Founding family ownership,

stock market performance and agency problems

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Abstract

This paper explores the relationship between founding family ownership and stock market performance. Using a comprehensive sample of firms listed on the Swiss stock market over the period 2003-2013, we find that stock returns of family firms are significantly higher than those of non-family firms. Since families usually hold a large stake in the firm, we relate this result to the risk of potential expropriation faced by investors. This assumption is confirmed by the fact that the outperformance of family firms is related to the stake of the family. We also document that family firms tend to surprise the market more positively than other firms when they announce their earnings and that the magnitude of surprise is also related to the family stake. These results show that the abnormal stock returns of family firms can be explained by investors' skepticism and the fact that market participants are systematically positively surprised by firms where agency problems are potentially more severe.

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1. Introduction

For more than a decade, the impact of family ownership and control on the performance of publicly listed companies has received extensive attention in the academic literature. A large fraction of this literature focuses on performance metrics related to the profitability (ROA) or valuation ratios (Tobin's Q). However, the academic evidence on the stock market performance of these firms is much more limited, although it is of prime importance for investors. Our paper fills this gap by proposing a detailed analysis of the stock returns of family-owned firms compared to the rest of the market. Using a comprehensive sample of non-financial firms on the Swiss market, we find that family ownership has a beneficial impact and that these firms deliver higher stock market returns than non-family firms. The outperformance of these firms ranges between 4% and 7% per annum depending on the way risk is adjusted.

The reason why stock returns of family owned firms have received little attention so far might be found in the strong belief in market efficiency. Characteristics such as ownership structure, and in particular the identity of the controlling shareholder, if any, is public information, and this feature should be integrated into stock market prices. There is no reason to believe that choosing stocks based on this information might lead to superior returns. However, the recent literature has shown that strategies using public information can offer superior returns on the stock market. Edmans (2011) shows that a strategy based on a publicly disclosed index of employee satisfaction (Forbes 100 best companies to work for) leads to positive abnormal returns. Von Lilienfeld-Toal and Ruenzi (2014) document that choosing stock of companies with high CEO ownership also leads to significant outperformance. The common explanation to both papers is that the market does not fully value these features as they are difficult to appraise quantitatively. These two features (employee satisfaction and CEO ownership) might by proxies for specific firm features that market participants are unable to value properly.

The eventual impact of family ownership on returns is also related to some improperly assessed effort. However, the concentration of ownership in family hands may not only have positive effects. It has various implications on agency costs and hence on the profitability of the company and its perception by market participants. On the one side, ownership by families

reduces conflict of interest problems between managers and shareholders (agency problems I). Hence, families seek the long-term sustainability of their companies and, by their dominant position, can challenge any decisions, not in this direction. This behavior can be value creating for the company and its shareholders. On the other side, the presence of a large shareholder generates conflicts of interest between minority and majority shareholders (agency problems II). This last one can use its power to extract private benefits, which reduces the value of the company. These two opposing forces might vary from company to company and depend on different characteristics of the firms. Typically, the generation of the family or the active involvement of the family in the management, have been documented to have an impact on different metrics of performance.

This paper analyses panel data over the period of January 2003 to December 2013 for a sample of 195 companies listed on the SIX Swiss Exchange. Although relatively small in the number of listed companies (232 domestic companies in 2015), the Swiss market is one of the ten largest financial centers in the world regarding market capitalization. It is characterized by a high ownership concentration and the presence of many family firms. La Porta et al. (1998) attribute to Switzerland a score of 2 out of 5 for their anti-director rights index. Minority shareholders are therefore poorly protected by law. However, to attract foreign investors as well as expand their market internationally, Swiss companies voluntarily adopt good governance practices. Switzerland represents an interesting case as it provides a good balance between relatively poor investor protection with weak market regulations offering firms much flexibility for their actions.

We study the impact of ownership structure on stock returns using different methodologies. We first analyze stock returns performance by taking into account industry and firm characteristics by using Fama-MacBeth and pooled panel regression approaches. We also use the approach developed by Gompers et al. (2003) where we build y portfolios with securities comprising the same structural ownership features such as family firms, widely held firms or firms at the founder stage to just name a few. Then, we create self-financing strategies that buy one type of portfolio and sell another type. By using the four-factor model of Fama and French (1992, 1993) and Carhart (1997), we control whether the returns of portfolios and strategies are abnormal, that is, if the returns are not explained by the exposure to various risk factors.

The main results of the study show that (1) family firms have higher stock returns than widely held firms and firms with another blockholder, (2) the outperformance of family family firms is related to different factors, such as the stake of the family and the active involvement of the family in the management, (3) investment strategies based on these factors generates

positive abnormal returns, even after taking into account the exposure to risk factors, (4) the results hold after controlling for the impact of industry and firm characteristics. Additional analyses reveal that family firms have larger earnings surprises than other firms and that they translate into higher abnormal returns. These results can be interpreted as a certain skepticism of markets participants on family firms and that investors are regularly (positively) surprised by the economic outcomes produced by family firms.

This paper contributes to the existing literature in two ways. First, this study is to our knowledge the first one to analyze the impact of different characteristics of family firms on stock returns. Unlike previous studies that test only family firms against non-family, our paper tests and compares several strategies and many show significant abnormal returns. Second, this study contributes to the growing literature on features that are not properly assessed by the market and that lead to abnormal returns for investors.

The remainder of this paper is organized as follows: Section 2 provides a literature review on the topic. Section 3 describes the data and variables used in the analysis. Section 4 presents the descriptive statistics and difference in means tests. Section 5 describes the methodology used to test our hypotheses. Section 6 exposes the results. Section 7 summarizes and concludes the study.

