Evolution of Family Capitalism:

A Comparative Study of France, Germany, Italy and the UK

Julian Franks, Colin Mayer, Paolo Volpin and Hannes F. Wagner

November 2008

Evolution of Family Capitalism:

A Comparative Study of France, Germany, Italy and the UK

ABSTRACT

Using data for France, Germany, Italy and the U.K., this paper analyzes the trade-off between family control and dispersed ownership along three dimensions. First, we study the evolution of ownership of individual companies over the period 1996-2006. We find that ownership of family firms is more stable in Continental Europe than in the U.K. Family firms in the U.K. follow a life-cycle and evolve into widely held companies, while Continental European ones do not. Second, we examine how the trade-off applies to publicly traded firms on the one hand and to private firms on the other. We find that family control is less common in the U.K. than in the other three countries not only among listed companies, which is well known, but also among private companies. Third, we look at the systematic differences in ownership structures across countries. We find a dramatic increase in widely held ownership among listed firms in Continental Europe that coincides with a general trend towards outsider system regulation,

JEL Classification: G32, G34

1. Introduction

This paper studies the evolution of the ownership structure of a large sample of private and listed firms from France, Germany, Italy and the UK over the period 1996-2006. Our goal is to analyze the transition from family control to dispersed ownership over time and across countries.

According to the traditional view, which can be traced back to Berle and Means (1932) and Chandler (1977), firms start as family-controlled entrepreneurial entities, raise external capital to grow, and as a result dilute family ownership. This transition involves the firm becoming a public company with diffused ownership, run by a professional manager and subject to the market for corporate control.

We conjecture that the likelihood and speed of transition from family firm to public corporation varies across countries and industries. The controlling family may be more likely to dilute control in countries where the value of the private benefits of control are lower, where new equity is less expensive and the market for corporate control is more efficient. Dyck and Zingales (2004) show that the UK has the lowest private benefits of control of the four countries with Italy being the highest. La Porta et al, (1997) suggests that this reflects differences between UK and Continental Europe in terms of investor protection and stock market development. Consistent with this, Rossi and Volpin (2004) show that the market for corporate control is more effective in the UK than in Continental Europe. Hence, we expect the U.K. to conform to this traditional view and the three Continental European countries to depart from it.

Our results confirm this prediction. First, we find that among the largest firms, measured by sales turnover in 1996, the majority of UK companies are stock exchange listed, compared with an average of less than 19% in the three other countries, illustrating the very different importance of stock markets in the economy of the four countries. Family controlled blocks are the most important category of ownership in the three Continental countries, as high as 68% in Italy and 48% in Germany. In contrast, it is only 18% in UK. The counterpart to this fact is that widely held companies are dominant in the UK at 66% whereas they are less than 15% on average in all of the other three countries.

Family control in the UK is the least important by number among the four countries, among both private and listed companies. In contrast, in France, Germany and Italy family companies are the dominant form of ownership, and they are of similar size to non family companies. In contrast, UK family firms are smaller in size than non family companies and have a lower chance of survival in that form; only about 38% of U.K. family firms survive as

family firms over the decade from 1996 to 2006, compared with 62% in Germany and almost 78% in Italy.

Villalonga and Amit (2006) report for the U.S. that for firms in the S&P 500 in the U.S. 12% are family controlled, where control is defined at the 20% threshold. Claessens, Djankov, Fan and Lang (2000) report family ownership for listed firms in Asian countries in 1996 with a range of 9.7% for Japan and 66.7% for Hong Kong. Thus, family ownership in France, Germany and Italy is at the high end internationally and family ownership in the U.K. is among the lowest in the world, and lower than in the U.S. and Japan. There is as yet no benchmark for private firms, although we suspect that the UK will also rank at the low end of family ownership.

Second, we find that ownership changes across age cohorts and countries. Firm age is negatively correlated with the probability of family ownership in the UK but not in Continental Europe. The older the firm the less likely it is to be family owned in the U.K., whereas there is no age effect in the other three countries. Thus, among family firms the probability of observing second- or higher generation family ownership is lower in the UK than elsewhere. These differences in family firms are largely driven by the market for corporate control which is very active in the U.K. and less so in the other countries. We find that family firms are less inclined to sell out when the founding family remains in control, where the controlling block is concentrated among one branch of the family and the initial voting block is large.

As firms need more external capital to grow, a cross-industry prediction is that the transition from family firms to widely-held companies is faster in sectors that depend more on external finance. We find that there is significant industry concentration among family companies. 49% of all family companies are concentrated in five of the 48 Fama French industries: wholesale, business services, retail, financials and household products. However, there are differences in industry concentrations across countries. For example, in Italy only 32% are in the top five industries compared with 65% in France, 56% in Germany and 44% in the U.K. Under the traditional view we would expect family firms to be more common in sectors that depend less on external finance. However, using the framework of Rajan and Zingales (1998), we find no support for the hypothesis that the concentration of family ownership is explained by industry specific needs for external financing. Thus, there is no evidence that external dependence explains the differences in family ownership across the four countries.

These results are based upon the construction of a unique dataset with ownership information on both private and listed firms. This dataset consists of the largest 1,000 private and listed companies by sales turnover in each of the four countries in two years, at the end of 1996 and 2006. Virtually all previous studies have focused on listed firms only.[1] The importance of private companies is striking. For example, among the largest 4,000 firms in our four countries more than two thirds are private.[2] Moreover, representation of family firms among listed companies may be considerably lower than in private companies because of a wish by families to retain private benefits of control. As a result, an analysis of listed companies only cannot adequately and consistently capture the importance of family ownership in the economy.

We significantly extend previous approaches for identifying *ultimate* controlling shareholders. Previous research has highlighted the importance of differentiating between direct shareholdings and ultimate control, where the latter may have to be traced through multiple control layers, particularly in Continental Europe. We trace ultimate controlling shareholders for all companies in our sample, across both countries and firms. In particular, we trace control through ownership layers and across countries *independently* of whether the *controlled* company or any *controlling* company is public or private.

Our methodology refinement is important because it has considerable impact on the characteristics of the final data set, which consists of both listed and unlisted firms. Further, even when we analyze listed firms only, our refinement leads to very different results from *prior* studies of listed firms. Specifically, we benchmark our classification of family firms against the widely-used dataset in Faccio and Lang (2002) [henceforth, F-L]. We find that 39% of family firms according to F-L are not family controlled according to our methodology. 28% of the 39% is attributable to misclassifications related to ultimate ownership. 4.3% is due to firms that were not listed in 1996 being described as being listed and 7.4% is where the ultimate owner was assumed by F-L but where we cannot be sure of the identity of the ultimate owner. For the 28% of misclassifications we find that almost two thirds are due to the incorrect assumption that firms which are controlled by an unlisted

---

[1] For example, La Porta, Lopez de Silanes and Shleifer (1999) sample the largest publicly traded companies in 27 economies, Faccio and Lang (2002) sample 5,232 publicly traded companies in Western Europe and Villalonga and Amit (2006) include all 500 of the Fortune 500 corporations. One exception is the study by Bloom and Van Reenen (2005), which includes 732 manufacturing firms in the US, France, Germany and the UK, of which 442 are private firms from France, Germany and the UK. A second exception is the study by Almeida, Park, Subrahmanyam and Wolfenzon (2008) which covers both private and listed firms in Korean chaebol groups.

[2] Due to high firm turnover over the decade caused by mergers and acquisitions, liquidations, dissolutions and other reasons we analyze a total of over 6,500 individual firms.

company are family owned. Instead we find that unlisted companies as controlling shareholders are often not investment vehicles of [ultimate] family shareholders.[3] As a consequence our methodology provides significantly lower estimates of the proportion of family firms among listed firms than F-L.

In a comparison of the landscape of ownership between 1996 and 2006, we find that another trend is the growth of widely held listed firms in the three Continental countries. We show that one of the stylized facts of corporate finance has significantly diminished over the decade. Ten years ago the typical company had a large controlling shareholder. This is much less so today. In 2006, in Germany the most frequent form of ownership is widely held; the proportion has increased from 26% to 52%. A similar trend has occurred in France and Italy, rising from 21% to 36% and from 2.1% to 24%, respectively. About one third of this increase is matched by a decline in family controlled companies in all three countries. The rest is largely explained by the unwinding of majority blocks of widely held parent firms as well as privatisations of state-owned companies. This pattern suggests that although family ownership continues to be an important form of ownership, there is a marked decline accompanied by a common movement across the large European capital markets to the widely held ownership form. In contrast, the proportion of widely held listed companies in the UK remained virtually unchanged.

We aggregate a number of variables into a binary classification of the U.K. versus other countries. In comparison with the U.K, over the decade, investor protection is relatively weaker in France, Germany and Italy, stock markets are relatively smaller, corruption is relatively higher, the political system is less democratic, and the market for corporate control is less active than in outsider countries.

Our empirical findings are consistent with the predictions of the insider versus outsider view. We find lower prevalence of family firms and greater prevalence of widely held both among listed and private companies in the UK than in Continental Europe. However, over the decade we show that Continental Europe has acquired characteristics of an outsider system, for instance, because of improvement in investor protection, stock market development and changes in taxation. This was associated with a decrease in family firms in 2006 relative to 1996 and an increase in widely held companies.

---

[3] One reason for differences in classification could be that the threshold for control is 25% of voting rights throughout our paper and 20% in F-L. We found only a few listed companies where the controlling family owns between 20% and 25% of voting rights. To make sure our findings with F-L do not differ because of these threshold differences, we classify those firms as family controlled.

In terms of performance, we find that corporate profitability is higher in outsider systems (the UK) than in insider systems (Continental Europe). This is consistent with the view that sub optimal ownership patterns may persist over time in insider systems because of less active markets for corporate control. We also find no consistent difference in profitability between family and non-family companies in the UK; while family are more profitable than non-family ones in Continental Europe.

Section 2 reviews the existing literature and develops the testable hypotheses. The dataset and empirical methodology are described in Section 3. Section 4 analyzes the evolution of ownership over the decade and tests the hypotheses on the life cycle of companies and the evolution of ownership. The focus in Section 5 turns to a sample of family controlled listed companies, in order to explore the role of family in family-controlled firms. In Section 6, we compare the top 1,000 companies in 1996 (for each country) with the top 1,000 in 2006 to investigate if there were systemic changes over the decade in the four countries and discuss the relative performance of family firms across countries. Section 7 concludes.

2. Overview of the literature and development of testable hypotheses

Most of the empirical literature has focused on comparing the performance of family-controlled and widely-held companies. The conclusion of this comparison is that the relation between family control and performance depends on the way family firms are controlled. If control is held directly, without the use of cross-holdings, pyramids and non-voting shares, the evidence is that family-controlled firms perform better than non-family ones (Khanna and Palepu, 2000; Anderson and Reeb, 2003; Barontini and Caprio, 2005). However, where families control companies via cross-holdings, pyramids and non-voting shares, performance has been shown to be worse than in widely-held companies (Morck, Strangeland and Yeung, 2000; Claessens et al., 2002). This evidence is attributed to the controlling shareholder's opportunity to extract private benefits of control and tunnel assets out of the firm.

A particular problem arises in the event of succession. The evidence here is that value is destroyed in the passing of active management from the founder to his/her descendants (Perez-Gonzales, 2005; Bloom and Van Reenen, 2007; Amit and Villalonga, 2006; Bennedsen, et al. 2006). Succession has also been shown to be influenced by country specific legal institutions such as inheritance tax (Ellul, Pagano and Panunzi (2008).

One limitation in these papers is that family ownership is taken as given without an analysis of the determinants of family ownership. We make this one of our principal

questions. We take a general approach inspired by the idea of a firm's life cycle, a popular concept suggested, among others, by Berle and Means (1932) and Chandler (1977). According to this view, all firms start as family firms founded by entrepreneurs. To grow, firms raise external capital and hence, ownership is diluted while entrepreneurs diversify their wealth away from their firm. From the entrepreneurial form, the firm becomes a public company with diffused ownership, run by professional managers and subject to the market for corporate control.

