

# Stock Market Performance of Family Firms

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Abstract – We find that family firms in France, Germany, the UK and US do not fare worse on the dimensions of Tobin's Q and ROA relative to non-family firms. In addition their stock returns are well explained by a four-factor model as well as a multifactor model based upon Fama-MacBeth type regressions. In contrast to findings by Fahlenbrach (2005), we do not find that founder CEO firms in France display significant abnormal returns. However, we do find that who manages the family firm results in significantly different risk exposures of the family firm relative to non-family firms. These different exposures seem to be at the heart of differences in ROA and Tobin's Q and may be one reason why Amit and Villalonga (2005) and Sraer and Thesmar (2005) find a significant drop in ROA and Q from founder to heir managed family firms.

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# 1 Introduction

Recent research shows that family firms are not only very prevalent around the world (e.g., Shleifer and Vishny, 1986; La Porta et al, 1999; Classens et al., 2000; Faccio and Lang, 2002), but that family firms also perform at least as well as non-family firms in terms of return-on-asset and Tobin's Q measures. For example, Barontini and Caprio (2005) investigate the valuation and performance of family firms in 11 European countries and conclude that even after controlling for control enhancing mechanisms and management involvement, family firms do not fare worse than non-family firms. In the US, Anderson and Reeb (2003a) find that founding-family firms have a higher valuation (Tobin's Q) and Amit and Villalonga (2005) find similar results for various definitions of family firms.<sup>1</sup> However, not all "family firms" are the same. In particular, they find that founder family firms have the highest Tobin's Q and second generation family firms have, on average, a valuation that is even below the valuation of non-family firms. Fahlenbrach (2005) finds that firms run by their founders display abnormal returns relative to the Fama-French (1993) factor model augmented by Carhart's (1997) momentum factor. His analysis suggests that the stock market either misprices founder family firms (which is possible as the time period investigated, the 1990s, includes the technology bubble) or that shareholders in those firms require an extra return, not captured by the factor model.

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<sup>1</sup> Generally, family firms are valued higher than non-family firms if, besides ownership, the founder is also involved in running the corporation. The one instance where family firms trade at a significant discount relative to non-family firms is when the family owns at least 20% of the votes and is involved in management with family members of the 2<sup>nd</sup> or later generations. Holderness and Sheehan (1988) find higher valuations for non-family firms than family firms, defined as firms that are majority controlled by a family. Amit and Villalonga (2005) point out that in the analysis of family firms it is important to distinguish between effects due to ownership, control and management.

We add to this research by investigating whether shareholders in *family* firms more generally receive (expect) stock returns beyond what a four-factor model would predict. Thus, the question is whether the abnormal return found in Fahlenbrach (2005) is due to the founder or the family effect. This question also arises from the findings of Amit and Villalonga (2005) who show that first generation (founder run) firms have a significantly higher Tobin's Q relative to both non-family firms and 2<sup>nd</sup> generation family firms. Since it is possible that the market is surprised by the lower value of 2<sup>nd</sup> generation firms, this argument would predict that we find negative long-run abnormal returns for family firms as they mechanically move from founder to heir control. Alternatively, the drop in Q could be related to the choice of family firms to operate in a way that results in different risk exposures compared with non-family firms. This would suggest that only the risk exposure in the factor models would differ, but no abnormal return would exist. Since it is not clear at what time shareholders come to realize this value drop or change in risk, we investigate the returns of family firms over a long period of time.

Gompers, Ishii, and Metrick (2003) ask whether firms with better governance are valued higher. They find evidence for this in the 1990s. In particular, they run a long-run event study over the full sample period from 1990-2000, to investigate the stock market's reaction to news about the importance of corporate governance. Gompers et al (2003) find that firms with better governance display a positive abnormal return over the 1990s using a four-factor model as a benchmark. It has been widely argued that family ownership, management and control are important corporate governance characteristics (e.g., Amit and Villalonga, 2005). In our study, we use the same event study

methodology as Gompers et al (2003) and ask whether family firms, as a proxy for the quality of governance, also display abnormal returns.

We use data from France, Germany, the UK and US. For the first three countries, we focus on the years 1993-2002 and we use data for the 250 highest capitalization stocks. In each of these countries, we collect family ownership in one particular year during the 1993-2002 period and assume that it stays constant throughout. For the US we take the sample of Anderson and Reeb (2003a) over the period from 1992 to 2000. We then create country specific factors (four factor model) and test whether family firms display a significant abnormal return.

We find no significant abnormal returns in any of the four countries. In other words, family firms do not seem to be charged an extra risk premium (or given a risk discount) in these countries during the sample years. Alternatively, we cannot reject the hypothesis that markets have efficiently priced family firms in the 1990s and family firms, on average, delivered returns commensurate with the risk. We also conclude that the Gompers et al (2003) findings are particular, not only to the time period (as argued in Cremers et al., 2005), but also to the proxy of corporate governance. Using family firm as a proxy of governance, we cannot reject the null of no abnormal return during the sample period.

The second research question we ask is whether there are significant differences between family and non-family firms. Interestingly, we find that in Germany, the UK and US the factor loadings differ significantly between family and non-family firms, indicating that family firms deliver systematically different risk profiles to investors. In Germany and the UK, family firms display a significantly higher loading on the size

factor but a lower loading on the value-versus-growth and momentum factors. In the US, family firms display a lower loading on the market only. In France, there is no significant difference in the factor loadings between family and non-family firms. Thus, to the extent that family firms choose to be smaller, they are charged a different cost of equity for it. In addition, the industry representation of family versus non-family firms is quite diverse. For example, in the UK and Germany, no family firm is represented in the utilities industry. On the other hand, no non-family firm is in the information technology industry in Germany and all non-cyclical services are owned by family firms in France. To the extent that industries result in certain exposures, it is possible that differences in the factor loadings result from the industry participation. Nevertheless, that is also a choice of the family and is as such an interesting finding.

However, surprisingly, we find a significant positive abnormal return in France for a portfolio long in family firms and short in non-family firms. The difference comes entirely from the fact that non-family firms in France display a negative abnormal return during the sample period. In order to test the robustness of this finding, we use the family firm definition and sample of Sraer and Thesmar (2005) for France. This data is survivorship free and accounts for the (very few) changes in family status during the sample period between 1994 and 2000. Focusing on the top 250 companies (by market value), we find the result to be robust. However, using a wider set of 576 firms which includes smaller companies, we find that the difference in return between family and non-family firms goes away. Non-family firms no longer significantly underperform family firms. We conclude that family firms are fairly priced in all four countries, and that large non-family firms in France were underperforming relative to the four-factor model

benchmark during the 1994-2000 time period. Interestingly, using the wider set of 576 firms for France also results in the finding that French family firms have a significantly higher (lower) loading on the size (value-versus-growth) factor consistent with the interpretation that family firms indeed choose different risk exposures.