2. Literature Review

Academics cite Berle and Means (1932) as the starting point in the debate on ownership and control of firms. They assume that companies in the United States have a widely held ownership, that is, the property of their capital is divided among a large number of small shareholders, while the control is mainly concentrated in the hands of the managers. This divergence between the ownership by a large number of small shareholders and the management by professionals generates agency problems, that is, the extraction of private benefits by managers at the expense of the true owners of the company. This image of the company with a dispersed ownership was the dominant paradigm for decades. However, in the eighties, several authors challenge this view. According to the results of Demsetz (1983), this image of widely held firms concerns only the largest U.S. companies. The United States is not the only country that has drawn the attention of academic research in this area. In the nineties, the ownership structure of many countries has been analysed. The results indicate the presence of large shareholders in many listed companies and that they are usually families. La Porta et al. (1999) fill the lack of a systematic and comparative study by analysing the ownership

structure of the 20 largest listed companies in 27 developed countries. For their entire sample, they find that about 30% of firms have a family owning more than 20% of the voting rights, 34% have another type of large shareholder, and 36% are widely held. They document that concentration is more pronounced in countries with low shareholder protection. Barca and Becht (2001) study the separation between ownership and control in seven European countries. They find that except the UK, all other analysed countries have concentrated ownership, mainly in family hands. Faccio and Lang (2002) and Barontini and Caprio (2006) confirm these results by analysing respectively 13 countries in Western Europe and 11 countries in continental Europe. Claessens et al. (2000) study the ownership structure of 9 countries in East Asia and find that about two-thirds of the firms are controlled by a family or another type of individual. While academics agree on -the fact that ownership is concentrated in a vast majority of countries, except a few countries like the U.S. and the UK. However, more recently, some researchers, such as Anderson and Reeb (2003), Gadhoum et al. (2005), Villalonga and Amit (2009) or Holderness (2009) challenge this point of view. They argue that the ownership structure in the United States differs very little from that of other countries and that about 30-40% of U.S. firms have a family as the main shareholder. For the case of the Swiss market, Isakov and Weisskopf (2014a) provide a comprehensive study. By setting a threshold of 20% of voting rights to define the controlling shareholder, they find that on average 35% of Swiss listed firms are owned by the founding family, 37% are widely held, and 27% are owned by another blockholder.

Parallel to the research on the ownership structure, academics have analysed its relationship with firm performance. The article of Demsetz and Lehn (1985) is one of the first to investigate this link. However, they find no significant relationship between ownership concentration and the accounting rate of return. Morck et al. (1988) and McConnell and Servaes (1990) find a non-linear relationship between ownership structure and firm performance (measured with Tobin's Q). This result clearly shows the dichotomy between two opposed forces. On the one hand, the incentive effect which suggests that the market value is positively affected by a large ownership stake, and on the other hand, the entrenchment effect, which suggests a negative impact. When the ownership stake becomes too high, the entrenchment effect becomes stronger than the incentive effect, thereby reducing the performance of the company. Anderson and Reeb (2003) find that family firms in the S&P500 perform better than non-family firms, which is inconsistent with the hypothesis that minority shareholders are negatively affected by the presence of families in the ownership structure. However, Claessens et al. (2000) find that the use of mechanisms to separate voting rights to cash-flow rights by

families negatively affects firm performance (measured with Tobin's Q and ROA). Moreover, the performance is significantly higher in firms controlled by the founder and those in which descendants seat on the board of directors. Villalonga and Amit (2006) break down family firms according to their generation and to the presence or not of the family in the management. They find that firms in which the founder is active as CEO or director perform better than those run by descendants. Miller et al. (2007) and Fahlenbrach (2009) also highlight the importance played by the founder on the company value, especially when it is the only member involved. Finally, Isakov and Weisskopf (2014a) find that Swiss family firms are more profitable (measured with ROA) than widely held firms and companies with another blockholder. However, their market value (measured with Tobin's Q) is not significantly different. Nevertheless, they find a concave relationship between the stake of voting rights held by families and the market value. Companies held moderately by a family (between 20% and 80% of the voting rights) have a better performance than the ones strongly controlled (>80%). Moreover, by analysing in more detail the impact of different characteristics of family firms on performance, they find that the generation and the active involvement of the family are important factors. When the founder is still active in the company, the two performance measures are significantly positive.

Most of the studies on the relationship between ownership structure and performance use ROA and Tobin's Q as a measure of performance. Only a few ones take the perspective of the investor and analyse the stock returns. Fahlenbrach (2009) find an excess return of 8.3% per annum for a strategy that invests in US companies whose CEO is the founder. Corstjens et al. (2005) show that French family firms have higher stock returns than non-family firms in the nineties. Their results are confirmed by Sraer and Thesmar (2007) who also find a performance in excess in France. Corstjens et al. (2006) extend their previous study to the German, English and American market. According to the performance measure used (ROA, Tobin's Q or stock market returns), they find that family firms never perform worst compared to non-family firms and are more likely to be better. However, only the French market offers significant abnormal returns (0.46% per month). Cella (2009) analyses eight European countries between 1993 and 2006 and find significant abnormal returns for family firms compared to non-family firms. However, there are differences between countries. When taken individually, only half of the countries analysed display strategies with significant abnormal returns. Also, the protection of minority shareholders plays a non-negligible role. In countries with strong protection, family firms have lower stock returns than in countries with low protection. Finally, Lilienfeld-Toal and Ruenzi (2014) examine the relationship between CEO ownership and stock market

performance. Using the portfolio approach as well as multivariate regressions to control for firm characteristics, they find that a strategy based on the stake of CEO ownership in the US delivers annual abnormal returns of 4% to 10% in the period 1988 to 2010.

3. Data and variables

The empirical research is performed on a database containing 195 companies listed on the SIX Swiss Exchange during the period from January 2003 to December 2013. This sample of 19'928 firm-monthly observations contains almost the whole non-financial Swiss market for this period. Different sources are used to form this database.

We use the data on the ownership structure of Swiss companies from Isakov and Weisskopf (2014a). This database, collected by hand, includes all non-financial companies belonging to the Swiss Performance Index (SPI) between 2003 and 2010 and provides information on the ownership structure of 185 firms. Isakov and Weisskopf (2014a) collected their data from the annual reports of companies, as well as from Swiss stock guides, newspaper articles, firm homepages or the commercial register when needed. By using a 20% threshold of the voting rights to define the majority shareholder, they classify companies by type of owner as follows: family, widely held, State, private investor, owned by another widely held corporation, owned by another widely held financial firms and miscellaneous. The database distinguishes family firms that are at the founder stage from those at the descendant stage, as well as the one having a lone founder. Finally, other dummy variables characterize family firms according to their management, that is, companies with the family active (CEO and/or Chairman of the Board) and particularly if the founder or the descendants are active. The authors also provide in their database the wedge between voting rights and cash-flow rights which is calculated by the ratio between the number of voting rights and the number of cash-flow rights held by the controlling shareholder. In Switzerland, this difference is mainly achieved with the use of multiple class of shares.

