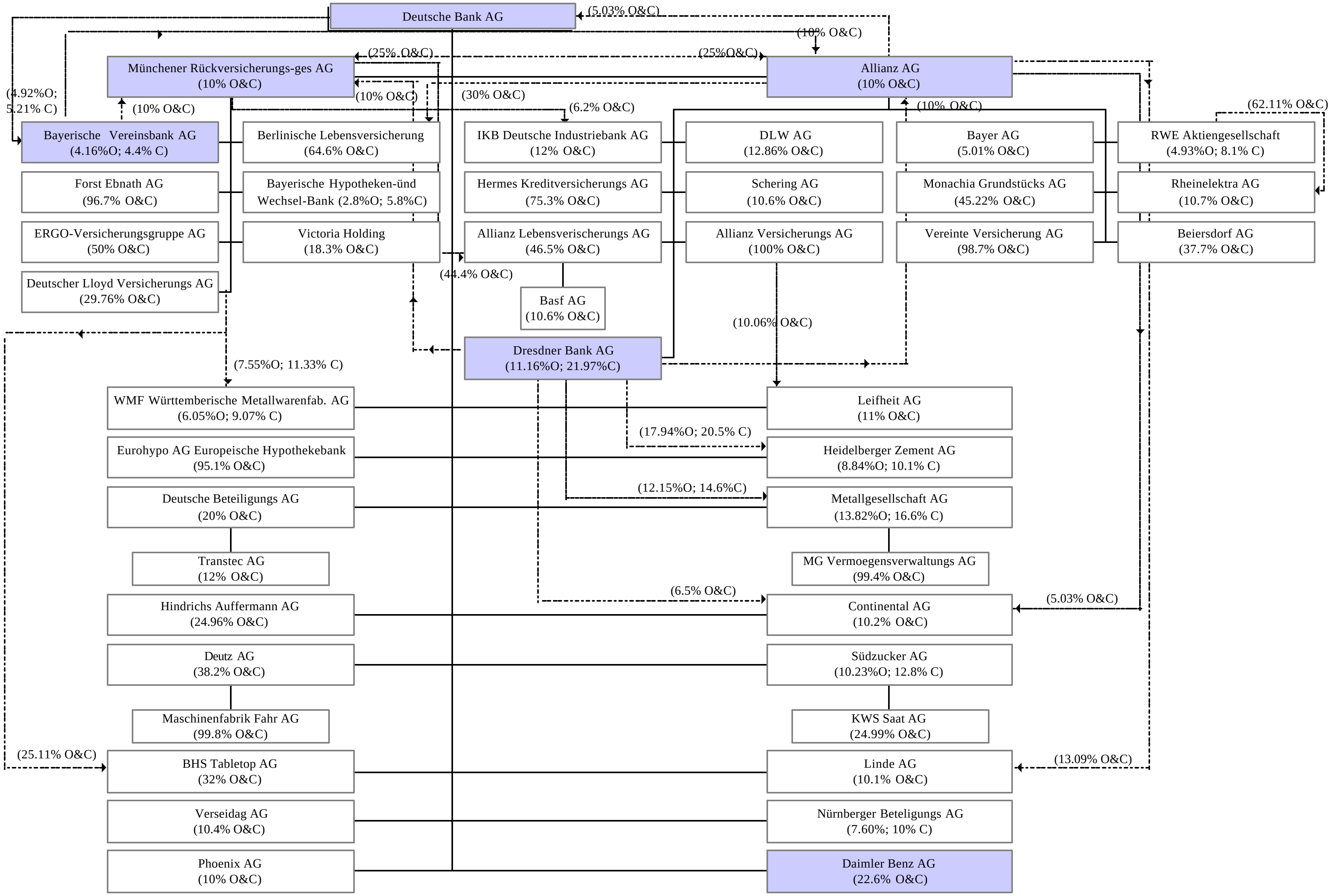
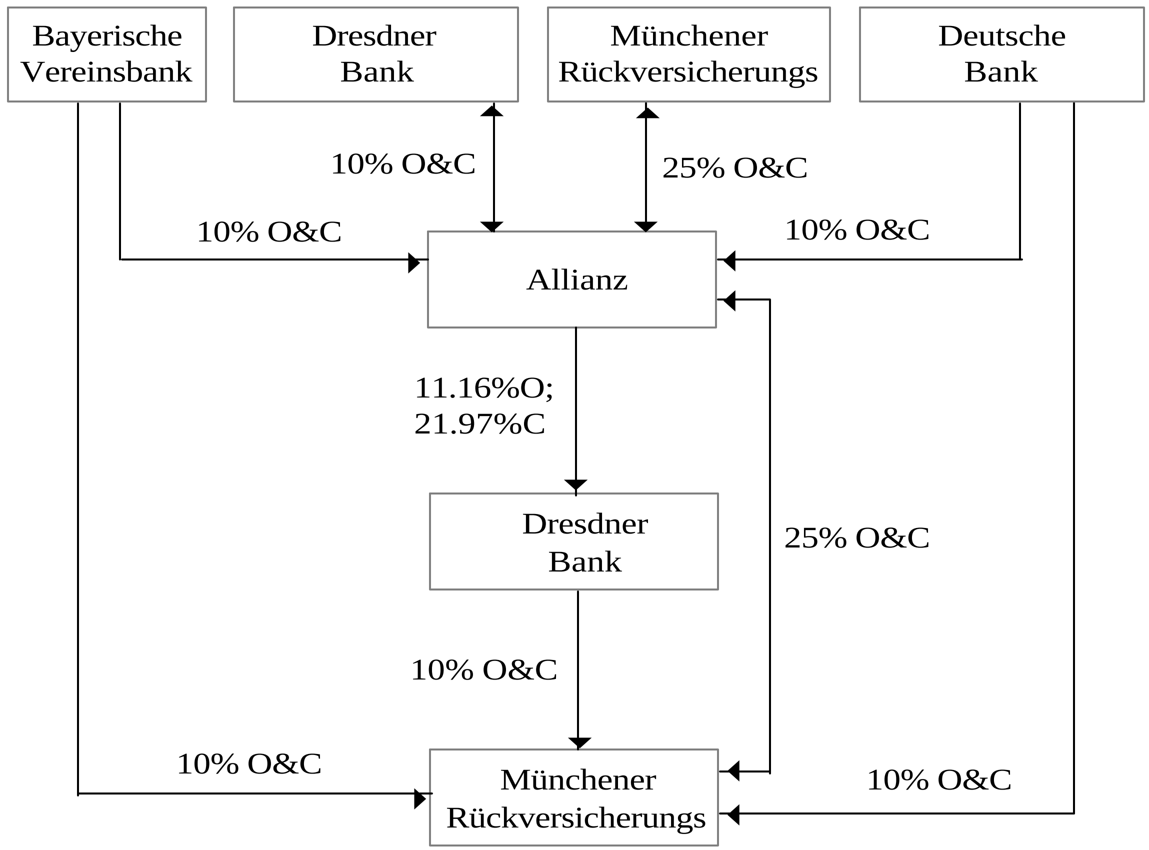