Given our finding that family firms per se do not display any significant abnormal returns during the sample period, we investigate whether this is an artifact of bundling different types of family firms together. Amit and Villalonga (2005) for the US and Sraer and Thesmar (2005) for France, investigate whether founder CEOs, heir managed and professional CEOs in family firms display different ROAs and valuations. Their results show that in both countries heir managed firms have a lower average Tobin's Q. But only in the US is the valuation significantly lower than for non-family firms. Nevertheless, it might be that there are abnormal returns for founder, heir or professionally managed family firms, if analyzed separately. We use the data of Sraer and Thesmar (2005) for France and find that none of the three subsamples of family firms generates significant abnormal returns using the four-factor model as our benchmark. This result differs from Fahlenbrach (2005) who finds a significant positive abnormal return for founder CEOs. The results for the French sample thus stand in contrast to the finding in the US. It suggests that the abnormal returns in Fahlenbrach (2005) might be specific to the sample period and country. Even when we compare founder CEO to non-family firms we do not find any significant abnormal returns. However, we find that founder CEO firms display significantly different factor loadings relative to non-family firms. Those firms load more (less) on the size and momentum (value) factors. Heir firms, while also not displaying any significant abnormal return relative to non-family firms, display differences in the

market and size factor loadings; lower on the market and higher on the size factor. Finally, professional CEO family firms display no significant differences relative to non-family firms at all. This suggests that who operates the business is fundamentally affecting the risks of the cash flows and the market prices reflect those changes in the life of a family owned company.

We believe these are important findings supplementing current research on the cost of debt for family versus non-family firms. For example, Anderson and Reeb (2003b) find that family firms receive debt financing at a lower cost. However, Ellul, Guntay and Lel (2005) find that family ownership mitigates agency cost of debt only in high investor protection countries. ADR (American Depositary Receipt) family firms from countries with poorer (better) creditor protection pay a higher (lower) cost of debt compared to non-family firms. Our results indicate that minority shareholders take these tradeoffs into account in the form of discounting cash flows, not by requiring a different equity return, since there is no separate risk premium for family firms.

This paper makes two contributions. First, we test whether a country specific four-factor model describes the returns of family firms in France, Germany, the UK and US. We believe this is an important test for several reasons: Firstly, there exist funds claiming to exploit a mispricing of family firms (e.g., Tibi et al., 2003). Secondly, since managers' pay and wealth are tightly linked to their firm's stock returns, it should be of interest to understand whether stock returns of family and non-family firms are determined in the same framework by the market. Thirdly, analysts often complain that family firms do not provide sufficient information to value the company correctly, and family firm managers often argue that they are neglected by the stock market. As the last

argument suggests, the reason why family firms might display abnormal returns can be found in Merton's (1987) model. Our findings reject the notion that publicly traded family firms experience this fate. Our second contribution is that we investigate differences in the risk that family firms expose themselves to by studying the factor loading of the four-factor model. This analysis provides insights into the possible reasons for why firm valuation changes over time as management is passed on from the founder to heirs and/or professional managers. It also highlights differences between family firm and non-family firms in terms of their choices of risk taking.

The paper is structured in the following way. We start by describing the data and comparing standard performance measures such as Tobin's Q and ROA between family and non-family firms. In section 3 we investigate and compare the stock market returns of family and non-family firms and section 4 concludes.

## **2 Data Samples and Ownership Classification**

### ***2.1 Sample selection***

We collect a sample of large firms quoted on the French, German and UK stock markets over the nine-year period from December 1993 through December 2002. Each country's initial sample consisted of its 250 highest capitalization stocks. The classification into family versus non-family firms is based on ownership data in December 1993 for France and Germany, and December 1998 for the UK. For our analyses we split the companies into two portfolios, family-owned firms and non family-



owned firms, based on the year of known ownership in each country.<sup>2</sup> We follow Blondel, Rowell, and Van der Heyden (2002) to determine whether a firm is family or non-family owned. A family firm is a company where one or several individuals or families are ultimate owners and represent the largest block of shares. The owning family is not required to be descendants of the firm's founder(s) and is not required to be involved in the business. Non-family owned firms are those firms in which no individual, set of individuals, family or sets of families can be identified as the ultimate owner. One particularity of French and German firms, as opposed to UK and US firms, is their complex chain of ownership. When ownership is not direct ultimate ownership is tracked by going up the ownership chain. Ultimate owner(s) are those shareholders who own at least 10% of the shares at each step of the ownership chain. The US sample is based on Anderson and Reeb (2003a). They have a time series of 403 firms between 1992 and 2000 where each firm-year is classified as family or non-family. A firm is called a family firm if founding families (or descendants) are shareholders and/or founding family members (or descendants) sit on the board of directors. Thus, the definition of family ownership for France, Germany and the UK differs from the definition used by Anderson and Reeb (2003a) in that a minimum level of ownership of 10% and the family being the largest blockholder is required. Furthermore, the definition is solely based on ownership and does not classify a firm as family firm only because founding family members are present on the board.

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<sup>2</sup> We also show results using the sample of Sraer and Thesmar (2005) for France who identify family ownership year-by-year between 1994 and 2000. Their sample suggests that there are very few changes of the family status during our sample period.

We obtained monthly return data for the primary listings of each European company from the Datastream database.<sup>3</sup> We were able to find total return index data for 246 French, 216 German<sup>4</sup> and 247 UK companies. Datastream is also our source for risk free interest rates, market value data and industrial classification data. For the US we use CRSP data and could match 330 of the 403 firms in the original sample of Anderson and Reeb (2003a).<sup>5</sup> Each country is analyzed separately in its local currency.

Notice that we do not replace firms that are de-listed nor do we include newly listed firms. 123 French, 58 German, and 50 UK sample firms de-listed during the 1993-2002 time period. We also report results based on French data from Sraer and Thesmar (2005) that is survivorship free and find that the survivorship issue is not affecting the inferences drawn from our sample<sup>6</sup>.

We collect accounting data for French companies from the Compustat Global Industrial/Commercial and the Compustat Global Financial databases, the Thomson One Banker database, the 1998 Diane database, and the DAFSA des Sociétés books – in that order. Firm age is obtained from the INSEE database, the Diane database and company websites. We find complete annual accounting data for 90% of our French stock market sample (representing 1446 firm-years and 221 firms). For Germany and the UK, we were able to obtain all financial information from the Thomson One Banker database. We have complete annual accounting data for 99% of the German stock market sample (1806

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<sup>3</sup> To detect errors in the data, we flag extrem monthly returns and had them checked by Datastream for accuracy.

<sup>4</sup> Some German companies have more than one type of share listed in the German market. We include only the primary listing of the company.

<sup>5</sup> We loose observations because the identifier is only the ticker and company name.

<sup>6</sup> Their definition of family ownership is if the firm's main shareholder is a single family that controls at least 20% of the shares.

firm-years and 214 firms), and 99.6% of the UK sample (2068 firm-years and 246 firms.) US accounting data is obtained from Compustat.

## **2.2 Return on assets and Tobin's Q**

Before showing our results, we briefly review the theoretical literature with a particular focus on the question why the performance of family firms might be better or worse than that of non-family firms. Demsetz (1985) argues that family firms avoid managerial expropriation thus alleviating the conflict of interest between shareholders and managers. On the other hand, family firms usually control a large stake. Therefore, an agency problem exists between large and minority shareholders (e.g., La Porta et al., 1999). Firms owned by families may have longer horizons, which render their investments more efficient, and also allow them to make investments firms with shorter horizons would not make (Stein, 1988 & 1989; James, 1999). Longer investment horizons may make family firms less reactive to short term pressures, events and fads. On the other hand, families prefer stability and capital preservation to profitable, but very risky projects (Demsetz, 1983). Family firms are also more likely to prefer independence and control to growth and performance, which would result in worse performance relative to non-family firms. Families might also exchange profits for private rents (Fama and Jensen, 1983), firm survival (Shleifer and Vishny, 1997), and special dividends (DeAngelo and DeAngelo, 2000). It is thus an empirical question which side of the argument dominates.