We further extend their database by hand collecting ownership data for the period of 2011 to 2013, as well as for ten new listed firms by using the same sources. Finally, we end up with data on the ownership of 195 non-financial firms between 2003 and 2013 comprising 1'703 firm-year observations.

In a second step, we merge the yearly data on ownership structure with market data on monthly returns for each company obtained from Datastream and adjusted to the dividend

distribution. We then also merge our data with other control variables obtained from Datastream and Worldscope.

Finally, the use of a 3- or 4-factor model to determine abnormal returns requires data on Fama and French (1992, 1933) and Carhart (1997) factors as well as the risk-free rate for Switzerland for every month. The data are obtained from Ammann and Steiner's website as well as from Marmi and Poma's website and Fama French's website as a robustness check.

[Insert Table 1 here]

Table 1 provides a description of the different variables used as firm characteristics in the empirical analysis

4. Descriptive statistics

Table 2 presents the composition of the sample. The different types and subdivisions of shareholder are presented for the entire period (column 1) as well as for the first (column 2), the middle (column 3) and the last year (column 4) of observations.

[Insert Table 2 here]

Our sample appears to be well balanced regarding the different types of firms. We have three main groups of roughly equal size. Each year, we have approximately 50 firms in each category (widely held, family and firm with another blockholder). Widely held firms are the first group with a share of 36% of the sample. Then there are family firms, representing approximately 35% of the sample. Of these, about one-third are at the founder stage and two-thirds at the descendant stage. Finally, 29% of the sample consists of firm with a controlling shareholder other than the founding family. By subdividing this latter group, we observe that 5% of the firms are owned by the State, 13% by a private investor, 4% by another widely held corporation, 4% by another widely held financial firm and 3% are miscellaneous. Proportions stay almost constant between the three decomposed periods. The ownership pattern is, therefore, stable over time.

Table 3 presents the descriptive statistics for the entire sample (column 1), as well as for the main groups, namely the family firms (column 2), the non-family firms (column 3), the widely held firms (column 4) and the firms held by another blockholder (column 5). The mean

of the different variables used in the analysis is presented as well as the results of the difference in means tests for the different variables.

[Insert Table 3 here]

The average monthly return of the entire sample is 0.59% per month with the highest value for the family firms (0.91%) and the smallest for the widely held firms (0.25%). Widely held firms have a higher beta (1.19) compared to the other groups, representing a higher risk, while family firms and firms held by another blockholder seem to be less risky (beta of 0.98 and 0.87 respectively). Finally, the largest shareholder in family firms has on average 1.5 more voting rights than cash-flow rights, while the other groups respect the one-vote-one-share principle. Therefore, family firms are still often using multiple class shares to allow their major shareholders to dissociate their voting rights from their cash-flow rights. Concerning the other firm characteristics, family firms and firms held by another blockholder have a higher book-to-market ratio, are less liquid (higher Amihud's illiquidity ratio) and are, in general, from a smaller size (smaller market value, total asset and net sales). While firms held by another blockholder are the oldest ones, widely held firms are on average the youngest. They are also more liquid and larger. Finally, family firms seem to be more generous with their shareholders by paying more dividends than the other firms, consistent with the findings of Isakov and Weisskopf (2014b), which found higher payout policy for family firms. Concerning the leverage, family firms have the lowest level of leverage.

Table 3 also shows the results of the difference in means tests between the main groups for the stock returns. The higher performance of family firms, when compared to non-family firms, widely held firms and firms with another blockholder, is statistically significant

The results for the returns of family and non-family firms, although slightly more moderate, confirm those found by Cella (2009) for Switzerland (1.18% and 0.73% respectively). The difference between the results of both studies can be explained by the fact that Cella (2009) uses a smaller sample (36 Swiss companies against 195 in this study) and uses a threshold of 10% (against 20% in this study) of the voting rights to define a majority shareholder.

5. Methodology

To study the impact of family ownership on stock performance we follow the methodology proposed by Gompers et al. (2003) based on portfolio formation. We build an equally weighted portfolio for each group of firms (family, widely held, other blockholder) at the beginning of the year including all the stocks of firms belonging to this group. Portfolio returns are then calculated at the end of each month until the end of the year. At the beginning of the next year, portfolios are reformed and returns calculated in the same way (annual rebalancement). We then create different self-financing strategies that are long in one portfolio and short in the second one (for example, long on the portfolio of family firms and short on the portfolio of widely held firms).

Once the monthly returns of the portfolios and the strategies are calculated, we use a multi-factor model to analyse their performance. More specifically, we use the four-factor model of Carhart (1997), which is an extension of the classical Fama-French three-factor model (Fama and French (1992, 1993)). We, therefore, estimate the model:

$$R_t = \alpha + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 WML_t + e_t \quad (1)$$

where Rt is the excess return in month t, RMRFt is expected market return in month t minus the risk-free rate, SMBt is the difference between the expected return in month t of a portfolio of small-cap stocks and that of a portfolio of large cap stocks, HMLt is the difference between the expected return in the month t of a portfolio of stocks with high book-to-market and that of a portfolio of stocks with low book-to-market and WMLt is the difference between the expected return in month t of a portfolio with stocks having outperformed the previous month and that of a portfolio with stocks having underperformed the previous month. Finally, the model constant (α) measures the abnormal return that an investor would have obtained each month from 2003 to 2013 by having invested in the portfolio more than what he would have if he had just passively invested in the four factors. We also use a simple CAPM as an alternative way to measure abnormal returns since the evidence on the validity of the FF 4-factor model for the Swiss stock market is weak. Moreover, the reliability of factors is not guaranteed as the number of stocks available on this market for their construction is limited. This decomposition of the performance in several factors also allows drawing conclusions on the risk profile of the firms. The coefficients also represent different exposure to risk. Certain type of companies with different ownership structure could be exposed to risk factors differently than another type, which could affect at the end their stock returns.