Figure 3: The ultimate ownership of Allianz, Dresdner Bank, and Münchener Rückversicherungs (Germany)



Appendix A: Summary of empirical studies

Cash Flow (O) Rights represents the ultimate ownership stake held by the largest controlling shareholder (for companies with an ultimate controlling owner); *Control Rights (C)* is the percentage of voting rights controlled by the largest controlling shareholder; *Ownership to Control Rights Ratio* is the ratio of Cash Flow Rights to Control Rights; *Own=20%Con* is the average minimum percent of the book value of common equity required to control 20 percent of the vote; *Pyramids with Ultimate Owners* (when companies are not widely-held) equals 1 if the controlling owner exercises control through at least one publicly-traded company, and 0 otherwise; *Cross-Holdings* equals 1 if the company has a controlling shareholder and owns any amount of shares in its controlling shareholder or in another company in its chain of control, and 0 otherwise; *Reciprocal Holdings* equals 1 if the company (directly or indirectly) controls its controlling shareholder, and 0 otherwise; *Controlling Owner Alone* equals 1 if a second owner does not exist who controls at least 10 percent of the stock, and 0 otherwise; *Management* equals 1 if the CEO, Board Chairman or Vice-Chairman are from the controlling family, and 0 otherwise.

Authors	Countries Analyzed	Sample Size	Sample Period	Measures of Separation of Ownership and Control (10 percent cut-off level)		
				Cash Flow (O) Rights (Largest Owner)	Control Rights (C) (Largest Owner)	Ownership to Control Rights Ratio
La Porta, Lopez-de-Silanes and Shleifer (1999a)	27 countries, including ours	Total: 870 non-financial firms, including the largest 20, and a sample of 10 medium-size firms for each country	End 1995	n.a.	n.a.	n.a.
Claessens, Djankov and Lang (1999)	9 countries: Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand	Total: 2,980 financial and non-financial firms Respectively: 330, 178, 1240, 345, 238, 120, 221, 141, 167	End 1996	15.70	19.77	0.746
This study	5 countries: France, Germany, Italy, Spain, and the UK	Total: 3,740 financial and non-financial firms Respectively: 607, 704, 208, 632, 1589	End 1996/1997	34.60	37.75	0.877

Appendix A: Summary of empirical studies (continued)

Authors	Means for Enhancing Control (20 percent cut-off level)							Type of ultimate owners (20 percent cut-off level)					
	Own = 20%Con	Dual Class Shares (%)	Pyramids with Ultimate Owners	Cross Holdings	Reciprocal Holdings	Controlling Owner Alone	Management	Widely Held Firms	Family Controlled Firms	State Controlled Firms	Companies Controlled by a Widely Held Financial Institution	Companies Controlled by a Widely Held Corporation	Other
La Porta, Lopez-de-Silanes and Shleifer (1999a) *	18.56	n.a.	25.75	3.15	n.a.	75.48	68.59	36.48	30.00	18.33	5.00	5.00	5.19
Claessens, Djankov and Lang (1999)	19.76	n.a.	38.7	10.1	n.a.	67.8	57.1	42.89	38.30	4.64	5.00	9.16	0.00
This study	19.34	16.52	15.01	5.95	0.87	54.69	66.78	38.34	43.88	3.33	10.21	2.16	2.08

* Results for the largest twenty firms