This evolution from family firm to public company with dispersed ownership is not always as smooth as described above. The family's decision to dilute its ownership stake depends critically on the costs and benefits of control. The cost of control is a lack of diversification. As argued by Pagano (1993), this is an increasing function of the degree of development of a country's stock market because large and more liquid stock markets offer greater opportunity to diversify risk. The benefit of control is the ability to use corporate resources for private advantages. As shown by Dyck and Zingales (2004), the private benefits of control are larger in countries with weaker investor protection, poorer accounting rules, lower tax compliance, less independent press.

Moreover, firms may choose to raise debt rather than issuing equity. In that case, growth is not necessarily associated with the evolution of family firms to widely held firms. The choice between debt and equity depends on the relative importance of banks versus stock markets in a financial system (Mayer, 1988). Hence, the type of financial development affects the evolution of family firms. Similarly, the decision to dilute ownership depends on the effectiveness of the market for corporate control. The size of this market is very different across countries and over time (Rossi and Volpin, 2004). Hence, the market for corporate control may also affect the evolution of family firms.

This view is more general than the law and finance hypothesis, whereby the presence of family firms is a second-best solution in countries with weak legal structures. Our view is that ownership is likely to be affected by many other variables than investor protection. They include the degree of financial development, the level of corruption, the openness of the political system, the degree of trust, the level of taxation in a country at a given point in time.

The approach of this paper is to aggregate these many variables into a binary classification of *insider systems* versus *outsider systems*. In "insider" systems the value of the private benefits of control is lower, new equity is less expensive and the market for corporate control is more efficient than in "outside" systems.

In Appendix A, we show that in 1996 the UK was significantly closer to an outsider system than Continental Europe. We also show that the difference between the UK and Continental Europe is much smaller in 2006, partly as a consequence of harmonizing legislation within the European Union.

On the basis of this discussion we propose the following five testable hypotheses:

H1) The U.K. as an outsider system should have lower prevalence of family firms and greater prevalence of widely held companies than the three Continental European countries as insider systems. Similarly, UK firms should list more often on the stock market than their counterparts from Continental Europe.

H2) Because of less active markets for corporate control in insider systems we expect insider systems to have more stable ownership than outsider systems. Therefore, we expect higher turnover of ownership among family companies in the UK than in the three other countries over time.

H3) Ownership structure and listing status should change across age cohorts and countries. Young companies will be as likely to be family owned in the UK as in Continental Europe. On the other hand older firms will be more likely to be family owned in Continental Europe than in the UK, due to differences in stock markets and markets for corporate control. Firm age should therefore be more negatively correlated with family ownership in the UK than in Continental Europe. Similarly, firm age should be more negatively correlated with being listed in the UK than in Continental Europe.

H4) Changes from an insider to outsider system (resulting from, for instance, the improvement in investor protection) should facilitate the transition from family firms to widely held companies. If there is a general trend towards outsider system regulation, we expect a lower prevalence of family firms in 2006 relative to 1996 and an increase in widely held companies.

H5) Efficient markets for corporate control will equate profitability across ownership types. Hence, we expect no difference in profitability between family and non-family companies in outsider systems; while there may be differences in insider systems.

Testing these hypotheses will be the main goal of this paper.

3. Data collection and empirical methodology

3.1 The 1996 sample

We collected data on the largest 1000 firms in 1996 in each of the four largest countries in Western Europe (France, Germany, Italy and the UK), using sales as our measure of size. Our

starting point is the universe of companies covered by AMADEUS, a dataset which covers over 250,000 listed and private firms in Europe, as of December 1996. From this dataset, we obtain basic financial information for each of the 4,000 companies and ownership information. The ownership data from AMADEUS was supplemented with hand-collected information from FACTIVA, the web and other sources.

We classify a company's ownership into five categories depending upon whether the company was (i) widely-held, or had as a controlling shareholder comprising either (ii) a family, (iii) the State, (iv) another widely held company or (v) several non family shareholders (referred to as a 'multiple block').

A widely held company is defined as one where there is no ultimate owner with 25 percent or more of voting rights. This definition of a controlling stake is used by AMADEUS and OSIRIS. Where there are two shareholders with individual blocks of 25% or more, this is counted as two controlling stakes. In the event that one of the two stakeholders is a family we classify the company as family-controlled. If neither blocks are family-controlled we describe the company as controlled by multiple stakes. We trace controlling stakes through *all* layers of ownership until we identify the ultimate owner; a controlling stake is defined by the ownership of the voting rights of the ultimate owner.[4]

To study the evolution of ownership, we have traced the history of all our companies for a decade, from 1996 to 2006. For companies that are in the AMADEUS dataset as of December 2006, we determine their ownership type then, adopting the classification used for 1996 and described above. For companies that were not in AMADEUS in 2006, we find and classify the reason for the disappearance into three categories: incorporation following a takeover, default, and liquidation. We used various sources in each country to determine the reasons for non survival, such as FACTIVA, Capital IQ and web searches.[5]

We have made considerable efforts to ensure the accuracy of the data. Although AMADEUS report ultimate ownership by type of owner, a considerable number of further adjustments have been made both in ownership levels and the identification of ultimate owner. We give below four important adjustments.

First, where one company has a block in another, that company may be classified [by the data base] as the ultimate owner. This is clearly not the ultimate owner, unless the holding company is widely held itself. We identify the *true* ultimate owners using alternative sources,

---

[4] A family stake is aggregated across individuals within the same family. If there are two or more families we also aggregate those.

[5] We also account for a possible contraction in size of the company, i.e. we search among *all* companies in AMADEUS in December 2006 (not only the largest 1,000). In many cases we find that companies have survived, but have become much smaller.

including Wer gehoert zu Wem for Germany, the London Share Price Data Base for the UK, Consob for Italy, and DAFSA for France. The complete list of data sources is in Appendix B.

Second, the identification of survivors from 1996 to 2006 presents serious obstacles. A company may be shown not to have survived over the decade because there is no company with the same identifier in 2006 as in 1996. However, checks through FACTIVA and other sources indicate that the company may have survived albeit with a different identifier number or name. We have attempted to correct these errors on an individual company basis.

Third, wholly-owned subsidiaries are frequently identified as separate companies even when consolidated into the accounts of the holding company. If we did not exclude subsidiaries it is likely that they would appear twice in our sample, first as a separate company and second as part of the consolidated company of the parent. To avoid this double counting, we identify and exclude wholly-owned subsidiaries of firms already included in the sample. In addition, we treat as wholly-owned subsidiaries those companies where a blockholder owns at least 95% of the share capital. There are a considerable number of companies in this category: about 200 in Germany, 290 in France, 290 for the UK and 230 for Italy. The exclusion of subsidiaries explains a large part of the reduction in the size of our sample.[6]

Fourth, we separate out foreign controlled companies. Such control may be exercised through families, state controlled companies and widely held parent firms. These will be analyzed separately. [explain further why they are separated out]

3.2 The 2006 sample

We also collected and classified the ownership data for the top 1,000 companies in each of the four countries as of December 2006. This dataset will be used to compare changes in the top 1000 companies between 1996 and 2006. This second sample is important because new firms enter the sample ('entries') to replace 1996 firms that have exited either because they have died or because their sales have fallen relative to other firms. These new firms may have ownership structures that are different from firms in the 1996 sample that have exited or survived. A comparison of companies in 1996 and 2006 will allow us to determine if ownership characteristics have changed over the decade. For the 2006 sample we collect the same data as for the 1996 sample. In particular, we hand-clean the ownership data in exactly the same way as for the 1996 sample.

---

[6] We also excluded subsidiaries of banks and financial companies since their parents were excluded from the original sample.

Given the large number that exited from the 1996 sample, and the change in performance ranking of firms over the ten years the total number of firms in the 1996 and 2006 samples is 6,900.

3.3 Listed family firms and the F-L sample

The most widely cited sample of family controlled companies is that of F-L (2002). This sample contains all listed family companies in 1996. We analyze their sample for two purposes: first we wish to use our methodology for classifying family controlled companies to determine if our profile of family controlled companies is similar to theirs. Second, we wish to study the evolution of family firms over time. It is only for listed firms that sufficient information is available.

The sample of companies identified as family controlled companies by F-L includes two types of family firms, one where the ultimate shareholder is identified as unequivocally being a family, and the other where the ultimate owner is a private company whose shareholders are unknown and which they classify as being family controlled. Because our methodology traces the shareholders of private companies we are able to provide a more accurate classification of private companies.

Using F-L's (1996) list of family controlled companies in 1996 for our four countries we apply our own methodology for classifying family companies which includes tracing ultimate ownership through different layers ownership (including private ownership). We show that our classification of family ownership is different from theirs in 40 percent of cases. The differences in classification mainly relate to companies that are controlled by a private company, which are assumed to be family firms by F-L. We return to this issue below.

To study the evolution of family ownership, we collect information for this sample over the subsequent decade, tracing changes in ownership, board membership, control transfers to outside the family (both to other family and non family firms), survival, and effects of generational change. We use these data to determine if management succession and the dispersion of ownership and control within a family affect the probability of survival, control changes and performance.

4. Evolution of ownership

4.1 Descriptive statistics

In the first panel of Table 1 we show the ownership data for 1996 for the top 1,000 companies in each country. We focus on the importance of family-dominated and widely-held companies. Family ownership is highest in Italy at 53.1% and lowest in the UK at 21%. Conversely, the percentage of widely held companies is highest in the UK at 27.5% and lowest in Italy at 5.6%. State ownership is significant and above 10% in all countries except the UK. Finally, the fraction of companies which have a widely held parent is also significant, although we show in Panel C that many of these companies are wholly owned subsidiaries, particularly in the UK.

In Panel B, we exclude from the sample wholly owned subsidiaries (as well as those where the parent has 95% or more of the shares) of companies where the holding company is included in the sample. The result is that the proportion of companies classified as block controlled with a widely held parent declines significantly in all four countries; in the case of the UK the decline is from 46.4% to 28.5% and for both France and Germany there is a fall of about 8%, and 5% for Italy.

In Panel C we exclude both subsidiaries and companies owned by foreign firms. As a result, the size of the sample declines significantly to between 404 and 583 depending upon the country.[7] There are large reductions in the percentage of firms controlled by a widely held parent and a proportionate increase in family held firms. The biggest impact of eliminating foreign owned firms is in the UK, where there are 220 firms in this category, Examples include Ford ownership of Jaguar and LandRover. In three of the countries, family-controlled firms are either a majority or close to a majority of firms in the sample, between 48% and 68%. The exception is the UK, where the proportion of family firms is small at 17.8%; correspondingly the proportion of widely held firms there is high, at 66.3%.

[Table on foreign controlled firms]

Table 2 partitions the companies described in Panel C of Table 1 into listed and private firms. Panel A shows that 54% of UK companies are listed. The proportion of listed companies is much lower in the other three countries, about 19% in Germany, 24% in France and 14% in Italy. The higher proportion of UK listed firms in part reflects the size and importance of the country's stock market.[8]

In Panel B we describe the ownership characteristics of the sample of listed companies only. As documented by Barca and Becht (2001), the listed companies in France, Germany and Italy have more concentrated ownership than those in the UK. As many as 91% of UK

---

[7] These samples will increase since there are a number of companies whose ownership remains to be traced.
[8] The number of listed companies on the main board in the UK is more than 2000 compared with less than 1000 in each of the other three countries.

listed companies are classified as widely held, compared with only 26% of German, 21% of French and 3% of Italian companies. The large controlling blocks in countries like Italy are held mainly by families, where 67% of all listed companies have a family blockholder; the corresponding proportions are 49% in France, and 38% in Germany.