The main problem with the approach of portfolio formation and risk exposure is that it omits to take into account different firm characteristics that may exist between the different groups of firms. To control for firm characteristics, we follow Lilienfeld-Toal and Ruenzi (2014) and use two methods to estimate the following multivariate regression:

$$r_{it} = a_i + b_i X_{it} + c_i Z_{it} + e_{it} \quad (2)$$

where rit is the returns adjusted for dividends for firm i in month t, Xit is the dummy variable indicating the presence or not of one type of shareholder in the ownership structure (main variable) and Zit is a vector of firm characteristics. The first method is a Fama-MacBeth (1973) approach (FMB) where cross-sectional regressions are run separately for each month of the sample period and then the values of the final parameters are determined with the mean and statistical significance of the time-series statistics of these monthly estimates. The second method is a pooled panel regression (POLS2C), where standard errors are two-dimensionally clustered along the firm and time dimensions. In both cases, we also control for industry effects by including industry dummies in all regressions based on the ICB 10 industry classification. Following the papers of Brennan et al. (1998), Gompers et al. (2003), Cella (2009) and Lilienfeld-Toal and Ruenzi (2014) our set of control variables includes the log of book-to-market and the log of market value as proxies for the size and value effect. We also use the price of the stocks and the volatility of the returns, as well as three variables for returns 3 to 2, 6 to 4 and 12 to 7 months before the month of the analysis as proxies for the momentum factor. As suggested by Edmans (2011), we further control for the stock liquidity by using the Amihud's illiquidity ratio (Amihud (2002)). We also take into account the dividend yield, the leverage and the log of total asset and, as proxies for firm's efficiency, the operating margin and the sales over the total asset. Finally, we use the asset growth and sales growth over the last year and over the last five years. All the variables are described in Table 1.

6. Results

6.1. Core results

The results of the performance attribution regression are presented in Table 4. The first three columns report abnormal returns and risk coefficients for the three portfolios representing the different types of firms while the last two columns report the alpha of two self-financing strategies.

[Insert Table 4 here]

Table 4 reports the results of the performance attribution regression for the main groups of firms using the Fama and French (1992, 1993) and Carhart (1997) four-factor model. Panel A shows the results for the one-factor model. We find that the portfolio of family firms has a positive and significant alpha, while the portfolios of non-family and widely held firms are positive and insignificant. Looking at the self-financed strategies, we see that a strategy that buys the portfolio of family firms and sells short the portfolio of widely held firms yields an abnormal return of 0.34% per month, which corresponds to an annual abnormal return of 4.08%. This result is slightly lower to the one of Cella (2009) who found a monthly average abnormal return of 0.44% for Switzerland but used a limited sample of firms. When we consider a four-factor risk -adjustment model, the results are qualitatively similar, but the significance of alphas differs slightly. The portfolio of family firms still has a positive alpha but this time, it is insignificant while the self-financing strategies long in family firms and short in widely held firms yield a significant 0.47% per month or 5.64% annually. The results from the 4-factor models must, however, be taken with some caution because of the factor construction. In general, it can be concluded from this initial analysis that risk-adjusting the returns of family firms does not change the results observed in Table 3, i.e. family firms have the highest returns.

The second analysis controls for firm characteristics. The results are provided in the first two column of Table 5. It summarizes the results of the pooled panel regression with two-dimensional clustering of standard errors (POLS2C) and the Fama-MacBeth (FMB) approach with the firm monthly returns adjusted for dividends as the dependent variable. We add to the series of firm characteristics a dummy variable (FoundFam) taking the value 1 for the returns of family firm. Both methods yield highly significant coefficients for this dummy reflecting the superior returns of family firms as compared to other firms in our sample.

[Insert Table 5 here]

Firms with a family holding at least 20% of the voting rights earn, for example, an additional monthly return of 0.61% (7.32 % annually) as compared to firms with no family holding this amount in the POLS2C regression. The coefficients differ only slightly between both regression approaches. These results confirm those found with the performance attribution regressions: the presence of a family into the firm's shareholding induces higher stock returns, and this outperformance is not explained by differences in firm characteristics as well.

6.2. Further results involving family stake and activity

The previous literature has documented that the performance of family firms is sometimes related to the level of voting rights (the stake) the family holds in the firm. A concave relation has been documented with some performance measure indicating that to some levels family control is beneficial to performance while it becomes detrimental when these levels become very high. This phenomenon has been documented for profitability and valuation ratios but not for stock returns. It is usually interpreted that agency costs (risk of expropriation of minority shareholders by the controlling shareholder) become too high when the family has a very high stake. We first analyze whether the stake of the family has an impact on abnormal stock returns and replace the family dummy by the stake of the family in Table 5. As can be seen in column 3 and 4, the stake has a positive and significant impact on stock returns, indicating that families holding a very high stake yield higher returns. We further investigate this idea of agency problem by analyzing sub-group of family firms. We first discriminate family firms according to the stake they hold and compute various descriptive statistics in Table 6.

[Insert Table 6 here]

We observe that the mean returns increase monotonically with the stake of the family. For families having and stake between 80 and 100%, the mean return is 1.01% monthly while for those holding a stake of 20-50% it is 0.88%. In a second stage, we also segregate family firms according to the fact that the family is active in the management or the board (FA) or not (NFA). Table 6 shows that returns are higher when the family is active and has operational control of the firm.

[Insert Table 7 here]

We further investigate this effects by controlling for firm characteristics and estimate equation (2) with a family dummy reflecting the stake of the family and the active involvement in the firm. Results are provided in Table 7 and confirm the results obtained in Table 6, i.e. that there is a monotonic relation between the family stake and stock returns as well a higher return for a firm where the family is active. It can, therefore, be concluded from these tests that there is a monotonic relation between the risk of expropriation (represented by a high family stake or an involvement of the family in the firm) and returns.