Prior research on family firms has focused on comparing performance metrics such as return-on-assets (ROA) and Tobin's Q (TQ) between family and non-family firms. For example, Barontini and Caprio (2005) investigate the valuation and

performance of family firms in 11 European countries and conclude that even after controlling for control enhancing mechanisms and management involvement, family firms do not fare worse than non-family firms. In the US, Anderson and Reeb (2003a) find that family firms have a higher valuation (Tobin's Q) while Holderness and Sheehan (1988) find the opposite. Amit and Villalonga (2005) find that the valuation results are dependent on the definition of a family firm. In France, Sraer and Thesmar (2005) find significantly higher ROA and TQ for family firms.

In Table 1, we show that family firms in France, Germany and the US have a significantly higher ROA (mean and median) than non-family firms. In the UK there is no significant difference. However, in all four countries we do find higher average Tobin's Q, measured as the book value of assets minus the book value of equity plus the market value of equity divided by the book value of assets.

The average family firm in all four countries is significantly smaller but only in the US displays a higher sales growth. Also, return volatility is significantly higher in Germany and the UK for family firms.

In Table 2, we report fixed effects regression results controlling for other determinants of ROA and TQ than family ownership. In particular, we include year and industry dummies (using Level 3 Datastream industry codes; US: 2-digit SIC) following Anderson and Reeb (2003a). We find that in France and the US do family firms still display a higher ROA than non-family firms. No significant difference is observed using Tobin's Q as the dependent variable. Our findings suggest that family firms have different characteristics and inferences from univariate comparisons do not carry over to a multivariate analysis. In particular, we find that family firms are not evenly represented

in the various industries. Figures 1a and 1b show the number of firms in each industry and the fraction of family firms in each industry, respectively.<sup>7</sup> The industry representation of family versus non-family firms is quite diverse. For example, in the UK and Germany, no family firm is represented in the utilities industry. On the other hand, no non-family firm is in the information technology industry in Germany and all non-cyclical services are owned by family firms in France. To the extent that ROA and TQ are correlated within the industry, the observed average performance in table 1 might not be attributable to family ownership per se, rather to the choice of industry. However, industry selection is also a choice of the family. However, when we control for industry effects in the regressions in Table 2, we still find higher ROA in France and the US for family firms. At the same time the differences in TQ disappear due to the controls. Thus, it seems unlikely that industry selection can explain the higher ROA – given that there is no difference in TQ. One possible reason to explain the higher ROA with no difference in TQ is that the market underestimated the performance of family firms. In the following section we test for this possibility using a measure of long-run abnormal returns by asking whether the market has changed its opinion about family firms over time after learning about the superior ROA performance.

### **3 Stock returns analysis**

#### **3.1 Motivation**

Instead of using exclusively the metrics of ROA or TQ, we also focus on stock returns. There are three main reasons for doing so. First, Amit and Villalonga (2005) find that Tobin's Q decreases significantly from the founder CEO to heir managed family

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<sup>7</sup> For the US, please refer to table 1 in Anderson and Reeb (2003a).

firms. It is thus possible that the market misprices one or the other set of firms. Alternatively, the firms could adjust their business (risk) so that this change in Tobin's Q is observed but does not imply any misvaluation. More importantly, it would imply that basing the conclusions on whether family or non-family firms perform better on a simple comparison of Tobin's Q might be misleading due to the underlying risk differences and changes through time.

The second reason for studying stock returns is that Fahlenbrach (2005) finds significant positive abnormal returns in a sample of founder CEO firms relative to a four-factor model benchmark. The benchmark is the three Fama-French (1993) factors and the momentum factor of Carhart (1997). We ask whether this abnormal return is specific to the time and country of analysis as well as the specific sample of founder-run firms. Our tests allow us to compare results for different countries and a broader definition of family firms using stock returns of firms in France, Germany, the UK and US. In addition, we ask whether these abnormal returns are observed in all family firms or whether it is specific to founders using additional data on France.

The reason why one could expect abnormal returns ex ante is based on Merton's (1987) model. He argues that neglected firms may display positive abnormal returns. If family firms, in particular, founder CEO firms that are likely to be young firms, are more opaque, and less followed by analysts (e.g., because a large chunk of the equity is still held by the founder and is not traded), then it is possible that such firms are charged an extra return premium. However, it is an empirical question whether all types of family firms are more opaque and potentially display abnormal returns.

A third reason is similar to the motivation of Gompers, Ishii, and Metrick (2003) who run a long-run event study over the full sample period from 1990-2000, to investigate the stock market's reaction to news about the importance of corporate governance. They find that firms with better governance display a positive abnormal return over the 1990s using a four-factor model as a benchmark. It has been widely argued that family ownership, management and control are important corporate governance characteristics (e.g., Amit and Villalonga, 2005; Sraer and Thesmar, 2005). In our study, we use the same event study methodology as Gompers et al (2003) and ask whether family firms, as a proxy for the quality of governance, also display abnormal returns.

A fourth reason to study returns is that managers and owners care whether their stock, at least on average, is priced correctly. We test for this by investigating abnormal returns relative to a four-factor model. Notice that practitioners claim to exploit such mispricing of family firms arguing that family firms are charged too high cost for their capital given their risk profile (e.g., Tibi et al., 2003).

### **3.2 Methodology**

In order to analyze whether family firms display abnormal returns, we run a four-factor model based upon monthly returns in each of the four countries. In particular, we construct the factor return based upon all listed firms in a particular year in any particular country. For the US, we take the factors from Ken French's webpage. The factors are the three Fama-French (1993) factors: RMRF (value-weighted market return minus the risk-free rate), SMB (small minus large firm returns), HML (value versus growth firm returns), and the momentum factor (UMD) of Carhart (1997). We calculate *SMB*, *HML*,

and *UMD* for the French, German and UK stock market using the definitions of Rouwenhorst (1999).

We run the following regression for each country:

$$R_t = \alpha + \beta_1 (\text{RMRF}_t) + \beta_2 (\text{SMB}_t) + \beta_3 (\text{HML}_t) + \beta_4 (\text{UMD}_t) + \varepsilon_t, \quad (1)$$

where  $R_t$  is the excess return to a portfolio of stocks in month  $t$ , and the monthly average abnormal return is captured by  $\alpha$ .

To study the return differences between portfolios of family versus non-family firms we use two approaches, the four-factor model and the Fama-MacBeth approach. In the four-factor model approach described above, we form monthly portfolios of family firms and non-family firms, using equal-weighting. Except for the US, the portfolio compositions do not change because of family status changes since we only have that information at one point in time during the sample period. However, there are changes in the composition of the portfolio from the fact that firms de-list (e.g., because they go private, are taken over or go bankrupt).<sup>8</sup> We then take the difference in monthly returns between the two portfolios, i.e., going long in the family firm portfolio and short in the non-family portfolio as  $R_t$ .