In Panel C of Table 2, we describe the sample of private firms. Particularly for the UK we expected the proportion of family controlled family firms to be much higher than the proportion of family controlled listed firms and to be comparable to the statistics for the other three countries. We assume the stock market is the primary mechanism through which ownership dispersion takes place thorough the market for corporate control and through IPOs and subsequent sales of shares in the secondary market. A comparison of panels B and C show that the proportion of family firms is very high at 51% of all firms in Germany, 52% in France and 68% in Italy. These percentages are similar to those for listed firms. However, in the UK the proportion of family firms is only 37%, much lower than in Continental European countries, although considerably higher than among listed companies. What explains the low proportion of family controlled private companies in the UK? We will show below that in the UK there is an active market for corporate control among private companies and as a result family-controlled firms are more likely to sell out to non family shareholders. This is not the same for Continental Europe which has a less active market for corporate control and where family controlled companies are more likely to be the acquirers.

Another feature of panel C is that the proportion of widely held firms, where there is no single shareholder owning at least 25% of the share capital, is high at 24% in the UK. It is roughly half that number in the other three countries. This suggests that large shareholders of private companies can sell out their holdings and companies can become widely held without 'going public'.

In Table 3 we compare the size of companies in our sample across countries. Among listed firms, we find that the median firm size, measured by sales, is the highest in the UK at 1.59 billion Euro. It is much smaller in France and Italy where it is between one half and one third of the size of UK companies. Comparing the size of private UK companies with UK listed firms and non-UK private firms, we find that UK private firms are smaller than their German counterparts but larger than their French and Italian ones. In all Continental countries, private companies are not significantly different in size from listed ones. UK private firms however are significantly smaller than UK-listed ones. The reason is that larger UK firms are much more likely to be listed. Thus, the role of the stock market is important in explaining differences in sample characteristics of listed and private firms across countries.

Comparing family with non family firms, Table 3 also shows that for the three Continental countries the size of family and non family firms is remarkably similar. Only in the UK are family firms much smaller than non family firms. Thus, it seems that for the UK family firms are not only less prominent in both the listed and private company sectors but they are also smaller.

Overall, this is strong evidence in favour of hypothesis H1 that outsider systems have lower prevalence of family firms and higher prevalence of widely held and listed firms, relative to insider systems.

4.2 Evolution of ownership from 1996 to 2006

Having established differences between family firms in outsider versus insider systems, we now turn to the analysis of the evolution of ownership structures.

For this purpose, we track the history of each company in the 1996 sample from 1996 to 2006. We first determine whether a firm still exists in 2006 ('survivors') or whether the firm no longer exists ('exits'). To classify firms as survivors we do not require them to stay within the top 1,000 firms. For survivors we determine whether ownership has changed as of December 2006 and (re)classify companies into the ownership categories previously defined in Section 3. For exits we determine the reason for non survival as one of three possibilities: i) (re)incorporation following an acquisition, ii) bankruptcy or liquidation without a change of control and iii) dissolution of the legal entity. We believe that in the last category the dissolution is likely due to an acquisition where the target company is legally merged with the acquirer.[9]

In Panel A of Table 4 we show that the proportion of companies in our 1996 sample that survived as independent entities in 2006 was 43% in Germany, 66% in France, 62% in the UK and 46% in Italy. Of those that survived xx% remained in the top 1000 in Germany, xx% in France, xx% in the UK, and xx% in Italy.

Panel B reports the transition matrix from 1996 to 2006, conditional on the firm surviving as an entity. For tractability we aggregate ownership categories into family controlled, widely held, state controlled, and others.

The main conclusion from the data is that, with the exception of family firms in the UK, there is considerable stability of ownership across time in all countries. The largest

---

[9] The acquisition can take two forms. In one case the bidder does not have a controlling share stake prior to the acquisition and then dissolves the company post acquisition. In the second case the bidder already has a controlling stake prior to the acquisition and then bids for the remaining shares and then dissolves the company post acquisition. In the latter case we would not record a control change.

14

change in family ownership occurs in the UK. Of all family controlled firms in 1996 that survived until 2006, only 38% remained family firms in 2006. The remaining 62% have become non-family firms.

Family ownership in the Continental European countries on the other hand is much more stable than in the UK. In Germany 62% of family firms in 1996 remain a such in 2006, and for France and Italy the respective percentages are 62% and 78%. The ratio of firms leaving family control in the UK therefore is roughly two times that of other countries.

The story for widely held is somewhat different. In all four countries widely held firms predominantly stay widely held. The likelihood of remaining widely held in 2006 is lowest in Germany where only 55% survived as widely held, and highest in Italy at 79%. Of the 45% that did not survive as widely held in Germany, one fifth were acquired by families and two thirds were acquired by other blockholders, including private equity. State holdings are less stable than widely held, with the largest change occurring in France where only 57% of State owned firms remained in that form. In the UK it is 75% but there are only eight such firms in 1996 in the UK.

We conclude that while ownership structures for firms surviving the decade are stable, the exception is family-controlled firms in the UK. Conditional on survival, a family firm in the UK is roughly half as likely to remain under family control as a family firm in Continental Europe. This confirms hypothesis H2 that because of less active markets for corporate control insider systems have more stable ownership than outsider systems and higher turnover of ownership among family companies in the UK.

4.3 Determinants of family control and being listed

We next turn to hypothesis H2, that the life cycle of a firm will affect family ownership differently in outsider systems than in insider systems due to differences in stock markets and markets for corporate control. We expect firm age to be negatively correlated both with family ownership and with a firm being listed in the UK, but not in Continental Europe.

The results show strong support for the hypothesis. Table 5 in columns 1 and 2 reports probit regressions where the dependent variable is a dummy for whether the firm is controlled by a family. The regressions control for industry fixed effects by including industry dummies for the Fama and French 48 industries.[10] With family control as the dependent variable, the coefficient for the UK dummy is negative and significant, indicating that there is a significantly lower probability of family control in the UK.

---

[10] More details in the industry classification are in Appendix C.

More importantly, firm age is an important determinant of the probability of family ownership. In the regressions we measure firm age both by number of years since incorporation and by its age cohort, where we divide companies into age deciles, with cohort 1 being the youngest and cohort 10 being the oldest. The results show that there is an important difference between the UK and Continental Europe. While in the UK older firms are less likely to be family controlled, the opposite is true for Continental Europe. This is demonstrated by the interaction of both age variables with the UK dummy variable being negative and significant. We provide evidence below, at least for family listed companies, that the principal reasons for the decline of family firms and ultimately their lower average age is the market for corporate control. This provides strong evidence that the life cycle view holds in the UK but not in Continental Europe.

The regressions shown in columns 3 and 4, with the dependent variable being a dummy for whether a firm is listed or not, shows that U.K. firms are more likely to be listed. This is also true for larger and older companies. In contrast, only older companies list in Continental Europe whereas younger companies list in the UK.

4.4 Can external financing requirements explain ownership changes?

As firms need more external capital to grow, a cross-industry prediction is that the transition from family firms to widely-held companies should be faster in sectors that depend more on external finance. Conversely it may be that innovations in the capital market, for example the rise of private equity finance, has reduced the comparative advantage of listed over private companies with respect to access to external financing.

In Table 6 we find that there is significant industry concentration among family companies. 49% of all family companies are concentrated in five of the 48 Fama French industries: wholesale, business services, retail, financials and consumer goods. However, there are differences in industry concentrations across countries. For example, in Italy only 37% are in the top five industries compared with 65% in France, 60% in Germany and 58% in the U.K.

Under the traditional view we would expect family firms to be more common in sectors that depend less on external finance. Using the framework of Rajan and Zingales (1998), we find no support for the hypothesis that the concentration of family ownership is explained by industry specific needs for external financing. Thus, there is no evidence that external dependence explains the differences in family ownership across the four countries.

5. The evolution of family firms

In this section we provide evidence for our third sample of companies consisting of all family-controlled listed firms in 1996 in our four countries. We use this sample to study in greater detail the evolution of ownership in family firms. Specifically, we will explain how firms exited, including acquisitions, going private and insolvency, and how family characteristics such as CEO being a family member, affect survival as a family firm.

For each of the 827 listed firms in the sample, we collected information on the name of the controlling family and whether it was descended directly from the firm's founder. As shown in Table 7, this is true for almost 70 percent of family firms across all four countries. It is interesting to note that 91.2 percent of UK family firms are controlled by a descendant of the founder while in half of the cases German companies are controlled by a different family than the founding family. This indicates that family firms are very active as acquirers of companies in Germany (and in the rest of Continental Europe) but not at all in the UK. Recently, the family firm Schaeffler has acquired a majority stake in Continental, the tyre manufacturer, for about 12 billion Euros. Such a transaction by a family controlled would be highly unlikely in the UK in large part because of their smaller size.

We also identify where a family member is the CEO, where control is divided among more than one individual, as well as the age of the firm and which generation of family members is in control of the company. In the UK and in Italy, family firms are younger and are more often run by the founder than in France and Germany.

Furthermore, we have collected information on the history of each firm in the period 1996-2006. By 2006, a firm may still be in family control or may have been taken private by the controlling family. We classify these two outcomes together as no change of control. Alternatively, the firm may have become widely held, insolvent or may have been acquired. These three outcomes are combined and classified as a change of control. We find that almost half of our companies have undergone a change of control. In the UK, 70 percent of family firms went through a change of control (having become widely held or acquired) compared with only 27 percent of firms in Italy, 49% in Germany and 41% in France.

The ownership classification of the sample of 827 listed companies can be directly compared with the classification of F-L. The sample of 827 is drawn from F-L's sample of 1359 companies. The difference in sample size is due to the fact that F-L classify 532 firms as family firms which we classify as non family. The difference is mainly due to firms being classified as controlled by an unlisted company. With a few exceptions (we do not know the ownership structure of 7 percent of the sample) we have been able to identify the ultimate

owner of these unlisted companies, and in 28 percent of 1359 companies the ultimate owner has been incorrectly classified as a family.

The comparison is shown in Table 8. F-L classify 1,359 companies as family controlled. Half (i.e. 652) have a family as their ultimate owner and the other half (707) have an unlisted company as their ultimate owner. We believe that only 827 (about 60 percent) of the 1,359 companies are in fact family-controlled firms. [ADD discussion of Panels B and C]

Finally, we turn to the analysis of changes of control in family firms. We investigate which family characteristic most influences the likelihood of survival of a family firm. The characteristics include a dummy as to whether the family that is in control in 1996 is the founding family, whether control is divided among family members, the size of the block held by the family, whether the CEO is a family member and which generation of the family is in control. The results are reported in Table 9. The dependent variable is a dummy for whether a change of control happened during the 1996-2006 period for firms that are family controlled and listed in 1996. A change of control is defined where a family-controlled firm in 1996 has subsequently become widely-held, has been taken over or has become insolvent over the decade.

We find that the probability of a change of control for family firms is significantly higher in the UK than in Continental Europe. More specifically, changes of control are more likely if the family owns a small equity stake or if the equity stake is divided between more than one family member. We find that the age of the controlling family as measured by the generation from the founder does not matter. Similarly, profitability as measured by the return on sales has no impact on the probability of a change in control. Finally, we find that firms still controlled by the descendants of the founder in 1996 have a significantly lower probability of experiencing a subsequent change of control.

6. Comparison of 1996 and 2006 samples

We now provide a comparison of the ownership characteristics of our first sample--the largest 1996 firms—with our second sample—the largest 2006 firms. This comparison is different from the previously reported results as it does not condition on firm survival and allows new firms to enter the 2006 sample based upon relative performance as ameasured by sales. Therefore this provides a comparison of the landscape of ownership over the decade from 1996 to 2006.

6.1 The changing landscape of ownership

In Table 10, we compare ownership in 2006 with that in 1996 and find significant changes. Panel A shows a decline in family ownership in the three Continental European countries, by about 6% in Germany, 7% in both France and Italy. There are corresponding increases in the proportion of widely held firms, almost 6% in Germany, 9% in France, and 11% in Italy. There are several explanations: sales of blocks by families, privatizations and a decline in relative performance because a new cohort of widely held companies has emerged, an issue we turn to below.