6.3 Stock returns around earnings announcements

One possible explanation for the outperformance of family firms over 10 years is that the investors are not able to properly assess the value of family firms and tend to be skeptical about their performance because of the high risk of expropriation. The true performance of these firm can be assessed when they disclose information and in particular when they announce their earnings. At that specific time, investors will be able to have accurate information about the firm and will, therefore, readjust their opinion accordingly. We, therefore, focus on this event and look at two measures: earnings surprises and market reactions to these events.

We use two measures of earnings surprise. The database FactSet provides the first one, and we call it the Surprise FactSet. It considers the difference between the consensus post-event (which can be seen as the true earnings-per-share, EPS) and the consensus pre-event. The consensus post-event is the median consensus calculated 100 days after the release of earnings by the analysts themselves using all the element that they knew before the event. It differs from the EPS published by the firm. The surprise is calculated as

$$Surprise_{FactSet} = \frac{Consensus\ After\ Event - Consensus\ Pre\ Event}{Consensus\ Pre\ Event} * 100 \qquad (3)$$

While the consensus pre-event is the median consensus on the eve of the release date. We use a second metric for the surprise that we call the self-calculated surprise. We use the mean EPS estimated nine months before the release date to estimate the predicted EPS, while the published EPS is used as the true EPS. This alternative measure of surprise is defined as:

$$Surprise_{SelfCalculated} = \frac{Real\ EPS - Consensus\ EPS}{Share\ Price} * 100 \qquad (4)$$

We use two measures of the market reactions to earnings announcements: the price impact and the cumulative abnormal return (CAR) of earnings surprise. The price impact is the relative change in price between the day before the announcement and the day of the announcement. The CAR is computed from an event study (with the market model as normal return) over the window [-1;+1]. Table 8 provides the mean values for these four measures for all the firms as well as for group of firms

[Insert Table 8 here]

Table 8 shows that on average, the FactSet surprise is positive, while the self-calculated surprise is negative. When we compute the means according to the different types of firms, it appears that family firms have the largest surprises indicating that earnings are well above expectations of financial analysts. However, it is significantly larger only for the self-calculated surprise. This indicates that professional analysts tend to be more pessimistic about the firm prospects than they should. We next turn to the price reactions on earnings announcements. We observe that the price reaction is significantly more positive for family firms than for other. This indicates that the market adjusts to this new information and generate some high positive abnormal returns which might explain the abnormal returns for family firms. We next investigate if there is a relation between the family stake and the measures of surprise and market reaction. The results are presented in Table 9, where the different measures are computed for different categories of family firms, according to the stake of the family. WE observe that the surprises are larger for family firms with a large stake (and a high risk of expropriation) although weakly significant.

[Insert Table 9 here]

The market reactions to the earnings announcements also appear to be significantly larger for family firms with a high stake. The general conclusion that can be drawn from these results is that the market seems to be more surprised and reacts more when family firms announce their earnings. The surprise is even slightly higher for firms where the family has a high stake. Table 11 et 12 propose a multivariate regression analysis for these four measures and confirms the results obtained in univariate tests.

[Insert Table 10 here]

[Insert Table 11 here]

We finally consider whether these results are related to the profitability of the firms and relate two measures of profitability, ROA, and ROE, to the ownership structure. The results are provided in Table 12 and confirm that the outperformance of family firms is also related to a higher profitability that was documented previously.

[Insert Table 12 here]

7. Conclusions

Many listed firms around the World have a controlling shareholder. The impact of such ownership structures on firm performance are not yet fully understood. This paper tries to address this problem by analyzing panel data over the period of January 2003 to December 2013 for a sample of 195 companies listed on the SIX Swiss Exchange. Unlike most of the previous literature, this paper takes the point of view of an investor and analyses the relationship between ownership structure and stock returns. We find that family firms outperform other firms regarding stock market returns by 4%-7% annually on the Swiss stock market and that they represent very interesting investment opportunity. We also show that this outperformance is positively related to the stake a family holds in a firm and to the fact that it is actively involved in the firm. However, this positive performance can be explained by the fact the market is skeptical towards those firms because they potentially present a danger regarding expropriation as they have total control of the firm. However, this risk appears to be overestimated, and those firms appear to surprise the market positively when they announce their earnings. The market corrects its poor assessment of these firms which leads to positive abnormal return which in turn make these firms very attractive.

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Table 1: Firm characteristics definitions

This table defines the variables used in the analysis. Market data come from Datastream and Worldscope, The period of analysis is from January 2003 to December 2013.

Age	The age of a firm in years computed as the current year minus the year of foundation as stated in the Swiss stock guides.
Amihud's Illiquidity Ratio	The Amihud (2002) illiquidity ratio is calculated using daily data and then averaged by month. The daily ratio is calculated by dividing the daily return by the daily trading volume which is calculated by multiplying the daily price by the daily volume.
Asset Growth (AG)	The asset growth of a firm over the past year and over the past five years (AG_1year, AG_5 years).
Beta	Regression coefficients of the market model calculated with the returns of the previous 60 months.
Book-to-Market (BM)	Ratio of the book value of common equity to the market value of common equity.
Dividend Yield (DY)	The ratio of total dividends to total market capitalization.
Leverage (Lev)	Long term debt divided by total asset.
logBM	The natural logarithm of the book-to-market ratio.
logSize	The natural logarithm of the firm's market value.
logTA	The natural logarithm of the firm's total asset.
Market Value	Share price multiplied by the number of ordinary shares in issue.
Operating Margin (OM)	Operating income over net sales.
Price	The closing price in CHF at which the firm's stock is traded.
Return_2_3	The natural logarithm of the cumulative returns over the months t-2 and t-3.
Return_4_6	The natural logarithm of the cumulative returns over the months t-6 through t-4.
Return_7_12	The natural logarithm of the cumulative returns over the months t-12 through t-7.
Sales Growth	The sales growth of a firm over the past year and over the past five years (SG_1year, SG_5years).
Sales/Total Asset	Net sales divided by total assets.
Stock Returns	Monthly returns of the securities calculated from the monthly stock prices collected at the end of each month and adjusted to the dividend distribution.
Total Asset	Sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets.
Volatility	The monthly volatility of a stock calculated using daily data and then averaged by month.
Wedge	Ratio between the number of voting rights and the number of cash-flow rights.