Secondly, we report results of Fama-MacBeth type regressions to answer the question whether there is a significant difference in returns between family and non-family firms controlling for more than the four-factors. The regression specification follows Gompers et al. (2003). We use the market value as a proxy for size effects, the book-to-market ratio as a proxy for the HML factor, three variables for returns over the

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<sup>8</sup> Using the sample of Sraer and Thesmar (2005) for France where survivorship is not an issue, we find that there is no impact on the conclusions drawn from our particular sample construction.



months  $-3$  to  $-2$ ,  $-6$  to  $-4$  and  $-12$  to  $-7$  prior to the month of analysis (as a proxy for UMD). Furthermore, we include the stock price level, volume (expressed as the logarithm of Euro (Pence; \$) trading volume in month  $t-2$ ), and the dividend yield in the prior fiscal year. A second specification adds ROA, one year sales growth, leverage (long-term debt/assets), return volatility (measured as the standard deviation of monthly stock returns over the previous 60 months), total assets and firm age.

### **3.3 Family firm stock return analysis**

In Table 3 we show the number of firms per country that are classified as family versus non-family firms. These numbers represent the firms at the beginning of the sample period, except for the UK where they represent the status in 1998. Over time fewer firms are in our sample because we do not replace firms that de-list. For example, for France, we start with 246 firms in December 1993 and end with 124 firms in December 2002.<sup>9</sup>

The total shareholder return (TSR) is the return to an equally-weighted portfolio invested in either family or non-family firms at the beginning of the sample period. The portfolios are rebalanced monthly to adjust for de-listings. We find that the average TSR over the sample period is significantly higher for family firms in France and the UK. The median TSR is only significantly higher in France. German and US firms do not display any significant differences between family versus non-family returns. In untabulated results, we find that French family firms significantly outperform non-family firms in 1994, 1996, 1998, 1999 and 2002, while non-family firms perform significantly better only in 1997. In the UK, family firms have a significantly higher TSR in 1994 and 1999

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<sup>9</sup> For our French sample we investigate how many firms change family status during the 10-year period and find 6 changes only. As we show below, using a survivorship free sample of French companies does not change the inferences drawn from our sample.

but a significantly lower TSR in 1995 and 1997. In Germany family firm TSR is significantly higher only in 1994 but lower in 1999. However, those returns might be commensurate with the risks of the stock. For example, we show in Table 3 that family firms, on average, are significantly smaller, have a lower trading volume and, a lower dividend yield (except in Germany). This suggests, that when we compare the performance of family to non-family firms, we should control for those factors too.

Table 4 shows the results of the four-factor model regressions. Our primary interest is to investigate whether family firms experience abnormal returns over the sample period relative to the four-factor benchmark model. We find that alpha is not significant in any of the four countries. In France (Germany, UK, US), the monthly average abnormal return is  $-0.09\%$  ( $0.31\%$ ,  $-0.43\%$ ,  $0.00\%$ ) with a p-value of  $0.77$  ( $0.37$ ,  $0.20$ ,  $0.62$ ). Therefore, we cannot reject the null hypothesis of no abnormal returns for family firms during the sample period. We believe this is an important finding. To the extent that family firms, over time, naturally move from founder to heir or professional control, it does not seem that the findings of Amit and Villalonga (2005) of a lower Tobin's Q in heir managed firms can be explained by abnormal stock market performance. This could have been a possible explanation in that family firms might have, suboptimally, chosen a heir to run the firm. If the market did not anticipate this, on average, we should observe a negative abnormal return to justify the drop from high to low Tobin's Q, especially measured in comparison with non-family firms. The explanation for the change in Q might however be found in the differences in the risk exposures chosen by family firms relative to non-family firms.

### **3.4 Family firm versus non-family firm analysis**

In this section we compare the stock returns of family firms to non-family firms. Results are shown in Table 4. For each country we report the four-factor model regression for the portfolio long in family and short in non-family firms. We find no significantly different monthly abnormal return between family and non-family firms in Germany, the UK and US. However, the results for the French sample indicate that family firms outperform non-family firms by 0.46% per month (significant at the 5% level). Given that family firms do not display a significant abnormal return, the finding is driven by an underperformance of French non-family firms. As shown in Table 4, the four-factor regression for non-family firms leads indeed to a negative alpha of  $-0.55\%$  with a p-value of 0.054.

Before we come back to have a closer look at the differences in risk between family and non-family firms, we proceed with some robustness tests. As our univariate comparison has shown, family firms display significantly different characteristics. In addition to the variables mentioned above, we also find that family firms are not represented in all industries in equal proportion. For example, as shown in Figure 1, in the UK and Germany, no family firm is represented in the utilities industry. On the other hand, no non-family firm is in the information technology industry in Germany and all non-cyclical services are owned by family firms in France. To the extent that these differences potentially affect the expected return and are not captured in the four-factor model, we follow Gompers et al. (2003) and use a Fama-MacBeth regression to control for additional factors. In particular, we compute returns relative to the industry median to take industry choice effects into account. In Table 5 we find that the family firm dummy is still significant, but again only in France. The economic magnitude has even increased

slightly from an average monthly abnormal return of 0.46% using the four-factor model to 0.65%.

An additional concern is whether the abnormal return is an artifact of our sample selection. We address this issue for the French sample by using the data of Sraer and Thesmar (2005). They collect family firm data in 1999 and add firms to their sample that de-listed between 1994 and 1999. They also determine the family status every year from 1994-2000. In order to compare results with our 246 firm French sample, we choose a subsample that contains the largest 245 firms out of the 576 firms for which we could gather complete data. The result is shown in Table 6. Again, we find a significant positive abnormal return for family firms relative to non-family firms. Again, the difference comes from the fact that non-family firms underperform the four-factor model significantly. The conclusion we draw from this analysis is that large French non-family firms are underperforming the four-factor model. However, family firms are, on average, priced according to the factor model. Since we have focused on large firms in our tests, it is possible that adding smaller firms will affect the results. As shown in Table 6, using the full sample of 576 firms of Sraer and Thesmar (2005), we find no significant difference between family and non-family firms anymore.<sup>10</sup> This suggests that large non-family firms in France are responsible for the significant abnormal return difference. This is important as it implies that family firms are not the ones mispriced. In fact their stocks are priced well according to a four-factor model.

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<sup>10</sup> Notice that both, the portfolio of family as well as non-family firms display negative abnormal returns. However, only the one of non-family firms is significant. Using the full sample of 576 firms, the alpha is marginally significantly negative. However, using the sample on which we base the calculation of the factors, we do not find a significant alpha, indicating that the four-factor model does describe the variation in returns of the full stock market sample well.

The second finding in Tables 4 and 6 is that family and non-family firms seem to have significantly different risk exposures. When comparing the risk exposures for France, let us focus on the full French sample in Table 6 where there is no significant abnormal return difference between family and non-family firms, and results from Table 4 for Germany, the UK and the US.

We find that family firms in the European countries display a significantly higher (lower) factor loading on the size (HML) factor. The exposure to the momentum factor (UMD) is significantly lower in Germany (at the 10% level) and the UK (at the 1% level), but not in France. Interestingly, in none of these three countries do we find a significantly different exposure to the market. In the US, however, the only significantly different exposure is with respect to the market: Family firms display a lower beta. Our findings suggest that to the extent that standard performance measures such as ROA and Tobin's Q are different between family and non-family firms, these might be driven by differences in the risk exposures. The market does price those correctly, on average, at least during the sample period and the four countries we investigate.