Panel B shows that by 2006, the proportion of listed firms has increased in all countries except the UK where it has declined. In Germany and France it has risen by about 6%, while in Italy it has risen by a more modest 3%. Panel C shows that the ownership of listed companies has also changed significantly. The proportion of companies widely held has sharply increased in three countries: it was up by 26% in Germany to almost 52%, 21% in France to 36%, and 3% in Italy to 24%. There is no change in a single category that explains this increase. For example, the increase in widely held by 26% in Germany is matched by falls in family blocks of 6%, in State blocks of 8% and of 11% in widely held parent. This pattern is similar for other Continental countries. There are a number of reasons for these changes: more IPOs to dispersed shareholders, sales of blocks to dispersed shareholders, acquisitions of private firms by listed firms, and relative changes in performance that have caused a change in the composition of the largest firms.

In Panel D we show the profile of ownership of private firms. We find a large decline in family ownership in all four countries. This decline is not mirrored by a similar increase in widely held firms. This suggests that there has been a transfer of family blocks to other blockholders rather than to dispersed shareholders. In Germany, there is a decline in family ownership of 7% and an increase in widely held of 2%. In France there is a decline of 10% and an increase of 6%. In the UK family ownership decreases by 10%, but most of this descrease is taken up i.e. 7% by other blockholders which is mostly private equity investors; the proportion of widely held declines by 3%. There is a 9% decline of family firms in Italy roughly matched by an increase in widely held firms.

In Table 11, we try to answer this question by looking at the ownership structure of firms that enter and exit the sample of the top 1,000 firms in each of the four countries. Panel A shows the exits, i.e. firms that existed in 1996 and did not survive until 2006. Panel B shows the entries, i.e. new firms in 2006 that were not among the largest firms in 1996. In Continental Europe we find that the firms that exit are significantly more likely to be family

controlled than those that enter. This contributes to the decline of family ownership in 2006 compared with 1996. However, in the UK, where family ownership is much less common, family ownership on entry is slightly higher than exits.

Also, in the UK, the entrants are significantly less likely to be listed than those that exit. This is consistent with the trend towards the delisting of companies in the UK and the purchase of listed companies by private equity. A similar trend is not evident in the other three countries.

6.2 Performance

Next, we turn to the analysis of firm performance and hypotheses H5 in Table 12. H5 states that because of more active markets for corporate control, firms will be closer to their optimal firm of ownership in outsider systems and firms will consequently be more profitable. H4 further states that in outsider systems profitability will be equated across ownership types by markets for corporate control. Therefore no difference in profitability should exist between family and non-family firms in outsider systems, but may exist in insider systems. The results of standard OLS and instrumental variable regressions in Table 12 with profitability as the dependent variable confirm both hypotheses.

First, Table 12 shows that UK firms are more profitable than Continental European companies. This holds both using return on assets (columns 1 and 2) and return on sales (columns 3 and 4) as the dependent variable. Second, as columns 1 and 3 show, family firms are more profitable than non-family ones only in Continental Europe. This can be seen from the coefficient of the family firm dummy on the one hand, which is positive and significant, and from the coefficient of the interaction of the family firm dummy and the UK dummy on the other. While the interaction term coefficient on its own is significantly negative, the t-tests of both UK family firms versus UK non-family firms and UK family firms versus non-UK family firms are not significantly different from zero. Therefore, consistent with an efficient working of the market for corporate control in hypothesis H4, family firms in the UK are as profitable as UK non family firms.

Some of the results continue to hold when we correct for endogeneity of family control. We do so by using firm age as an instrument as suggested by the analysis in Table 5 . The first stage regression has an F-test of 45, suggesting that firm age is a good instrument for family control. Moreover, the OLS regressions in columns 1 and 3 in Table 12 suggest that firm age is not correlated with performance once we control for family control. Hence, age is a feasible instrument for family ownership.

In unreported regressions we also compare labour costs and leverage across firms. We do not find any statistical difference in labour costs between family and non-family firms. This is in contrast with the results in Sraer and Thesmar (2007), who find that family firms pay lower wages than non-family ones. Further, we find that family firms are less levered than non-family ones. This is consistent with the results for the US in Anderson, Mansi and Reeb (2005).

7. Conclusion

We provide a detailed comparative analysis of a large sample of private and listed companies for four countries: France, Germany, Italy and the UK.

Our main source of data is AMADEUS, a dataset compiled by Bureau Van Dijk that contains financial and ownership information on 250,000 public and private European companies. We collected information for the largest 1,000 firms in each of the four countries as at December 1996 and December 2006. The quality of ownership information contained in AMADEUS proved to be very poor. Hence, the data was extensively cleaned and enriched with hand-collected information from FACTIVA, the web and other sources. Using the same sources, we also reconstructed the outcomes for each company present in the 1996 sample but which was not included in the 2006 sample.

Our final dataset is unique for two reasons. First, it focuses on both listed and private companies, while all existing studies are restricted to listed companies. This is an important difference. Because listed companies represent a smaller fraction of the economy in Continental Europe than in the UK, the emphasis on listed companies distorts any comparative analysis. By way of illustration, only 20 percent of the top 1,000 companies in France, Germany and Italy are listed, compared with about 50 percent of British companies. Moreover, family firms are far more common among private companies, thereby understating the importance of family firms in the economy when focusing only on listed companies. The difference is particularly dramatic for the UK, where we find that only 6 percent of listed companies are family owned compared to 28 percent of private companies.

Second, we document how the landscape of ownership evolves over time. Existing research describes ownership only at one point in time, giving little clue as to whether and how ownership might change over time. We find large changes: on average, more than a third of the top 1,000 companies in 1996 have disappeared from the 2006 sample mainly because of acquisition. Acquisitions are more common in the UK, where almost half of the top 1,000

companies became takeover targets over the decade, compared with only a quarter of French companies. The frequency of acquisition for German and Italian companies is somewhere in between.

How important are family controlled companies in Europe? We find that about 50 percent of the top 1,000 companies in Germany and France were family controlled in 1996, that is, they had one individual or family who owned directly or indirectly more than 25 percent of the voting rights. Family firms were even more prevalent in Italy, where more than 65 percent of the top 1,000 companies were family controlled. This stands in marked contrast with the result for the UK where only 16 percent of firms were family controlled.

When we compare 1996 and 2006, we find that family firms have become significantly less important in France and Germany, while there was little change in Italy and the UK. The last decade was characterized by extensive reforms in continental Europe in many areas ranging from investor protection to taxation and financial liberalization. As a result of these reforms, regulation across Europe was considerably harmonized.

We find support for the hypothesis that the trade-off between family control and widely held firms as well how this trade-off changes over time are explained by the characteristics of outsider systems versus insider systems. In particular, we find that ownership is more stable in insider systems than in outsider systems and family companies having a higher probability of becoming non-family firms in outsider systems than in insider systems. Ownership structures change asymmetrically across age cohort and countries. Whereas firm age has a negative effect on the probability of family ownership in outsider systems—consistent with a firm life cycle theory of ownership—there is no significant effect of firm age on the probability of family ownership in insider systems. In insider systems, families engage in takeover activity, whereas this is not the case in outsider systems. Further, corporate profitability is higher in outsider systems than in insider systems, consistent with firms in outsider systems being closer to their optimal form of ownership. Finally, we find no difference in profitability between family and non-family firms in outsider systems, but greater profitability of family firms than for non-family firms in insider systems, consistent with outsider systems equating profitability between ownership types but not insider systems.

References

Aganin, Alexander and Paolo Volpin, 2005. "The History of Corporate Ownership in Italy," in *A History of Corporate Governance around the World*. ed. by Randall K. Morck, ed. Chicago and London: The University of Chicago Press.

Almeida, Heitor, Sang Yong Park, Marti Subrahmanyam, and Daniel Wolfenzon, 2008. "Beyond Cash Flow and Voting Rights: Valuation and Performance of Firms in Complex Ownership Structures," Working Paper University of Illinois at Urbana-Champaign.

Anderson, Ronald, Sattar Mansi and David Reeb, 2003. "Founding Family Ownership and the Agency Costs of Debt," Journal of Financial Economics 68, 263-285.

Anderson, Ronald and David Reeb, 2003. "Founding-Family Ownership and Firm Performance." Journal of Finance 58, 1301-1328.

Barca, Fabrizio and Marco Becht, 2001. The Control of Corporate Europe, Oxford University Press.

Barontini, Roberto, and Lorenzo Caprio, 2005. "The Effect of Family Control on Firm Value and Performance. Evidence from Continental Europe," ECGI Working Paper 88.

Beck, Thorsten, Ross Levine, and Norman Loyaza, 2000. "Finance and the Sources of Growth," Journal of Financial Economics 58, 261-300.

Bennedsen, Morten, Kasper M. Nielsen, Francisco Pérez-González, and Daniel Wolfenzon, 2007. „Inside the Family Firm: the Role of Families in Succession Decisions and Performance," Quartely Journal of Economics 122, 647-691.

Bertrand, Marianne and Antoinette Schoar, 2006. "The Role of Family in Family Firms," Journal of Economic Perspectives 20, 73-92.

Bloom, Nick and J. Van Reenen, 2007. "Measuring and Explaining Management Practices across Firms and Countries," Quarterly Journal of Economics, forthcoming.

Chandler, Alfred, 1977. The Visible Hand. The Managerial Revolution in American Business, Belknap Harvard, Cambridge, MA.

Claessens, Stijn, Simeon Djankov, Joseph Fan, and Larry Lang, 2002. "Disentangling the Incentive and Entrenchment Effects of Large Shareholdings," Journal of Finance 57, 2741-2771.

Claessens, Stijn, Simeon Djankov and Larry Lang, 2000. "Separation of Ownership from Control of East Asian Firms," Journal of Financial Economics 58, 81–112.

Dyck, Alexander, Luigi Zingales, 2004. "Private Benefits of Control: an International Comparison," Journal of Finance 59, 537-600.

Ellul, Andrew, Marco Pagano and Fausto Panunzi, 2008 "Inheritence Law and Investment in Family Firms," 2008. Working Paper Indiana University Bloomington.

Enriques, Luca, and Paolo Volpin. 2007. "Corporate Governance Reforms in Continental Europe." Journal of Economic Perspectives 21, 117-140.

Faccio, Mara, and Larry H.P. Lang, 2002. "The Ultimate Ownership of Western European Corporations," Journal of Financial Economics 65, 365-395.

Franks, Julian, Colin Mayer and Stefano Rossi. 2005. "Spending Less Time with the Family: The Decline of Family Ownership in the United Kingdom," in *A History of Corporate Governance around the World*. ed. by Randall K. Morck, ed. Chicago and London: The University of Chicago Press.

Khanna, Tarun and Krishna Palepu. 2000. "Is Group Affiliation Profitable in Emerging Markets? An Analysis of Diversified Indian Business Groups," Journal of Finance 55, 867–891.

Johnson, Simon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2000. "Tunneling," American Economic Review Papers and Proceedings 90, 22-27.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny. 1997. "Legal Determinants of External Finance," Journal of Finance 52, 1131-50.

La Porta, Rafael, Florencio Lopez-de-Silanes and Andrei Shleifer. 1999. "Corporate Ownership Around the World," Journal of Finance 54, 471-517.

La Porta, Rafael, Florencio Lopez-de-Silanes and Andrei Shleifer. 2006. "What Works in Securities Laws?" Journal of Finance 61, 1-32.

Mayer, Colin, 1988. "New Issues in Corporate Finance," European Economic Review 32, 1167-1183.

Morck, Randall, David Strangeland and Bernard Yeung, 2000. "Inherited Wealth, Corporate Control, and Economic Growth: The Canadian Disease", in Concentrated Corporate Ownership, Randall Morck, ed., NBER Conference Volume, Cambridge

Morck, Randall, Daniel Wolfenzon, and Bernard Yeung. 2005. "Corporate Governance, Economic Entrenchment and Growth," Journal of Economic Literature 43, 655-720.