Table 2: Sample composition and evolution over the time

	All	2003	2008	2013	Number of firms per year		
	Mean	Mean	Mean	Mean	Mean	Min	Max
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Widely held firms	0.33	0.35	0.36	0.29	49.7	41	55
Family firms	0.35	0.38	0.35	0.33	52.8	46	60
Family firms at founder stage	*0.12*	*0.13*	*0.13*	*0.11*	*18.7*	*14*	*23*
Family firms at descendant stage	*0.23*	*0.25*	*0.22*	*0.22*	*34*	*31*	*37*
Other blockholders	0.32	0.27	0.29	0.38	47.5	40	58
State	*0.05*	*0.04*	*0.05*	*0.05*	*7.5*	*6*	*9*
Private Investor	*0.15*	*0.12*	*0.13*	*0.21*	*21.6*	*17*	*30*
Widely held corporation	*0.05*	*0.08*	*0.03*	*0.04*	*7.5*	*5*	*12*
Widely held financial	*0.04*	*0.01*	*0.04*	*0.04*	*5.8*	*1*	*9*
Miscellaneous	*0.03*	*0.02*	*0.04*	*0.04*	*4.9*	*3*	*6*
N	19’604	1’795	1’800	1’680	150	140	156

Table 3: Descriptive statistics and difference in means tests for the entire sample and the main groups

	All	Family firms	Non-family firms	Widely held firms	Other blockholder	FF vs. NFF	FF vs. WH	FF vs. OB
	Mean	Mean	Mean	Mean	Mean	Difference	Difference	Difference
Stock Returns (%)	0.59	0.91	0.41	0.25	0.58	0.49***	0.65***	0.32**
Return on Asset	0.0058	0.0569	-0.0224	-0.0063	-0.0400	0.0793***	0.0631**	0.0968**
Return on Equity (%)	-10.2688	4.9807	-18.7505	-7.3146	-31.0767	23.7312*	12.2953*	36.0574
Beta	1.01	0.98	1.03	1.19	0.87	-0.05***	-0.21***	0.10***
Volatility_mth	0.11	0.10	0.12	0.12	0.11	-0.01***	-0.02***	-0.01***
Wedge	1.22	1.57	1.02	0.98	1.07	0.55***	0.60***	0.51***
Age (in years)	73.2	69.8	75.1	57.5	93.6	-5.3***	12.3***	-23.8***
Book-to-Market	0.82	0.87	0.80	0.65	0.97	0.06***	0.22***	-0.10***
Amihud's Illiquidity (*10^3)	0.62	0.58	0.65	0.46	0.86	-0.08	0.12*	-0.29***
Dividend Yield	1.60	1.92	1.42	1.36	1.49	0.50***	0.56***	0.43***
Leverage	0.13	0.12	0.14	0.13	0.16	-0.03***	-0.01***	-0.04***
Market Value (in mio)	5159	4786	5363	9076	1463	-576*	-4289***	3323***
Total Asset (in mio)	3852	3629	3976	6358	1375	-348*	-2730***	2254***
Net Sales (in mio)	3257	3296	3235	5051	1258	61	-1754***	2039***
N	19604	6924	12680	6495	6185	19604	13419	13109

Table 4:
Performance-attribution regression results for equally weighted portfolios

Panel A: 1 factor model

	(1) Founding Family - Risk Free	(2) Non-founding Family - Risk Free	(3) Widely Held - Risk Free	(4) Founding Family - Non-founding Family	(5) Founding Family - Widely Held
	b/se	b/se	b/se	b/se	b/se
Alpha	0.0057**	0.0038	0.0023	0.0019	0.0034**
	(0.0023)	(0.0025)	(0.0028)	(0.0013)	(0.0016)
SPI_RmRf	0.9185***	0.9782***	1.0648***	-0.0597*	-0.1462***
	(0.0727)	(0.0751)	(0.0775)	(0.0347)	(0.0393)
N	132	132	132	132	132
r2	0.6580	0.6478	0.6443	0.0240	0.0852

Panel B: 4 factors model

	(1) Founding Family - Risk Free	(2) Non-founding Family - Risk Free	(3) Widely Held - Risk Free	(4) Founding Family - Non-founding Family	(5) Founding Family - WH
	b/se	b/se	b/se	b/se	b/se
Alpha	0.0023	-0.0002	-0.0023	0.0025*	0.0047***
	(0.0016)	(0.0014)	(0.0018)	(0.0014)	(0.0017)
RMRF	1.1129***	1.2120***	1.3405***	-0.0991**	-0.2276***
	(0.0487)	(0.0438)	(0.0470)	(0.0459)	(0.0493)
SMB	0.7334***	0.8867***	0.9147***	-0.1533**	-0.1813**
	(0.0595)	(0.0608)	(0.0715)	(0.0633)	(0.0712)
HML	0.4031***	0.4393***	0.3798***	-0.0362	0.0233
	(0.0762)	(0.0664)	(0.0824)	(0.0770)	(0.0858)
WML	0.0373	0.0442	0.1127*	-0.0069	-0.0754
	(0.0686)	(0.0579)	(0.0673)	(0.0491)	(0.0562)
N	132	132	132	132	132
r2	0.8719	0.9016	0.8648	0.0850	0.1470