### ***3.5 Founder, heir and professional CEO in family firms***

Anderson and Reeb (2003a), Amit and Villalonga (2005) and Fahlenbrach (2005) all conclude that performance is affected by who is the CEO of the company. In particular, Fahlenbrach (2005) finds abnormal stock returns using a four-factor model for a US sample of founder CEO firms. Anderson and Reeb (2003a) and Amit and Villalonga (2005) find that Tobin's Q is significantly higher in founder CEO firms than in heir managed firms. In addition founder CEO firms have an average Tobin's Q that is above the non-family firm's TQ, while heir managed firms have one that is below.

We ask whether such subsamples of family firms display abnormal returns. We use the sample of Sraer and Thesmar (2005) for France to investigate this question.<sup>11</sup> In 1999, there are 167 non-family firms, 166 founder, 113 heir and 76 professional CEO managed family firms for a total, in that year, of 522 companies. Other years have a different number of observations. In total there are 576 different firms in their sample for which we could find sufficient data to run the tests. In Table 7 we report that none of the three subgroups display a significant abnormal return. These results are thus in stark contrast to Fahlenbrach's (2005) finding of a significant positive abnormal return in the US for founder CEO firms. It also suggests, that to the extent that Tobin's Q drops from the founder to the heir or professional CEO, that this change is not a surprise to the market that would be reflected in a significant abnormal return. Rather it hints at the possible explanation that who manages the firm affects the risks that are taken. In particular, if we compare the risk exposures of the founder to the heir managed firms, we find a stark difference. Founder firms relative to non-family firms exhibit a significantly higher exposure to the SMB and UMD factor and a significantly lower exposure to HML. The exposure to the market is higher but with a p-value of 0.13 insignificant. Heir managed firms, however, display a marginally significantly lower exposure to the market and a higher exposure to SMB while professional CEO family firms display no significant difference in their risk exposure relative to non-family firms. Thus, to the extent that the family chooses who is managing the family business, it affects the risks that are being taking within the company. Founder CEOs tend to be running small, growth firms with higher risk exposure. Heir managed firms are also smaller firms and

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<sup>11</sup> We thank Sraer and Thesmar for sharing their data. We do not have a similar sample for Germany, the UK and the US.

one explanation could be lower risk taking. In particular, the market exposure drops significantly and the exposure to growth is not different from non-family firms anymore. Once a professional CEO takes over, the company seems to be managed like a non-family firm in terms of exposure to risks.

## **4 Conclusion**

We find that family firms in France, Germany, the UK and the US do not fare worse on the dimensions of Tobin's Q and ROA relative to non-family firms. In addition their stock returns are well explained by a four-factor model as well as a multifactor model based upon Fama-MacBeth type regressions. In contrast to findings by Fahlenbrach (2005) for the US, we do not find that in France founder CEO firms display significant abnormal returns. However, we do find that who manages the family firm results in significantly different risk exposures of the family firm relative to non-family firms. Founder family firms display different exposures to three of the four factors. Heir managed family firm to the market and the size factor but the exposure of professional CEO family firms is not different from non-family firms. These different exposures seem to be at the heart of differences in ROA and Tobin's Q and may be one reason why Amit and Villalonga (2005) find a significant drop in these two variables from founder to heir managed family firms.

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**Table 1: Difference of Median and Mean Tests for ROA, TQ and Control Variables–  
Family vs. Non-Family**

This table presents tests for differences in the median and mean values of firm performance and control variables between family and non-family owned firms in each country. Values are calculated in local currency using the cross-sectional median (mean) of firm time-series averages from December 1993 – December 2002 (for US: 1992-2000), except French sales growth which was available from 1994. *ROA* denotes Return on Assets, measured as net income divided by total assets. *Tobin's Q* is the ratio of the market value of assets to the book value of assets. Our proxy for the market value of assets is the sum of the book value of assets and the market value of the common stock less the book value of the common stock. *LT Debt/Total Assets* is the book value of long-term debt divided by total assets. *Total Assets* is the total assets. *Firm Age* is the number of years since the firm was created. *Sales Growth* is sales in the current year divided by sales of the previous year. *Return Volatility* is the standard deviation of monthly stock returns for the previous 60 months. \*Indicates significance at the one percent (\*\*\*), five percent (\*\*) and ten percent (\*) levels, based on the non-parametric Wilcoxon test for medians, and the t-statistic assuming unequal variances for the means.

		France		Germany		UK	
		Family	Non-Family	Family	Non-Family	Family	Non-Family
No. Firms with ROA Data		115	122	83	131	81	165
<b>Firm Performance</b>							
ROA (%)	Median	3.03	2.13***	2.41	1.36***	4.59	4.76
	Mean	3.42	1.39***	2.59	1.51**	4.70	4.99
Tobin's Q	Median	1.14	1.13	1.33	1.18***	1.53	1.44
	Mean	1.36	1.27*	1.56	1.39**	2.68	1.85*
<b>Control Variables</b>							
LT Debt / Total Assets (%)	Median	11.70	13.19	9.24	6.15	15.55	14.20
	Mean	12.89	16.92**	10.66	9.53	18.59	16.63
Total Assets (millions)	Median	1,335.98	1,620.91	656.11	2,020.27***	1,428.08	2,518.98***
	Mean	3,497.91	23,829.40***	2,701.98	27,153.71***	2,720.98	17,606.71***
Firm Age (years)	Median	40.25	39.75	NA	NA	NA	NA
	Mean	47.27	43.50				
Sales Growth	Median	1.10	1.05***	1.06	1.05	1.12	1.08**
	Mean	1.26	1.34	1.32	1.89	1.27	1.28
Return Volatility (%)	Median	8.82	8.44	8.77	7.78***	9.15	7.90***
	Mean	8.89	9.14	9.23	7.93***	10.10	8.33***

		US	
		Family	Non-Family
No. Firms with ROA Data		125	205
<b>Firm Performance</b>			
ROA (%)	Median	6.47	3.75***
	Mean	6.10	3.36***
Tobin's Q	Median	1.72	1.53**
	Mean	2.02	1.85**
<b>Control Variables</b>			
LT Debt / Total Assets (%)	Median	15.45	17.61**
	Mean	17.18	19.07**
Total Assets (millions)	Median	2,504	4,914**
	Mean	8,464	13,184**
Firm Age (years)	Median	NA	NA
	Mean		
Sales Growth	Median	1.079	1.052**
	Mean	1.090	1.067**
Return Volatility (%)	Median	7.97	8.15
	Mean	8.85	8.94

**Table 2: ROA, Tobin's Q and Family Ownership**

This table reports results of two-way fixed effects regression models of firm performance on family ownership and control variables. The models were run over the December 1993 – December 2002 time period, except France (US) which was run over the 1994-2002 (1992-2000) time period. *ROA* denotes Return on Assets, measured as net income divided by total assets. *Tobin's Q* is the ratio of the market value of assets to the book value of assets. Our proxy for the market value of assets is the sum of the book value of assets and the market value of the common stock less the book value of the common stock. *Family Firm* is a binary variable that equals one when the firm is family-owned. *Sales Growth* is sales in the current year divided by sales of the previous year. *LT Debt/Total Assets* is the book value of long-term debt divided by total assets. *Return Volatility* is the standard deviation of monthly stock returns for the previous 60 months. *Ln(Total Assets)* is the natural log of total assets. *Ln(Firm Age)* is the natural log of the number of years since the firm was created. All regressions include dummy variables for the Level 3 Datastream industry codes (US: two-digit SIC) and for each year of the sample period. The standard errors are corrected using the Huber White Sandwich estimator and firm level clustering. *t*-values are in parentheses. \* Indicates significance at the one percent (\*\*\*), five percent (\*\*) and ten percent (\*) levels.