Morck, Randall and Bernard Yeung, 2005. "Dividend Taxation and Corporate Governance," Journal of Economic Perspectives 19, 163-80.

Pagano, Marco, 1993. "The Flotation of Companies on the Stock Market: A Coordination Failure Model," European Economic Review 37, 1101-1125.

Pérez-González, Francisco, 2006. "Inherited Control and Firm Performance," American Economic Review 96, 1559-1588.

Rossi, Stefano, and Paolo Volpin, 2004. "Cross-Country Determinants of Mergers and Acquisitions," Journal of Financial Economics 74, 277-304.

Spamann, Holger, 2007. "On the Insignifiance and/or Endogeneity of La Porta et al.'s 'Antidirector Rights Index' Under Consistent Coding." Harvard Law School Discussion Paper.

Sraer, David and David Thesmar. 2007. "Performance and Behavior of Family Firms: Evidence From the French Stock Market". Journal of the European Economic Association 5, 709-751.

Villalonga, Belen, and Raphael Amit, 2006, "How do Family Ownership, Control and Management Affect Firm Value?" Journal of Financial Economics 80, 385-417.

Villalonga, Belen and Raphael Amit, 2008. "Family Control of Firms and Industries," Working Paper Harvard University.

Table 1: The landscape of ownership

This table reports percentages of ownership types for the largest 4,000 firms by sales in the four countries in 1996. Panel A reports figures for all firms for which ownership data are available. Panel B reports figures for all firms that meet the criterion of Panel A and which are not controlled by other firms with 95 percent of voting rights or higher. Panel C reports figures for all firms that meet the criterion of Panel B and are not controlled by a shareholder from outside the country in which the firm is incorporated.

Panel A: Largest 1,000				
Ownership types (in percent)	Germany	France	UK	Italy
Multiple blocks	4.4%	2.0%	0.3%	2.0%
Family	35.9%	38.4%	10.9%	47.9%
Foreign	18.4%	20.6%	33.9%	27.6%
Other	2.1%	3.2%	2.8%	2.2%
State	12.1%	8.8%	1.0%	12.5%
Widely held	9.9%	8.9%	27.4%	5.6%
Widely held parent	17.2%	18.2%	23.7%	2.3%
TOTAL number of firms	923	970	980	954

Panel B: Largest 1000, wholly owned subsidiaries eliminated				
Ownership types (in percent)	DE	FR	GB	IT
Multiple blocks	5.0%	2.6%	0.5%	2.2%
Family	39.5%	40.9%	11.5%	53.2%
Foreign	18.3%	20.0%	35.3%	21.4%
Other	1.8%	3.7%	2.7%	2.9%
State	12.9%	9.7%	1.3%	10.8%
Widely held	11.8%	12.4%	42.9%	7.3%
Widely held parent	10.6%	10.7%	5.8%	2.2%
TOTAL number of firms	714	680	624	725

Panel C: Largest 1000 domestic vs foreign, wholly owned subsidiaries eliminated				
	DE	FR	GB	IT
Widely held	11.8%	12.4%	42.9%	7.3%
Domestic block shareholder	69.9%	67.6%	21.8%	71.3%
Foreign block shareholder:				
Foreign family	3.4%	5.7%	11.7%	3.6%
Foreign state	1.4%	0.9%	0.8%	0.1%
Foreign widely held parent	13.6%	13.4%	22.8%	17.7%
TOTAL number of firms	714	680	624	725

Table 2: Ownership of listed versus private firms

This table focuses on the largest 1,000 firms in Germany, France, Italy and the UK after the exclusion of wholly owned subsidiaries. Panel A reports the percentage of listed firms in each of the four countries. Panel B and C describe the ownership structure of listed firms and private firms, respectively.

Panel A: Frequency of listed firms

	Germany	France	UK	Italy
Listed firms (% of all firms)	18.9	23.5	53.8	13.9

Panel B: Ownership of listed firms

Ownership types	Germany	France	UK	Italy
Multiple blocks (%)	4.6	0.8	0.4	3.8
Family (%)	38.2	49.2	6.3	67.1
Other(%)	0.0	8.6	1.6	0.0
State(%)	14.6	8.6	0.4	19.0
Widely held (%)	26.4	21.1	91.3	2.5
Widely held parent (%)	16.4	11.7	0.0	7.6
TOTAL number of firms	110	128	254	79

Panel C: Ownership of private firms

Ownership types	Germany	France	UK	Italy
Multiple blocks (%)	6.6	4.1	1.3	2.7
Family (%)	50.7	51.7	37.3	67.8
Other(%)	2.8	3.4	8.7	4.3
State(%)	16.1	13.2	4.7	12.8
Widely held (%)	11.6	13.7	24.0	10.4
Widely held parent (%)	12.3	13.9	24.0	2.0
TOTAL number of firms	473	416	150	491

Table 3: Comparison of total sales in billions of Euro

This table reports the mean, median (p50), first (p25) and third (p75) quartiles of sales for our sample of firms after the exclusion of wholly owned subsidiaries and foreign owned firms. The summary statistics are reported for the whole sample, the sub-samples of listed firms, private firms, family controlled firms, and non-family firms.

	Germany	France	UK	Italy
All firms				
p25	0.73	0.38	0.64	0.15
p50	1.16	0.59	1.18	0.20
p75	2.34	1.16	2.74	0.39
Mean	3.02	1.79	2.71	0.72
No. Obs.	637	569	424	609
Listed firms				
p25	0.63	0.38	0.72	0.21
p50	1.32	0.77	1.59	0.49
p75	4.39	2.55	3.82	1.31
Mean	5.59	4.13	3.34	2.59
No. Obs.	115	128	254	79
Private firms				
p25	0.75	0.37	0.59	0.15
p50	1.15	0.57	0.83	0.20
p75	2.09	0.98	1.65	0.32
Mean	2.46	1.11	1.76	0.44
No. Obs.	522	441	170	530
Family firms				
p25	0.71	0.35	0.53	0.15
p50	1.16	0.54	0.77	0.20
p75	2.21	0.95	1.19	0.34
Mean	2.45	1.25	1.59	0.48
No. Obs.	282	278	72	386
Non-family firms				
p25	0.75	0.41	0.66	0.15
p50	1.17	0.66	1.35	0.23
p75	2.51	1.33	3.00	0.56
Mean	3.48	2.31	2.93	1.12
No. Obs.	355	291	352	223

Table 4: Evolution of ownership from 1996 to 2006

This table reports the evolution of ownership for the largest 4,000 firms by sales in the four countries after the exclusion of wholly owned subsidiaries and foreign owned firms..

Panel A: Survival

	Germany	France	UK	Italy	Total
Number of firms in 1996	583	544	404	570	2,101
Survival frequency (%)	43	66	62	46	53
Survival in top 1,000 (%)	32	50	46	28	38

Panel B: Transition matrices

Germany					
	Family in 2006	Other in 2006	State in 2006	Widely held in 2006	Number of firms
Family in 1996	62%	24%	0%	14%	107
Other in 1996	25%	63%	3%	9%	67
State in 1996	9%	21%	58%	12%	57
Widely held in 1996	10%	33%	2%	55%	42

France					
	Family in 2006	Other in 2006	State in 2006	Widely held in 2006	Number of firms
Family in 1996	62%	27%	2%	10%	177
Other in 1996	23%	63%	7%	7%	70
State in 1996	12%	26%	57%	6%	51
Widely held in 1996	9%	19%	0%	72%	67

UK					
	Family in 2006	Other in 2006	State in 2006	Widely held in 2006	Number of firms
Family in 1996	38%	43%	0%	19%	47
Other in 1996	29%	62%	3%	6%	34
State in 1996	13%	13%	75%	0%	8
Widely held in 1996	5%	31%	1%	63%	168

Italy					
	Family in 2006	Other in 2006	State in 2006	Widely held in 2006	Number of firms
Family in 1996	78%	15%	1%	6%	191
Other in 1996	40%	40%	10%	10%	20
State in 1996	31%	0%	59%	10%	29
Widely held in 1996	12%	9%	0%	79%	34

Table 5: The determinants of family control and being listed

Firms are divided into age cohorts by age quintiles and age deciles. All regressions include industry fixed effects (not reported). The regression model is probit. Robust standard errors are reported in brackets. * indicates a coefficient significantly different from 0 at 10% confidence level; ** indicates significance at 5% and *** at 1%.

Dependent variable:	Family control		Being listed	
Firm age	-0.001		0.015***	
	[0.001]		[0.002]	
(UK) X (Firm age)	-0.002*		-0.009***	
	[0.001]		[0.003]	
Firm cohort (deciles)		-0.032		0.220***
		[0.036]		[0.026]
UK X Firm cohort deciles		-0.063*		-0.131***
		[0.037]		[0.035]
Log (Sales)	-0.062***	-0.155***	0.109*	0.107*
	[0.015]	[0.038]	[0.057]	[0.058]
UK dummy	-0.298***	-0.554**	1.808***	2.344***
	[0.029]	[0.240]	[0.121]	[0.241]
Industry fixed effects	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES
Observations	2030	2030	2027	2027
R-squared	0.182	0.182	0.261	0.258

Table 6: Top 20 industries with the highest concentration of family ownership
This table lists the 20 industries with the largest number of family controlled firms in our sample. It reports two measures of industry concentration: C-5 (C-20) measures for each country the percentage of family firms that are concentrated in the 5 (20) industries with the highest number of family firms. The table also reports a measure of external dependence at the industry level, computed following Rajan and Zingales (1998) and using Compustat data for the US from 1987 to 1996. At the bottom of the table, we report the correlations (and p-values) between external dependence and the country level frequencies of family firms.

	Germany	France	UK	Italy	Total	External dependence
Wholesale	41.0%	54.0%	23.6%	35.6%	173	-0.176
Business services	51.0%	36.2%	3.5%	57.0%	126	0.031
Retail	62.2%	81.3%	26.6%	79.6%	77	0.025
Financials	0.0%	30.1%	1.7%	100.0%	61	-0.325
Consumer goods	65.4%	61.6%	12.2%	72.2%	50	-0.037
Food products	32.3%	70.7%	25.3%	66.7%	41	-0.018
Construction	36.3%	65.4%	8.8%	42.9%	40	-0.039
Steel works	61.2%	33.5%	4.5%	29.2%	37	-0.083
Transportation	32.4%	20.9%	6.3%	66.8%	36	0.079
Candy and soda	36.0%	81.2%	13.2%	98.5%	34	0.071
Machinery	18.7%	45.4%	0.0%	100.0%	33	-0.158
Printing and publishing	100.0%	10.1%	22.7%	84.1%	31	-0.356
Construction materials	74.5%	37.8%	4.3%	89.8%	24	-0.195
Automobiles and trucks	46.8%	22.3%	10.2%	49.8%	23	-0.080
Apparel	92.3%	0%	68.0%	100.0%	20	-0.286
Pharmaceutical products	13.0%	17.5%	0.0%	15.6%	20	2.437
Real estate	40.7%	20.3%	70.1%	34.4%	20	0.227
Banking	54.8%	39.3%	15.7%	29.1%	18	-1.195
Textiles	38.7%	44.5%	0.0%	81.5%	17	-0.030
Chemicals	23.4%	0.0%	0.0%	26.9%	16	-0.101
Total number of family firms in sample	281	276	71	374	1002	
C5	55.9%	64.9%	43.7%	32.1%	48.6%	
C20	90.0%	93.8%	87.3%	86.4%	89.5%	

Cross-industry correlation between frequency of family firms and external dependence

Correlation coefficient	-0.3596	-0.0964	-0.1353	-0.3067	0.0651	
p-value	0.1194	0.6859	0.5695	0.1884	0.7850	

Table 7: Family-controlled listed firms
This table reports the characteristics of the controlling family for all family-controlled listed firms in 1996 in the four countries.