Table 5: Multivariate Regressions

	(1)	(2)	(3)	(4)
FoundFam	0.0061***	0.0035***		
	(0.002)	(0.001)		
Stake_FF			0.0109***	0.0075***
			(0.003)	(0.002)
logBM	0.0028	0.0030	0.0027	0.0029
	(0.003)	(0.003)	(0.003)	(0.003)
logSize	0.0118***	0.0124***	0.0119***	0.0126***
	(0.003)	(0.004)	(0.003)	(0.004)
logTA	-0.0113***	-0.0129***	-0.0114***	-0.0131***
	(0.003)	(0.003)	(0.003)	(0.003)
price_mth	0.0000	0.0000	0.0000	0.0000
	(0.000)	(0.000)	(0.000)	(0.000)
Volatility_mth	0.1105**	-0.0205	0.1124**	-0.0216
	(0.055)	(0.041)	(0.055)	(0.041)
Amihud_mth	-1.2091***	-3.4533***	-1.2243***	-3.5252***
	(0.380)	(1.321)	(0.372)	(1.312)
DY	-0.0023**	-0.0016***	-0.0023**	-0.0016***
	(0.001)	(0.000)	(0.001)	(0.000)
Lev	0.0084	0.0092	0.0088	0.0100
	(0.010)	(0.008)	(0.010)	(0.008)
OM	0.0000*	0.0002**	0.0000*	0.0002*
	(0.000)	(0.000)	(0.000)	(0.000)
S_T	-0.0022	0.0005	-0.0022	0.0005
	(0.002)	(0.001)	(0.002)	(0.001)
AG_1year	0.0271***	0.0214***	0.0272***	0.0212***
	(0.008)	(0.007)	(0.008)	(0.007)
AG_5year	-0.0234	-0.0195	-0.0240	-0.0187
	(0.016)	(0.013)	(0.016)	(0.013)
SG_1year	-0.0003	0.0191***	-0.0003	0.0190***
	(0.001)	(0.006)	(0.001)	(0.006)
SG_5year	-0.0006	-0.0172*	0.0004	-0.0178*
	(0.006)	(0.010)	(0.006)	(0.010)
Return_2_3	0.0387*	-0.0187	0.0386*	-0.0191
	(0.022)	(0.012)	(0.022)	(0.012)
Return_4_6	0.0341**	0.0137	0.0340**	0.0133
	(0.016)	(0.009)	(0.016)	(0.009)
Return_7_12	-0.0269**	-0.0094	-0.0271**	-0.0092
	(0.013)	(0.006)	(0.013)	(0.006)
_cons	-0.0094	0.0234*	-0.0118	0.0225*
	(0.015)	(0.012)	(0.015)	(0.012)
Controls	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
Methods	POLS2C	FMB	POLS2C	FMB
N	15558	15558	15558	15558

Note : Model 1 and 3 are estimated using pooled panel regression (POLS2C), where standard errors are two dimensionally clustered along the firm and time dimensions. Model 2 and 4 are estimated using Fama-MacBeth (1973) approach (FMB) where cross-sectional regressions are run separately for each month of the sample period and then the values of the final parameters are determined with the mean and statistical significance of the time-series statistics of these monthly estimates.

Table 6: Descriptive Statistics of the subsample of family firms according to the stake and the active involvement

	(1)	(2)	(3)	(4)	(5)	(6)
	Family firms	Family firms 20-50	Family firms 50-80	Family firms 80-100	Family active	Family non-active
	Mean	Mean	Mean	Mean	mean	mean
Stock Returns (%)	0.91	0.88	0.91	1.01	0.97	0.79
Beta	0.98	1.16	0.86	0.91	0.94	1.05
Volatility_mth	0.10	0.11	0.10	0.10	0.10	0.10
Wedge	1.57	1.30	1.80	1.56	1.47	1.76
Age (in years)	69.8	67.8	67.3	95.7	63.5	81.0
Book-to-Market	0.87	0.82	0.72	2.00	0.89	0.82
Amihud's Illiquidity (*10^3)	0.58	0.63	0.57	0.35	0.58	0.56
Dividend Yield	1.92	1.86	1.86	2.58	1.78	2.16
Leverage	0.12	0.11	0.13	0.06	0.11	0.12
Market Value (in mio)	4786	3263	6658	401	2516	8829
Total Asset (in mio)	3629	3622	4095	693	1729	7058
Net Sales (in mio)	3296	3381	3643	662	1895	5813
N	6924	2800	3572	552	4434	2490

Table 7:
Multivariate regressions according to the stake and the involvement of the family

	(1)	(2)	(3)	(4)
FoundFam_20_50	0.0035*	0.0002		
	(0.002)	(0.002)		
FoundFam_50_80	0.0076***	0.0051***		
	(0.003)	(0.002)		
FoundFam_80_100	0.0093***	0.0098***		
	(0.003)	(0.003)		
FA			0.0070***	0.0043***
			(0.002)	(0.002)
NFA			0.0046***	0.0023
			(0.002)	(0.002)
Intercept	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
Methods	POLS2C	FMB	POLS2C	FMB
N	15558	15558	15558	15558

Note : Model 1 and 3 are estimated using pooled panel regression (POLS2C), where standard errors are two dimensionally clustered along the firm and time dimensions. Model 2 and 4 are estimated using Fama-MacBeth (1973) approach (FMB) where cross-sectional regressions are run separately for each month of the sample period and then the values of the final parameters are determined with the mean and statistical significance of the time-series statistics of these monthly estimates.

Table 8:
Descriptive statistics and difference in means tests for the entire sample and the main groups for the surprises, price impact and CAR

	All	Family firms	Non-family firms	Widely held firms	Other blockholder	FF vs. NFF	FF vs. WH	FF vs. OB
	Mean	Mean	Mean	Mean	Mean	Difference	Difference	Difference
Surprise_Factset (%)	2.4542	4.0626	1.4912	1.9203	0.8294	2.5714	2.1423	3.2332
N	*1004*	*376*	*628*	*381*	*247*			
Surprise_Selfcalculated (%)	-1.9530	-1.3055	-2.3355	-2.2596	-2.4381	1.0300***	0.9541**	1.1326**
N	*1201*	*446*	*755*	*434*	*321*			
Price Impact (%)	0.3882	0.9992	0.0224	-0.3410	0.5829	0.9768***	1.3402***	0.4163
N	*1004*	*376*	*628*	*381*	*247*			
CAR (%)	0.4608	1.1577	0.0832	0.1564	0.0078	1.0745***	1.0013***	1.1499***
N	*1548*	*544*	*1004*	*509*	*495*			

Note: Pour supprimer les outliers, les surprises supérieures à 10% du prix du titre sont supprimées, ainsi que celles en dessous du 1-percentil et au-dessus du 99-percentil.