	ROA				Tobin's Q			
	France	Germany	UK	US	France	Germany	UK	US
Family Firm	0.025 * (1.88)	0.008 (1.32)	0.001 (0.13)	0.012*** (3.82)	-0.069 (0.76)	0.123 (1.51)	0.056 (0.27)	0.052 (1.33)
Sales Growth	0.0005*** (2.77)	0.0001*** (6.34)	-0.00004 (0.21)	0.025*** (2.96)	0.004*** (5.84)	0.001 *** (5.79)	0.003 (0.73)	1.008*** (9.90)
LT Debt/Total Assets	-0.066 *** (2.57)	-0.003 (0.06)	-0.054 (1.50)	-0.149*** (12.15)	-0.565 *** (2.87)	-0.858 *** (3.91)	0.873 (0.65)	-1.665*** (11.44)
Return Volatility	-0.256 (1.47)	-0.231 (1.49)	-0.690 *** (4.37)	-0.647*** (12.47)	-0.818 (1.45)	-2.212 ** (2.16)	9.582 (0.98)	-1.059* (1.71)
Ln (Total Assets)	-0.003 (1.22)	-0.003 (1.83)	-0.011 *** (5.12)	-0.005*** (3.16)	-0.036 (1.61)	-0.102 *** (2.77)	-0.269 *** (4.31)	-0.067*** (3.91)
Ln (Firm Age)	0.003 (0.48)	–	–	–	-0.069 (0.85)	–	–	–
Adjusted R square	0.079	0.039	0.165	0.167	0.147	0.315	0.203	0.139
No. of observations	1446	1812	2068	2212	1447	1806	2066	2212

**Table 3: Difference of Median and Mean Tests for TSR and Control Variables  
– Family vs. Non-Family**

This table presents tests for differences in the median and mean values of total shareholder return and control variables between family and non-family owned firms in each country. Values are calculated in local currency using the cross-sectional median (mean) of firm time-series averages over the January 1994 – December 2002 period (US: 1992-2000). The starting point of our stock market analyses is January 1994 because our samples begin at the end of December 1993 and the December 1993 return index is used to calculate the Total Shareholder Return for the month of January 1994. *TSR* is the monthly total shareholder return. *Market Value* is the market value in millions of local currency. *Book to Market Value* is the ratio of book value of common stock to the market value of common stock. *Price* is the share price in local currency. Price is shown in euros for France and Germany, pounds sterling for the UK and dollars for the US. *Volume* is the currency volume of trading and is the price multiplied by the volume traded. *Dividend Yield* is the dividend per share as a percentage of share price. \*Indicates significance at the one percent (\*\*), five percent (\*\*\*) and ten percent (\*) levels, based on the non-parametric Wilcoxon test for medians, and the t-statistic assuming unequal variances for the means.

		France		Germany		UK	
		Family	Non-Family	Family	Non-Family	Family	Non-Family
No. Firms with TSR Data		120	126	84	132	81	166
<b>Firm Performance</b>							
TSR (%)	Median	1.51	1.23 ***	0.59	0.77	1.14	1.10
	Mean	1.52	1.14 ***	0.49	0.69	1.40	1.13 **
<b>Control Variables</b>							
Market Value (millions)	Median	759.85	609.89	274.85	944.88 ***	1105.95	2100.29 ***
	Mean	2115.94	3558.58 **	1623.52	3596.03 ***	1965.21	6581.31 ***
Book to Market Value	Median	0.70	0.77	0.45	0.50	0.41	0.45
	Mean	0.70	1.24	0.51	0.54	0.49	0.52
Price	Median	50.43	45.54 *	28.33	42.67 *	3.30	3.98
	Mean	95.72	70.58 *	84.91	148.53 ***	4.12	4.96 *
Volume (millions)	Median	11.93	12.66	11.47	21.76 *	77.06	197.00 ***
	Mean	89.64	222.47 ***	312.31	667.04 *	149.00	376.00 ***
Dividend Yield (%)	Median	2.94	4.00 ***	2.00	2.03	3.14	3.49
	Mean	3.46	5.85 ***	2.10	2.13	3.17	3.59 **
<hr/>							
		US					
		Family	Non-Family				
No. Firms with TSR Data		125	205				
<b>Firm Performance</b>							
TSR (%)	Median	1.05	1.33				
	Mean	1.22	1.33				
<b>Control Variables</b>							
Market Value (millions)	Median	3160	4340***				
	Mean	7332	10699***				
Book to Market Value	Median	0.577	0.654***				
	Mean	0.591	0.635***				
Price	Median	37.92	42.67***				
	Mean	41.52	45.46***				
Volume (millions)	Median	52.73	85.57***				
	Mean	136.84	154.48				
Dividend Yield (%)	Median	1.66	2.02***				
	Mean	1.74	1.99***				

**Table 4: Performance-Attribution Regression Results of Equal-Weighted Portfolios**

This table presents the coefficients and significance levels of the performance attribution regressions for the French, German, UK and US samples. These regressions are based on 108 observations - one for each month in the 9 year time period between January 1994 and December 2002 (US: 96 months from January 1992 to December 1999). *Alpha* is the abnormal return. *RMRF* is the value-weighted market return minus the risk free rate. *SMB* and *HML* are the two Fama and French size and book-to-market factors, while *UMD* is Carhart's momentum factor. For France, Germany, and the UK, we calculate *RMRF*, *SMB*, *HML*, and *UMD* separately for each country using the definitions of Rouwenhorst (1999). We form each country's total market using all companies in Datastream's dead and active lists for that country. Thus the total French market is based on 2189 firms, the total German market 4761 firms, and the total UK market 4271 firms. For the US we use the standard Fama-French and Carhart factors.