Panel A. Summary statistics for listed family firms in 1996

	Germany	France	UK	Italy	Total
Founding family still in control	49.0%	72.3%	91.2%	60.4%	69.7%
CEO is a family member	59.0%	80.8%	81.1%	74.5%	74.1%
Control divided among family members	63.4%	81.0%	47.0%	61.3%	58.5%
Founder in control	15.8%	44.6%	56.2%	57.5%	40.5%
3rd generation in control	45.5%	19.9%	15.2%	22.6%	26.8%
Average voting rights	68.1%	62.1%	41.8%	58.7%	57.9%
ROS	6.1%	18.9%	9.4%	2.2%	9.4%
Average age (years)	91.5	71.7	38.6	48.6	66.2

Panel B. Evolution of ownership from 1996 to 2006

	Germany	France	UK	Italy	Total
NO CHANGE	109	113	50	56	323
Went private	17	34	15	21	87
Widely held in 2006 (A)	13	17	56	6	92
TAKEOVER (B)	75	81	79	15	250
DEFAULT (C)	26	6	17	8	57
Total	235	251	217	106	827
Frequency of changes in control (A+B+C)	48.5%	41.4%	70.0%	27.4%	48.3%

Table 8: Listed firms identified as family firms compared with Faccio and Lang (2002)

The table compares the firms classified as family firms in the study of Faccio and Lang (2002) with how the firms are classified according to our analysis.

	Germany	France	UK	Italy	Total
Panel A. Family firms according to F-L and this study					
Number of family-controlled firms according to F-L	417	395	425	122	1,359
Of which:					
- Controlled by a family	184	163	224	81	652
- Controlled by an unlisted company	233	232	201	41	707
Number of family-controlled firms according to our study	253	251	220	106	830
Panel B. Differences in classification of family firms between F-L and this study					
Number of family-controlled firms according to F-L that we classify as non-family controlled	164 [= 417-253]	144	205	16	529
Of which:					
- Controlled by a family according to F-L	32	46	54	5	137
- Controlled by an unlisted company according to F-L	132	98	151	11	392
Panel C. Reasons for inconsistent classification					
1) Firm is not family controlled according to our sample (%)	25.2%	29.9%	33.4%	13.1%	28.0%
2) Firms is not a listed firm in 1996 according to our sample (%)	8.4%	0.0%	5.5%	0.0%	4.3%
3) Unknown ownership in our sample (%)	5.8%	6.6%	12.0%	0.0%	7.4%

Table 9: Ownership changes among listed family firms

The table reports the estimates of a probit model with heteroskedasticity-robust standard errors in brackets. The dependent variable is a dummy variable that indicates changes of control. A change of control is defined as a case where a family-controlled firm in 1996 is widely held in 2006 or was taken over or defaulted between 1996 and 2006. * indicates a coefficient significantly different from 0 at 10% confidence level; ** indicates significance at 5% and *** at 1%.

Dependent variable: Change of control from 1996 to 2006						
Founding family in control in 1996	-0.616***	-0.807***	-0.896***	-1.283***	-1.103***	-1.106***
	[0.108]	[0.147]	[0.135]	[0.180]	[0.177]	[0.191]
Control divided among family members	0.203**	0.233*	0.343***	0.506***	0.541***	0.558***
	[0.098]	[0.129]	[0.117]	[0.156]	[0.155]	[0.168]
Voting rights (%)	-0.018***	-0.019***	-0.009***	-0.007	-0.007	-0.006
	[0.003]	[0.004]	[0.003]	[0.004]	[0.004]	[0.005]
UK			0.981***	1.325***	1.370***	1.355***
			[0.141]	[0.188]	[0.188]	[0.205]
CEO is family member			0.039	0.179	-0.036	-0.076
			[0.128]	[0.177]	[0.170]	[0.190]
1st generation (founder) in control			-0.228*	-0.093	-0.106	-0.017
			[0.131]	[0.171]	[0.169]	[0.182]
3rd generation in control			-0.109	-0.119	-0.123	-0.116
			[0.144]	[0.188]	[0.183]	[0.199]
Firm age (years)			-0.001	0	-0.001	0
			[0.001]	[0.001]	[0.001]	[0.001]
Return on sales in 1996					-0.067	-0.371
					[0.160]	[0.766]
Industry fixed effects	YES	NO	YES	NO	YES	NO
Pseudo R-squared	0.075	0.119	0.133	0.209	0.198	0.229
Chi-square	68.461	73.121	108.502	124.068	96.95	114.602
Prob	0.000	0.000	0.000	0.000	0.000	0.000
Observations	754	492	668	447	424	402

34

Table 10: Comparison of ownership structure in 1996 and 2006

This table reports ownership types for the largest 4,000 firms by sales in the four countries at two points in time, 1996 and in 2006, after wholly-owned subsidiaries and foreign owned firms are eliminated. Panel A shows the ownership classification for the entire sample. In Panel B, we report the fraction of listed companies. Panel C and D report the ownership classification for the sub-samples of listed and private companies, respectively.

	1996				2006			
Panel A: Largest 1000, wholly owned subsidiaries and foreign owned firms eliminated								
Ownership type (%)	DE	FR	GB	IT	DE	FR	GB	IT
Family	48.4	51.1	17.8	67.7	41.9	43.1	17.2	59
Multiple blocks	6.2	3.3	0.7	2.8	3.5	2.1	0.9	1.8
State	15.8	12.1	2	13.7	10.8	8.9	2.3	12.3
Widely held	14.4	15.4	66.3	9.3	21.5	24.9	54.6	21.2
Widely held parent	13	13.4	8.9	2.8	14	14.8	15.8	4.5
Other	2.2	4.6	4.2	3.7	8.3	6.1	9.2	1.3
TOTAL	583	544	404	570	546	530	489	648
Panel B: Frequency of listed firms								
Listed firms (%)	18.9	23.5	53.8	13.9	24.4	29.9	47.2	16.9
Panel C: Only listed firms								
Family	38.2	49.2	6.3	67.1	32.3	48.1	5.3	61.3
Multiple blocks	4.5	0.8	0.4	3.8	1	0	0	0
State	14.5	8.6	0.4	19	6.1	7.4	0	12.9
Widely held	26.4	21.1	91.3	2.5	51.5	36.3	92.2	23.7
Widely held parent	16.4	11.7	0	7.6	5.1	5.9	0.5	2.2
Other	0	8.6	1.6	0	4	2.2	1.9	0
TOTAL	110	128	254	79	107	141	224	100
Panel D: Only private firms								
Family	50.7	51.7	37.3	67.8	44.3	41.1	27.8	58.5
Multiple blocks	6.6	4.1	1.3	2.6	4.1	3.0	1.7	2.2
State	16.1	13.2	4.7	12.8	12.0	9.5	4.3	12.2
Widely held	11.6	13.7	24.0	10.4	14.0	20.4	20.9	20.7
Widely held parent	12.3	13.9	24.0	2.0	16.3	18.3	29.6	5.0
Other	2.7	3.4	8.7	4.3	9.4	7.7	15.7	1.5
TOTAL	473	416	150	491	439	389	265	548

Table 11: Comparison of firms that exited and entered the top 1,000

This table reports statistics on the percentages of firms being family-controlled and of firms being listed for four different firm samples. EXITS is the sample of firms that belonged to the top 4,000 firms in the four countries in 1996 and did not survive until 2006. ENTRIES is the sample of firms that belonged to the top 4,000 firms in the four countries in 2006 but was not present in the 1996 top 4,000 firms. All firms that existed in 1996 are based on the top 4,000 firms in the four countries in 1996, all firms that existed in 2006 are based on the top 4,000 firms in the four countries in 2006. The final sample is much smaller than 4,000 due to the elimination of wholly owned subsidiaries and firms with foreign controlling shareholders.

Panel A. EXITS: Firms that existed in 1996 and did not survive

	Germany		France		UK		Italy	
Family	175	(53.0%)	101	(54.0%)	25	(16.3%)	195	(63.3%)
Non family	155	(47.0%)	86	(46.0%)	128	(83.7%)	113	(36.7%)
Listed	41	(12.4%)	36	(19.3%)	93	(60.8%)	45	(14.6%)
Non listed	289	(87.6%)	151	(80.7%)	60	(39.2%)	263	(85.4%)
TOTAL	330	(100.0%)	187	(100.0%)	153	(100.0%)	308	(100.0%)

Panel B. ENTRIES: New firms in 2006

	Germany		France		UK		Italy	
Family	142	(44.4%)	123	(46.6%)	56	(20.6%)	241	(56.8%)
Non family	178	(55.6%)	141	(53.4%)	216	(79.4%)	183	(43.2%)
Listed	44	(13.8%)	53	(20.1%)	112	(41.2%)	66	(15.6%)
Non listed	276	(86.3%)	211	(79.9%)	160	(58.8%)	358	(84.4%)
TOTAL	320	(100.0%)	264	(100.0%)	272	(100.0%)	424	(100.0%)

Table 12: Performance regressions

This table reports performance regressions for the largest 4,000 firms by sales in the four countries. Robust standard errors are in brackets. * indicates a coefficient significantly different from 0 at 10% confidence level; ** indicates significance at 5% and *** at 1%. ND means not significant at the 10% level. In the IV regressions, the dummy variable family firm is instrumented using age cohorts. The first stage regression is reported in the first column of Table 5.

Dependent Variable	ROA		ROS		ROE	
	OLS	IV	OLS	IV	OLS	IV
Family firm	0.020***	0.051	0.011***	0.042	0.038**	0.811***
	[0.003]	[0.043]	[0.003]	[0.044]	[0.015]	[0.293]
UK	0.028***	0.032***	0.028***	0.026**	0.039	0.245***
	[0.005]	[0.012]	[0.005]	[0.013]	[0.030]	[0.089]
UK X Family firm	-0.024***		-0.038***		-0.029	
	[0.006]		[0.006]		[0.038]	
Log (Sales)	0.006***	0.007***	0.003***	0.005*	0.017***	0.058***
	[0.001]	[0.003]	[0.001]	[0.003]	[0.004]	[0.018]
Firm age	0		0		-0.001***	
	[0.000]		[0.000]		[0.000]	
UK X Firm age	0		0		0	
	[0.000]		[0.000]		[0.000]	
2006 dummy	0.001**	0.001**	0.001***	0.001***	0.004***	0.004*
	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.002]
Industry fixed effects	YES	YES	YES	YES	YES	YES
Observations	2736	2736	2736	2736	2733	2733
R-squared	0.111	0.032	0.142	0.058	0.041	
UK family vs UK non-family t-test	ND		***		ND	
UK family vs non-UK family t-test	ND		*		ND	

37

Appendix A

In what follows we describe changes in each of the four countries in corporate governance regulation (shareholder voice, board effectiveness, disclosure and private and public enforcement), financial development (size of stock market, credit to the private sector, number of listed companies and number of IPOs), market for corporate control (volume of mergers and acquisitions and frequency of hostile takeovers), taxation (capital gains, inheritance, dividend taxes and tax compliance), and general business conditions (competition laws and independence of media). The common message throughout this section is that there was a broad convergence across European countries from 1996 to 2006. While in 1996 the UK looked very different from Continental Europe, this difference has significantly narrowed by 2006.

A1. Corporate Governance Reforms
In the last fifteen years many reforms have been enacted in France, Germany, Italy and the UK to improve corporate governance. This section provides a brief overview of legal reforms in the four countries. More details can be found in Enriques and Volpin (2007). We will overview the major reforms with the help of Table A1, starting with corporate governance codes of conduct. All four countries introduced corporate governance codes. Following the British example, in recent years Continental European countries have introduced the requirement that companies comply with the code or explain why they are not doing so.