Table 9:
Descriptive Statistics and difference in means tests for the subsample of family firms for the surprises, price impact and CAR according to the family stake

	Family firms	FoundFam_20_50	FoundFam_50_80	FoundFam_80_100	FoundFam_80_100 vs. FoundFam_50_80	FoundFam_80_100 vs. FoundFam_20_50	FoundFam_50_80 vs. FoundFam_20_50
	Mean	Mean	Mean	Mean	Difference	Difference	Difference
Surprise_Factset (%)	4.0626	3.3680	3.8721	12.1258	8.2538	8.7578	0.5040
N	*376*	169	188	19			
Surprise_Selfcalculated (%)	-1.3055	-2.0556	-0.7432	-0.7479	-0.0047	1.3077	1.3123**
N	446	191	229	26			
Price Impact (%)	0.9992	0.5753	1.1345	3.4302	2.2956**	2.8549**	0.5592
N	*376*	169	188	19			
CAR (%)	1.1577	0.8521	1.2176	2.6047	1.3871	1.7526*	0.3655
N	544	222	287	35			

Note: Pour supprimer les outliers, les surprises supérieures à 10% du prix du titre sont supprimées, ainsi que celles en dessous du 1-percentil et au-dessus du 99-percentil.

Table 10: Multivariate Regressions for the Surprise_Factset and Surprise_Selfcalculated

	(1) Surprise_ Factset	(2) Surprise_ Factset	(3) Surprise_ Factset	(4) Surprise_ Selfcalculated	(5) Surprise_ Selfcalculated	(6) Surprise_ Selfcalculated
FoundFam	2.4400			0.7790**		
	(1.955)			(0.366)		
Stake_FF		5.2257			2.0298**	
		(4.537)			(0.848)	
FoundFam_20_50			2.1410			-0.0835
			(1.750)			(0.459)
FoundFam_50_80			2.0788			1.2997**
			(2.924)			(0.580)
FoundFam_80_100			8.8282*			2.6151**
			(4.621)			(1.332)
lag_logSize	0.0205	0.0298	0.0441	0.5220***	0.5238***	0.5256***
	(0.267)	(0.268)	(0.264)	(0.157)	(0.155)	(0.154)
lag_logBM	2.9277	2.7791	2.7860	-0.3221	-0.4067	-0.4313
	(1.921)	(1.988)	(1.897)	(0.712)	(0.733)	(0.740)
_cons	-0.0684	-0.2240	-0.4624	-20.2645***	-20.3161***	-20.3533***
	(6.579)	(6.536)	(6.410)	(3.442)	(3.425)	(3.428)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Methods	POLS2C	POLS2C	POLS2C	POLS2C	POLS2C	POLS2C
N	979	979	979	1182	1182	1182

Note : Model 1-6 are estimated using pooled panel regression (POLS2C), where standard errors are two dimensionally clustered along the firm and time dimensions.

Table 11: Multivariate Regressions for the Price Impact and CAR

	(1) Price Impact	(2) Price Impact	(3) Price Impact	(4) CAR	(5) CAR	(6) CAR
FoundFam	1.0085***			0.9819***		
	(0.327)			(0.234)		
Stake_FF		2.0055***			1.7961***	
		(0.683)			(0.455)	
FoundFam_20_50			0.6248*			0.7523**
			(0.365)			(0.296)
FoundFam_50_80			1.1973***			1.0614***
			(0.384)			(0.265)
FoundFam_80_100			2.6151***			1.7401
			(0.690)			(1.431)
lag_logSize	-0.2413***	-0.2358***	-0.2424***	0.0288	0.0408	0.0318
	(0.084)	(0.082)	(0.086)	(0.089)	(0.088)	(0.090)
lag_logBM	0.0696	0.0180	0.0127	0.3004	0.2757	0.2718
	(0.229)	(0.233)	(0.226)	(0.291)	(0.288)	(0.287)
_cons	4.7052***	4.6128***	4.7229***	0.2195	0.0167	0.1679
	(1.197)	(1.156)	(1.253)	(.)	(.)	(.)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Methods	POLS2C	POLS2C	POLS2C	POLS2C	POLS2C	POLS2C
N	979	979	979	1521	1521	1521

Note : Model 1-8 are estimated using pooled panel regression (POLS2C), where standard errors are two dimensionally clustered along the firm and time dimensions

Table 12: Multivariate Regressions for ROA and ROE

	(1) ROA b/se	(2) ROA b/se	(3) ROE b/se	4) ROE b/se
FoundFam	0.0277**		8.7529*	
	(0.011)		(5.256)	
Stake_FF		0.0450**		10.0906
		(0.020)		(7.861)
Wedge	-0.0011	-0.0005	-10.0487	-9.2536
	(0.005)	(0.005)	(8.204)	(8.163)
logSize	0.0219***	0.0224***	10.8806**	11.0029**
	(0.005)	(0.005)	(4.390)	(4.387)
LnAge	0.0040	0.0042	-0.0905	-0.0207
	(0.007)	(0.007)	(2.662)	(2.671)
Lev	-0.1156***	-0.1136**	-160.4514*	-160.7013*
	(0.045)	(0.045)	(93.754)	(93.966)
SG_1year	0.0016	0.0015	0.0424	0.0200
	(0.002)	(0.002)	(2.718)	(2.714)
CapExp_TA	0.1364	0.1315	208.0502*	204.9713*
	(0.189)	(0.189)	(120.380)	(120.253)
Beta	-0.0221**	-0.0214**	-14.8301*	-14.9678*
	(0.009)	(0.009)	(8.314)	(8.350)
Intercept	-0.3503***	-0.3613***	-118.9632**	-121.7277**
	(0.101)	(0.105)	(47.894)	(47.411)
Controls	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
Methods	POLS2C	POLS2C	POLS2C	POLS2C
N	1381	1381	1380	1380

Note : Model 1-4 are estimated using pooled panel regression (POLS2C), where standard errors are two dimensionally clustered along the firm and time dimensions.