Country	Excess Return	Adj. R <sup>2</sup>	Alpha	RMRF	SMB	HML	UMD
France	Family – Risk Free	0.61	-0.09 (0.771)	<b>0.64</b> (0.0001)	-0.02 (0.874)	0.01 (0.879)	-0.09 (0.065)
	Non-Family – Risk Free	0.69	-0.55 (0.054)	<b>0.74</b> (0.0001)	-0.02 (0.814)	0.03 (0.525)	-0.04 (0.349)
	<b>Family – Non-Family</b>	0.02	<b>0.46</b> (0.046)	-0.10 (0.116)	0.01 (0.938)	-0.02 (0.562)	-0.05 (0.183)
Germany	Family – Risk Free	0.46	0.31 (0.370)	<b>0.32</b> (0.0001)	-0.01 (0.951)	<b>0.25</b> (0.0001)	-0.04 (0.209)
	Non-Family – Risk Free	0.52	0.49 (0.103)	<b>0.28</b> (0.0001)	-0.13 (0.103)	<b>0.34</b> (0.0001)	-0.01 (0.840)
	<b>Family – Non-Family</b>	0.10	-0.18 (0.422)	0.03 (0.242)	<b>0.12</b> (0.035)	<b>-0.08</b> (0.026)	-0.04 (0.089)
UK	Family – Risk Free	0.72	-0.43 (0.195)	<b>0.86</b> (0.0001)	-0.09 (0.354)	<b>-0.13</b> (0.043)	<b>-0.24</b> (0.0001)
	Non-Family – Risk Free	0.82	<b>-0.55</b> (0.027)	<b>0.89</b> (0.0001)	<b>-0.20</b> (0.007)	0.04 (0.391)	<b>-0.14</b> (0.005)
	<b>Family – Non-Family</b>	0.19	0.11 (0.560)	-0.03 (0.503)	0.11 (0.069)	<b>-0.17</b> (0.0001)	<b>-0.11</b> (0.005)
US	Family-Risk Free	0.89	0.0007 (0.62)	<b>0.9649</b> (0.01)	<b>0.1302</b> (0.01)	<b>0.1249</b> (0.02)	<b>-0.3033</b> (0.01)
	Non Family-Risk Free	0.90	0.0013 (0.36)	<b>1.0371</b> (0.01)	<b>0.1565</b> (0.01)	<b>0.2042</b> (0.01)	<b>-0.3415</b> (0.01)
	<b>Family – Non-Family</b>	0.01	-0.0006 (0.70)	-0.0722 (0.09)	-0.0263 (0.56)	-0.0793 (0.16)	0.0382 (0.38)

### Table 5: Fama-MacBeth Return Regressions

This table presents the average coefficients and time series standard errors for 108 equally weighted cross-sectional regressions for each month from January 1994 through December 2002 (US: 96 months from January 1992 to December 1999), except the second model using French accounting data, which was run from January 1995- December 2002 due to the missing 1993 sales growth variable. Regressions are run separately for each country. The dependent variable is industry-adjusted stock returns for month  $t$ . Industry adjustment is done by subtracting the appropriate average industry return from each firm's stock return each month. We calculated the average industry returns for each country using all equities quoted in Datastream during this time period (US: All firms listed in Compustat). *Family* is 1 if family and 0 otherwise. *Market Value* is the ln of the market value in millions of local currency at the end of month  $t - 1$ . *Book to Market Value* is the ln of the ratio of book value of common stock to the market value of common stock for the previous year. *Price* is the ln of the price in local currency at the end of month  $t - 2$ . Price is in euros for France and Germany, pence for the UK, and dollars for the US. *Volume* is the ln of the currency volume of trading (in thousands) in month  $t - 2$ . Currency volume is the price multiplied by the share volume. *Dividend Yield* is the dividend per share as a percentage of share price for the previous year. *Return2-3* is the ln of the compounded gross returns for months  $t-3$  and  $t-2$ . *Return4-6* is the ln of the compounded gross returns for months  $t-6$  through  $t-4$ . *Return7-12* is the ln of the compounded gross returns for months  $t-12$  through  $t-7$ . *ROA* denotes Return on Assets, measured as net income divided by total assets. *Sales Growth* is the sales growth during the previous year. *LT Debt/Total Assets* is the book value of long-term debt divided by total assets. *Return Volatility* is the standard deviation of monthly stock returns for the previous 60 months. *Total Assets* is the natural log of total assets. *Firm Age* is the natural log of the number of years since the firm was created. Significance at the 1%, 5% and 10% levels is indicated by \*\*\*, \*\* and\*, respectively.

Table 5: continued

	France		Germany		UK		US	
	(1)	(2)	(1)	(1)	(2)	(2)	(1)	(2)
<b>Family</b>	0.65 *** (0.18)	0.64 *** (0.19)	0.07 (0.16)	0.03 (0.13)	-0.07 (0.15)	0.01 (0.15)	0.001 (0.001)	0.001 (0.001)
<b>Market Value</b>	0.03 (0.12)	-0.21 (0.19)	0.10 (0.08)	-0.32 ** (0.16)	-0.30 (0.27)	0.23 ** (0.12)	-0.001 (0.002)	-0.013*** (0.003)
<b>Book to Market Value</b>	0.18 * (0.12)	0.12 (0.17)	0.10 (0.14)	-0.23 ** (0.12)	-0.27 *** (0.11)	0.19 (0.16)	0.003 (0.005)	-0.026** (0.010)
<b>Price</b>	-0.12 * (0.09)	-0.19** (0.10)	-0.15 (0.07)	-0.45 *** (0.11)	-0.44 *** (0.11)	-0.14 ** (0.07)	-0.002 (0.002)	-0.003* (0.002)
<b>Volume</b>	0.01 (0.06)	0.02 (0.08)	-0.02 (0.06)	0.11 (0.11)	0.03 (0.13)	-0.02 (0.05)	0.002 (0.002)	0.004** (0.002)
<b>Dividend Yield</b>	0.04 (0.03)	0.03 (0.04)	-0.004 (0.06)	0.02 (0.05)	-0.01 (0.06)	-0.01 (0.06)	-0.004 (0.060)	-0.055 (0.052)
<b>Return2-3</b>	-2.63 ** (1.21)	-4.36 *** (1.28)	-4.68 *** (1.22)	-4.10 *** (1.18)	-4.65 *** (1.22)	-5.44 *** (1.21)	-0.025* (0.015)	-0.019 (0.014)
<b>Return4-6</b>	0.96 (0.93)	0.55 (1.00)	2.51 *** (0.80)	0.88 (0.86)	0.12 (0.80)	2.08 *** (0.82)	0.001 (0.017)	0.004 (0.016)
<b>Return7-12</b>	1.58 *** (0.68)	1.14 * (0.73)	1.93 *** (0.49)	2.01 *** (0.58)	1.72 *** (0.57)	1.57 *** (0.50)	0.076*** (0.020)	0.091*** (0.019)
<b>ROA</b>	-	9.61 *** (2.77)	-	-	0.17 (1.55)	5.92 *** (2.04)	-	0.013 (0.015)
<b>Sales Growth</b>	-	-0.22 (0.19)	-	-	-0.06 (0.21)	0.41 ** (0.24)	-	0.003 (0.004)
<b>LT Debt/Total Assets</b>	-	-0.02 *** (0.01)	-	-	-0.96 ** (0.58)	-0.23 (0.64)	-	-0.007 (0.005)
<b>Return Volatility</b>	-	-2.09 (5.22)	-	-	4.82 (6.02)	2.91 (5.36)	-	-0.109*** (0.034)
<b>Total Assets</b>	-	0.33 *** (0.14)	-	-	0.11 (0.17)	-0.11 (0.09)	-	0.010*** (0.003)
<b>Firm Age</b>	-	-0.16 (0.14)	-	-	-	-	-	-
<b>Intercept</b>	-0.64 (0.71)	-0.39 (1.17)	-0.04 (0.75)	2.94 *** (1.09)	3.23 *** (1.09)	-0.66 (1.10)	-0.005 (0.019)	0.056*** (0.020)