A.1.1 Board effectiveness
The UK was the country where more was done to increase the effectiveness of the board of directors. Since the 1992 Cadbury report, most companies have boards (and audit and compensation committees) with a majority of independent directors. Since 1998, in the vast majority of companies there is a strict separation of Chairman and CEO. The definition of independent director was also clarified and made very strict in 2003.
In Germany, the 1998 reform gave larger role to the supervisory board. The management board must now report to the supervisory board over risk management issues, budget and business plans. Supervisory boards have to meet at least four times a year and have an increased role in the choice of auditors.
In France little was done to empower the board of directors, other than to allow companies to separate the roles of chairman of the board and chief executive officer. In Italy, the 1998 reforms have strengthened the board of directors by requiring that at least one director and one of the internal auditors be elected by minority shareholders. The reforms also assigned greater power to internal auditors and somewhat tightened their independence requirements.
France and Italy have empowered boards in the case of self-dealing transactions by dominant shareholders. By contrast, no new rules for related-party transactions have been enacted in Germany over the past 15 years.

A.1.2 Shareholders Rights
In the UK, shareholders have historically enjoyed great power vis-à-vis managers and directors. Shareholders have a final say on a large number of issues, such as share buy-backs, dividend payments and new issues. Even small shareholders have always had the power to set the shareholder meeting agenda (shareholder voice) and bring derivative suits against directors i.e. shareholder actions for damages against directors on behalf of the corporation (private enforcement). The only change in this area was to increase further the scope for derivative suits, as was done in 2007.
Lawmakers in Continental Europe have taken various steps to increase minority shareholders' powers vis-à-vis managers and dominant shareholders. First, they have strengthened shareholders' voice in corporate governance. In France the general meeting has to ratify any non-routine transactions with a major shareholder and some forms of executive compensation. In Italy, the meeting's approval is required on any form of stock-based compensation. France and Italy also lowered the ownership thresholds for the right to call a meeting (from 10 to 5 percent and from 20 to 10 percent, respectively). In each of the three Continental European countries, shareholders now have lower costs for voting. Companies can allow remote voting via Internet and telecommunications technology. France and Italy now allow shareholders who want to attend the shareholder meeting to trade their shares around shareholder meetings. Second, Germany and Italy have enacted reforms to allow and facilitate derivative suits. There was no change in France, where derivative suits were already allowed although rarely used.

A.1.3 Ownership and Control
Germany has done the most to limit deviations from the one-share-one-vote principle. Multiple-voting shares were banned in 1998. Banks were also prohibited banks from acting as clients' proxy if they own more than 5 percent of the shares. Italian lawmakers introduced a three-year time limit for shareholder agreements and provided for these agreements to be void in the event of a takeover bid. There was no comparable change in

France and the UK. In the first country, multiple and non-voting shares are common. In the second one, they are virtually unheard of among listed companies.

The three Continental European countries have introduced a "mandatory bid rule": that is, the acquirer of a control block must offer to acquire all the remaining shares at a price usually close to the price paid for the block. The same rule was enacted in the UK in 1968.

A.1.4 Disclosure Requirements

Disclosure of self-dealing has improved in all four countries. Following a 2002 European Community Regulation, starting in 2006 the annual accounts of listed companies must be drawn according to the International Financial Reporting Standards (IFRS), whose Standard 24 requires detailed and specific disclosure of related-party transactions.

All four countries have changed their laws to incorporate the 2003 European Commission directive on "market abuse" – the short name for insider trading and securities fraud. The directive extends the definition of inside price-sensitive information requiring immediate disclosure. It also requires disclosure of trading activity on a company's shares by its directors and persons closely connected with them. Italy followed the US example and extended the disclosure requirement to trading activity by controlling shareholders.

Until recently, compensation received by Continental European companies' directors was a well-guarded secret. Reforms have now mandated complete disclosure of individual board members' compensation, including stock options.

All four countries have also taken steps to strengthen auditors' independence and effectiveness, similar to the U.S. rules imposed under SOX.

A.1.5 Public Enforcement

All four European countries have reshaped and strengthened their public enforcement structures in the past 15 years. Germany has done the most in this area, because it had no authority for supervising securities markets and thus had to build one up from scratch. Italy has granted Consob greater powers. France and the UK, which already had a powerful public enforcement agency in place, merged all its financial supervision into one authority, the AMF and the FSA.

With the adoption of the Market Abuse Directive in 2003, all European countries now provide for criminal sanctions in cases of market abuse. Similarly, they have all strengthened the public oversight on auditors. France in 2003 and Germany in 2004 instituted an equivalent of the US Public Company Accounting Oversight Board (PCAOB). The UK has reformed their pre-existing public authority (the ABP). Italy's Consob supervisory powers over audit firms were greatly extended in 2005.

A.1.6 Antidirector rights

It is difficult to provide a quantitative indicator that captures the impact of the reforms described in Table A1, simply because of the complexity of the legal reforms. Any quantitative index can be criticised on the ground that it needs to choose arbitrarily among the many laws and is thus biased by the subjective view-point of the producer of the index. We are therefore not producing any quantitative index to summarize the regulatory changes of the last decade. However, in the regression analysis that follows we will use the (often criticized but widely used) index of shareholder rights produced by LLSV (1998), the so called antidirector rights. We use the revised indicator produced by Spamann (2007) for 1996 and 2006. According to this indicator, corporate governance improved only in Germany and Italy.

Table A1: Regulatory changes in investor protection and corporate governance

	France	Germany	Italy	UK
Corporate governance codes	Corporate governance code mandated on a comply-or-explain basis (2003).	Corporate governance code mandated on a comply-or-explain basis (2002).	Corporate governance code mandated on a comply-or-explain basis (2005).	Corporate governance code mandated on a comply-or-explain basis (1992, 1998).
Board Effectiveness	Separation of Chairman and CEO allowed (2001). New rules on board's information (2001 and 2003). Board disclosure and approval of non-routine transactions with significant shareholders (2001, 2003 and 2005).	Greater role for supervisory board (1998). Specific duties on internal controls (1998).	New rules on board information (2003). Minorities represented on board of directors (2005). Stricter independence (1998 and 2005). Board disclosure and approval on related-party transactions (2003).	Majority of Independent directors (1992). Separation of Chairman and CEO (1998). Stricter independence requirements for non-executive directors (2003).
Shareholders Voice	Shareholder approval of stock-based executive compensation (2001, 2003 and 2005). Exercise of voting rights made easier (2001). Lower thresholds for minority shareholder rights (2002).	Exercise of voting rights made easier (2001). Communication among shareholders facilitated (2005).	Shareholder approval of stock-based compensation (2005). Exercise of voting rights made easier (2003). Lower thresholds for minority shareholder rights (1998 and 2005).	(No change. Shareholder approval of executive compensation was already required.)
Private enforcement	(Individual shareholders were already allowed to bring derivative suits.)	Derivative suits made easier (2005).Civil actions for securities fraud made easier (2003).	Derivative suits for minorities representing 2.5 percent of shares allowed (1998 and 2005).	Extended scope for shareholder derivative suits against the board (2007).
One-share, one-vote rules	(No change: multiple voting shares are allowed.)	Multiple voting shares banned and banks' influence over shareholder meetings curbed (1998).	Voting caps banned (2003). Limits on validity of shareholder agreements (1998).	(No change: multiple voting shares are allowed but de facto not used.)
Control Transactions	Mandatory bid rule (1992).	Mandatory bid rule (2002).	Mandatory bid rule (1998).	(Mandatory bid rule since 1968.)
Disclosure requirements	Price sensitive information to be immediately disclosed (1991 and 2005). Disclosure of directors' and officers' trading (2005). Annual disclosure of individual directors' compensation (2001).	Price sensitive information to be immediately disclosed (1994 and 2004). Disclosure of directors/officers' trading (2002 and 2004). Annual disclosure of individual directors' compensation (2006).	Price sensitive information to be immediately disclosed (1991 and 2005). Disclosure of directors' and officers' trading (2005). Annual disclosure of individual directors' compensation (1999).	Price sensitive information to be immediately disclosed (1996 and 2005). Disclosure of directors' and officers' trading (2005). Annual disclosure of individual directors' compensation (1995).
Financial reporting and audit	IFRS reporting mandated (2002, effective 2006). CEO abstains from proposal of auditors (2003). Audit partner rotation every 6 yrs (2003). Prohibition on non-audit services to audit clients (2003).	IFRS reporting mandated (2002, effective 2006). Increased cooperation between supervisory board and auditor (1998). Audit partner rotation every 7 yrs (1998). Prohibition on non-audit services to audit clients (2004).	IFRS reporting mandated (2002, effective 2006). Increased cooperation between supervisory board and auditor (1998). Audit partner rotation every 6 yrs (2005). Prohibition on non-audit services to audit clients (2005).	IFRS reporting mandated (2002, effective 2005). Audit partner rotation every 5 yrs (2004). Prohibition on non-audit services to audit clients (2004).
Public enforcement	Merger of securities and banking authorities (2003). Market abuse regime tightened (2005). French "PCAOB" (2003)	Securities regulator set up and granted powers (1994 - 2005). Merger of securities and banking authorities (2002). Criminal sanctions for insider trading (1994) and market manipulation (2002). Market abuse regime tightened (2002 and 2004). Securities' agency review of financial reports (2004). German "PCAOB" (2004)	Increased regulator's investigative and sanctioning powers (1998 and 2005). Criminal sanctions for insider trading (1991) and market manipulation (1998). Market abuse regime tightened (2005). Securities agency's review of financial reports (2005). Securities agency's powers on audit firms strengthened (2005).	Merger of securities and banking authorities and increase in power and scope (1997 and 2001). Criminal sanctions for insider trading and market manipulation (1986 and 2000). Market abuse regime tightened (2005). New British "PCAOB" (2002).
Antidirector rights	(no change: 3)	Increase from 2 to 3	Increase from 1 to 2	(no change: 4)

A2. Financial Development

An outsider system has a high level of financial development and in particular a well-developed stock market. We follow La Porta et al (1997) and Beck et al (2000) and focus on four measures of financial development (reported in Table A2). First, is stock market capitalization over GDP, which is defined as the ratio of the stock market capitalization to GDP for 1996 and 2006. The second variable is the size of the domestic credit to private sector, which is measured as the ratio of the domestic credit to the private sectors and GDP for 1996 and 2006. The source for both these variables is the World Development Indicators 1997 and 2007. A third measure of financial development is the number of listed firms scaled by population. As in La Porta et al (1997), this variable is measured as the ratio of the number of domestic firms listed in a given country to its population (in millions) in 1996 and 2006. Finally, a dynamic measure of financial development is the number of IPOs scaled by the number of listed firms. This is defined as the ratio of the number of initial public offerings of equity in a given country to the number of listed companies for 1996 and 2006. The number of domestic IPOs and the number of domestic listed firms are from country-level stock market statistics; while population is from World Development Indicators.

All these indicators suggest that financial development increased in Continental Europe compared to the UK.

Table A2: Changes in financial development

	France	Germany	Italy	UK
Stock market capitalization / GDP (%)				
1996	31.8	21.8	18	119.5
2006	80.4	43.7	63.3	139.1
Domestic credit to private sector / GDP (%)				
1996	84.1	102.7	52.3	112.3
2006	93.1	111.4	90.2	165.5
Number of listed firms /Population				
1996	11.83	8.30	4.28	35.22
2006	10.89	7.90	4.66	22.63
Initial public offerings/ Listed firms (%)				
1996	3.21	2.94	4.92	9.14
2006	4.82	2.31	6.91	6.19

A3. Market of Corporate Control

An outsider system has a very active market for corporate control. Following Rossi and Volpin (2004), we are considering two measures (reported in Table A3). M&A volume is the percentage of domestic traded companies targeted in completed deals. For 1996 (2006), it is the average number of listed companies taken over in the 1992-1996 (2002-2006) period scaled by the number of listed companies in 1996 (2006). A second and more direct measure of the effectiveness of the market for corporate control is the frequency of hostile takeovers. The latter is measured as attempted hostile takeovers as a percentage of domestic traded companies. For 1996 (2006), it is the average number of listed companies that were target of an unsolicited offer in the 1992-1996 (2002-2006) period scaled by the number of listed companies in 1996 (2006). M&A data is from SDC Platinum. The number of domestic listed companies is from country-level stock market statistics.

The most visible change is the appearance of hostile takeovers in Continental Europe in 2006.

Table A3: Changes in the market of corporate control

	France	Germany	Italy	UK
M&A volume (%)				
1996	5.80	3.14	5.57	3.26
2006	4.79	4.38	4.44	5.26
Hostile takeovers (%)				
1996	0.03	0.00	0.00	0.18
2006	0.15	0.19	0.22	0.93

A4. Tax Reforms

Taxation may have an important role in the evolution of a family firm. Intuitively, capital gain taxes increase the cost of selling control blocks. Inheritance taxes may force to sell blocks to pay taxes. Taxes on dividends increase the cost for a family to face cash needs. Hence, we collect information (reported in Table A4) on tax reforms in the four European countries.

The only relevant change in inheritance tax over the decade was the abolition in 2001 of the inheritance tax in Italy. In the other countries, the inheritance tax on business assets did not change and was lower than on other assets because of a special tax relief. For instance, in the UK the inheritance tax on business property assets enjoys a tax relief of 100% for unlisted companies and 50% on listed companies.

The taxation of dividends was subject to minimum changes in the decade. Only Germany changed the tax on dividends by introducing a tax relief on 50% of the dividends in 2002. We measure the dividend tax as the total tax paid (inclusive of corporate and personal taxes) on $1 paid in dividends, following the same methodology adopted by LLSV (2000). We follow the same approach for capital gains tax, where our indicator measures the total tax paid (inclusive of corporate and personal taxes) paid on $1 in capital gain.

The taxation of capital gains was the most active area of reforms in the decade. Since 1998, in the UK only a quarter of the capital gains on business assets held for more than 2 years is subject to tax (so called 'taper relief'). Since 2002 (2003), capital gain tax in Germany (Italy) was removed on the sale of shares held in companies for more than one year. The aim of the latter reform was to encourage firms and financial institutions to disentangle their cross-shareholdings.

There is also convergence (with the notable exception of Italy) in terms of tax compliance. As in Dyck and Zingales (2004), tax compliance is measured as the response to survey question from the World Competitiveness Yearbook, "tax evasion is not a common practice in your country." Higher scores suggest agreement that there is greater tax compliance. The trend in this case has seen the UK becoming more similar to France and Germany rather than vice-versa.

Table A4: Regulatory changes in the areas of taxation

		France	Germany	Italy	UK
Inheritance tax rate[1]					
	1996	20%	19.5%	27%	20%
	2006	20%	19.5%	0%	20%
Dividend tax[2]					
	1996	$0.60	$0.61	$0.63	$0.50
	2006	$0.61	$0.53	$0.55	$0.47
Capital gains tax[3]					
	1996	$0.37	$0.54	$0.52	$0.40
	2006	$0.38	$0.38	$0.41	$0.32
Tax compliance					
	1996	5.39	4.29	2.40	7.17
	2006	4.73	4.64	2.49	5.30

Notes:

1) Inheritance tax rate is the maximum tax rate for inheritance of a controlling stake in a listed company when inherited by a child. Since 1984, in the UK, there is a relief of the inheritance tax on business property assets of 100% on unlisted companies and 50% on listed companies. In 2001, the inheritance tax was abolished in Italy.

2) Dividend tax measures the total tax paid (inclusive of corporate and personal taxes) on $1 paid in dividends. The data for 1996 is from LLSV (2000). Using the same methodology, comparable estimated for 2006 was produced based on the data in PWC, Individual and Corporate Taxes, Worldwide Summaries. Since 2002, in Germany only 50% of the dividend income is taxable as personal income.

3) Capital gains tax measures the total tax paid (inclusive of corporate and personal taxes) on $1 paid in capital gain. The data for 1996 is from LLSV (2000). Using the same methodology, comparable estimated for 2006 was produced based on the data in PWC, Individual and Corporate Taxes, Worldwide Summaries. Since 1998, in the UK only 25% of the capital gain on business assets held for more than 2 years is subject to tax (taper relief). Since 2002, capital gain tax in Germany is removed on sale of shares held in companies for more than one year.

A5. General business environment

As measures of general business environment we consider the quality of anti-trust regulation and the degree of independence of the press (reported in Table A5). As in Dyck and Zingales (2004), we use the indicator of competition laws provided by the World Competitiveness Yearbook. It is defined as the response to survey question, "competition laws prevent unfair competition in your country." Higher scores suggest agreement that competition laws are effective. We also follow Dyck and Zingales (2004) and use the number of daily newspapers per 1,000 inhabitants (from UNESCO Statistical yearbook) as a proxy of independence of the press.

Table A5: Changes in the general business environment

		France	Germany	Italy	UK
Competition laws					
	1996	6.11	6.99	4.65	6.21
	2006	6.22	6.94	4.39	6.07
Newspaper circulation					
	1996	208	305	105	388
	2006	142	291	109	326

Appendix B. Data sources

Source name	Date range used	Data items
Panel A: Electronic sources		
Bureau van Dijk OSIRIS	2006-2007 various snapshots	Ownership and financial data, listed status, name changes
Bureau van Dijk AMADEUS	1996 CD-ROM issue, 2006 DVD issue	Ownership and financial data, listed status, name changes, survival, family CEO, founding family, family ownership structure
CAPITAL IQ	2007 snapshots	Ownership data, listed status of companies, name changes, survival, reasons for non-survival, family CEO, founding family
London Stock Price Database LSPD	1995-2007	Listed status of companies, survival, death reasons
FACTIVA	1980-2008	Ownership data, listed status of companies, survival, reasons for non-survival, family generation, family CEO, founding family, family ownership structure
Faccio and Lang (2002)	1996	Ownership data, listed status of companies
DATASTREAM	1996, 2006	Financial data
WORLDSCOPE	1996, 2006	Financial data
Google	2006-2008	Ownership data, listed status, name changes, survial, reasons for non-survival, family generation, family CEO, founding family, family ownership structure
CONSOB	1994-2007	Ownership data, listed status, name changes, survival, family CEO, family ownership structure
Panel B: Hardcopy sources		
Hoppenstedt Aktienfuehrer	1994-2007	Ownership data, name changes, survival, reasons for non-survival
Company Register	1994-2007	Ownership data, name changes
Calepino dell'Azionista	1994-2007	Ownership data, name changes, survival, reasons for non-survival
Dafsaliens annuaire de sociétés	1994-2007	Ownership data, name changes, survival, reasons for non-survival
Commerzbank, Wer gehoert zu wem	1984-2007	Ownership data, name changes, survival, family ownership structure

Appendix C. Industry composition of the 4000 largest companies

Industry	Industry description	Germany		France		UK		Italy	
Aero	Aircraft	0	(0.0)	5	(0.5)	3	(0.3)	0	(0.0)
Agric	Agriculture	0	(0.0)	0	(0.0)	2	(0.2)	2	(0.2)
Autos	Automobiles and trucks	31	(3.1)	26	(2.6)	21	(2.1)	22	(2.2)
Banks	Banking	8	(0.8)	19	(1.9)	28	(2.8)	30	(3.0)
BldMt	Construction materials	20	(2.0)	16	(1.6)	26	(2.6)	29	(2.9)
Books	Printing and publishing	15	(1.5)	9	(0.9)	22	(2.2)	22	(2.2)
Boxes	Shipping companies	2	(0.2)	4	(0.4)	4	(0.4)	6	(0.6)
BusSv	Business services	165	(16.7)	115	(11.6)	60	(6.0)	38	(3.8)
Chem	Chemicals	24	(2.4)	27	(2.7)	33	(3.3)	44	(4.4)
Chips	Electronic equipment	2	(0.2)	5	(0.5)	4	(0.4)	4	(0.4)
Clths	Apparel	5	(0.5)	1	(0.1)	8	(0.8)	16	(1.6)
Cnstr	Construction	21	(2.1)	42	(4.2)	51	(5.1)	40	(4.0)
Coal	Coal	8	(0.8)	2	(0.2)	4	(0.4)	0	(0.0)
Comps	Computers	28	(2.8)	14	(1.4)	23	(2.3)	21	(2.1)
Drugs	Pharmaceutical products	18	(1.8)	27	(2.7)	21	(2.1)	45	(4.5)
ElcEq	Electrical equipment	11	(1.1)	20	(2.0)	16	(1.6)	28	(2.8)
Enrgy	Petroleum and natural gas	22	(2.2)	10	(1.0)	37	(3.7)	23	(2.3)
FabPr	Fabricated products	8	(0.8)	4	(0.4)	7	(0.7)	13	(1.3)
Fin	Trading	0	(0.0)	97	(9.7)	8	(0.8)	12	(1.2)
Food	Food products	13	(1.3)	37	(3.7)	28	(2.8)	34	(3.4)
Fun	Entertainment	3	(0.3)	1	(0.1)	9	(0.9)	4	(0.4)
Guns	Defense	0	(0.0)	2	(0.2)	3	(0.3)	1	(0.1)
Hlth	Healthcare	0	(0.0)	0	(0.0)	0	(0.0)	1	(0.1)
Hshld	Consumer goods	33	(3.3)	50	(5.0)	33	(3.3)	54	(5.4)
Insur	Insurance	0	(0.0)	0	(0.0)	1	(0.1)	0	(0.0)
LabEq	Measuring equipment	17	(1.7)	5	(0.5)	3	(0.3)	16	(1.6)
Mach	Machinery	50	(5.1)	22	(2.2)	27	(2.7)	37	(3.7)
Meals	Restaurants, hotel, motel	2	(0.2)	5	(0.5)	19	(1.9)	6	(0.6)
MedEq	Medical equipment	3	(0.3)	4	(0.4)	3	(0.3)	5	(0.5)
Mines	Nonmetallic mining	3	(0.3)	1	(0.1)	7	(0.7)	0	(0.0)
Misc	Miscellaneous	0	(0.0)	1	(0.1)	2	(0.2)	0	(0.0)
Paper	Business supplies	12	(1.2)	9	(0.9)	14	(1.4)	18	(1.8)
PerSv	Personal services	5	(0.5)	3	(0.3)	5	(0.5)	4	(0.4)
RlEst	Real estate	29	(2.9)	11	(1.1)	6	(0.6)	14	(1.4)
Rtail	Retail	45	(4.6)	75	(7.5)	104	(10.4)	45	(4.5)
Rubbr	Rubber and plastic products	7	(0.7)	5	(0.5)	6	(0.6)	8	(0.8)
Ships	Shipbuilding equipment	1	(0.1)	1	(0.1)	0	(0.0)	2	(0.2)
Smoke	Tobacco products	10	(1.0)	1	(0.1)	7	(0.7)	0	(0.0)
Soda	Candy and soda	25	(2.5)	30	(3.0)	49	(4.9)	44	(4.4)
Steel	Steel works etc.	28	(2.8)	23	(2.3)	18	(1.8)	48	(4.8)
Telcm	Telecommunications	1	(0.1)	10	(1.0)	15	(1.5)	4	(0.4)
Toys	Recreational products	13	(1.3)	6	(0.6)	9	(0.9)	12	(1.2)
Trans	Transportation	36	(3.6)	35	(3.5)	39	(3.9)	35	(3.5)
Txtls	Textiles	2	(0.2)	3	(0.3)	7	(0.7)	23	(2.3)
Util	Utilities	62	(6.3)	14	(1.4)	41	(4.1)	11	(1.1)
Whlsl	Wholesale	198	(20.0)	189	(19.0)	158	(15.8)	153	(15.4)
Missing		2	(0.2)	9	(0.9)	9	(0.9)	19	(1.9)
Total		984	(100.0)	995	(100.0)	1,000	(100.0)	993	(100.0)