**Table 6: Performance-Attribution Regression Results of Equal-Weighted Portfolios  
Survivor Bias Free French Sample January 1994 – December 2000**

This table presents the coefficients and significance levels of the performance attribution regression for the survivor bias free French sample of Sraer and Thesmar. Sraer and Thesmar provided us with yearly ownership data for 685 firms quoted at some time over the 1994 through 2000 time period. Their definition of family ownership is if the firm's main shareholder is a single family that controls at least 20% of the shares. Of these 685 firms, we were able to find monthly total shareholder return data on Datastream for 576. In order to compare results with our 246 firm French sample, we also analyzed the top 245 firms of the Sraer and Thesmar sample separately. There is some overlap in the two French samples, 126 firms in the Sraer and Thesmar Top 245 sample are also present in our French sample. These regressions are based on 84 observations - one for each month in the 7 year time period. *Alpha* is the abnormal return. *RMRF* is the value-weighted market return minus the risk free rate. *SMB* and *HML* are the two Fama and French size and book-to-market factors, while *UMD* is Carhart's momentum factor. We calculated *RMRF*, *SMB*, *HML*, and *UMD* separately for each country using the definitions of Rouwenhorst (1999). We formed each country's total market using all companies in Datastream's dead and active lists for that country. Thus the total French market is based on 2189 firms, the total German market 4761 firms, and the total UK market 4271 firms.

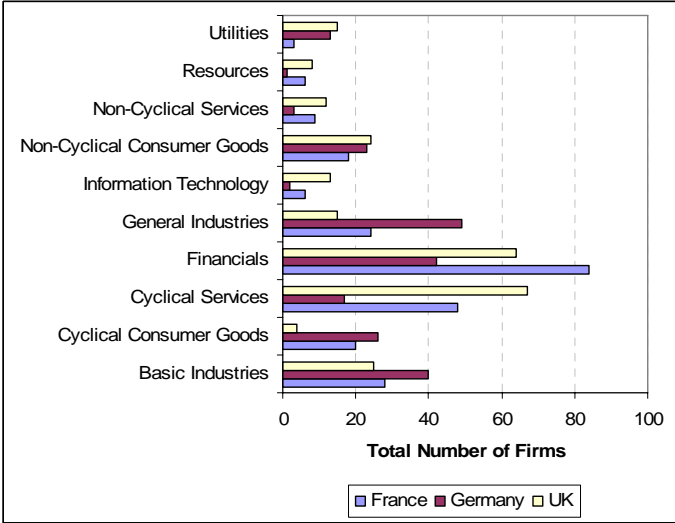
<b>Sample</b>	<b>Excess Return</b>	<b>Adj. R<sup>2</sup></b>	<b>Alpha</b>	<b>RMRF</b>	<b>SMB</b>	<b>HML</b>	<b>UMD</b>
<b>Top 245</b>	Family – Risk Free	0.60	-0.24 (0.536)	<b>0.78</b> (0.0001)	0.20 (0.123)	<b>-0.24</b> (0.001)	0.002 (0.974)
	Non-Family – Risk Free	0.66	<b>-0.94</b> (0.008)	<b>0.83</b> (0.0001)	0.02 (0.843)	-0.10 (0.103)	-0.06 (0.346)
	<b>Family – Non-Family</b>	0.23	<b>0.70</b> (0.011)	-0.05 (0.554)	<b>0.17</b> (0.046)	<b>-0.14</b> (0.002)	0.07 (0.204)
<b>Full Sample</b>	Family – Risk Free	0.55	-0.62 (0.109)	<b>0.74</b> (0.0001)	<b>0.46</b> (0.0001)	<b>-0.26</b> (0.0001)	-0.01 (0.944)
	Non-Family – Risk Free	0.58	<b>-0.69</b> (0.045)	<b>0.75</b> (0.0001)	0.16 (0.147)	-0.09 (0.115)	-0.07 (0.299)
	<b>Family – Non-Family</b>	0.41	0.07 (0.753)	-0.01 (0.877)	<b>0.30</b> (0.0001)	<b>-0.17</b> (0.0001)	0.06 (0.147)

**Table 7: Performance-Attribution Regression Results of Equal-Weighted Portfolios for Founder, Heir and Professional CEOs of Family-Owned Firms, January 1994 – December 2000**

This table presents the coefficients and significance levels of the performance attribution regressions for the French sample of Sraer and Thesmar for different management categories of family-owned firms. Sraer and Thesmar provided us with yearly ownership data for 685 firms quoted at some time over the 1994 through 2000 time period. Of these 685 firms, we were able to find monthly total shareholder return data on Datastream for 576. Sraer and Thesmar’s definition of family ownership is if the firm’s main shareholder is a single family that controls at least 20% of the shares. They also collected yearly data about the CEO of the family firms. Thus the family firm category also contains three sub-categories: founder CEO, heir CEO or professional CEO. The family firm is founder controlled when the founder of the firm still holds the family block and is CEO. The family firm is heir managed when heirs of the founder own the firm and one is the CEO. Finally, the family firm is professionally managed when the family holds the controlling block but the CEO position is held by an outsider. These regressions are based on 84 observations - one for each month in the 7 year time period. *Alpha* is the abnormal return. *RMRF* is the value-weighted market return minus the risk free rate. *SMB* and *HML* are the two Fama and French size and book-to-market factors, while *UMD* is Carhart’s momentum factor. We calculated *RMRF*, *SMB*, *HML*, and *UMD* separately for each country using the definitions of Rouwenhorst (1999). We formed each country’s total market using all companies in Datastream’s dead and active lists for that country. Thus the total French market is based on 2189 firms, the total German market 4761 firms, and the total UK market 4271 firms.

<b>Excess Return</b>	<b>Adj. R<sup>2</sup></b>	<b>Alpha</b>	<b>RMRF</b>	<b>SMB</b>	<b>HML</b>	<b>UMD</b>
Founder CEO – Risk Free	0.63	-0.66 (0.158)	<b>0.88</b> (0.0001)	<b>0.72</b> (0.0001)	<b>-0.47</b> (0.0001)	0.06 (0.506)
<b>Founder CEO – Non-Family</b>	0.63	0.03 (0.917)	0.13 (0.131)	<b>0.57</b> (0.0001)	<b>-0.38</b> (0.0001)	<b>0.13</b> (0.028)
Heir CEO – Risk Free	0.38	-0.44 (0.235)	<b>0.64</b> (0.0001)	<b>0.30</b> (0.013)	-0.04 (0.506)	-0.05 (0.515)
<b>Heir CEO – Non-Family</b>	0.23	0.25 (0.292)	-0.11 (0.105)	0.14 (0.065)	0.05 (0.216)	0.02 (0.632)
Professional CEO – Risk Free	0.45	-0.63 (0.109)	<b>0.70</b> (0.0001)	0.21 (0.092)	-0.07 (0.262)	-0.07 (0.353)
<b>Professional CEO – Non-Family</b>	0.001	0.07 (0.803)	-0.05 (0.479)	0.05 (0.543)	0.02 (0.691)	-0.001 (0.983)

**Figure 1a: Total Number of Firms per Industry in each Country**



**Figure 1b: % of Family-Owned Firms per Industry in each Country**

