# THE FAMILY FACTOR

## FAMILY OWNERSHIP AND FIRM PERFORMANCE IN THE EUROPEAN MARKET

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**The Family Factor: Family Ownership and Firm Performance in the European Market**

Abstract:

We study the impact of family ownership on firm performance within the STOXX Europe 600 index over the period 2010 to 2022. Using a sample of 577 firms, of which 98 are family-owned, we employ a two-way fixed effects OLS regression model to investigate the relationships between family ownership and two firm performance measures: stock return and return on assets (ROA). Our analysis differentiates between high and low levels of family ownership, as well as younger and older family firms, to assess performance nuances. The findings indicate that family-owned firms generally exhibit higher ROA than non-family firms, suggesting that family ownership contributes positively to firm profitability. Family-owned firms have higher stock returns over our studied period, however, we cannot deduce that it is the effect of family ownership. Additionally, we present evidence that higher family ownership significantly increases firm performance compared to lower family ownership.

Keywords:

Family ownership, Firm performance, Controlling shareholder

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# I. Introduction

Numerous globally successful firms are controlled by families, such as Porsche, Hoffmann-La Roche, and LVMH Moët Hennessy Louis Vuitton. Bernard Arnault, the CEO of LVMH and head of the family, asserts that family ownership endows their company with fundamental advantages. It facilitates a long-term perspective, where the immediate financial results are overshadowed by the need to maintain an enduring consumer desire for the brand. For Arnault, the financial performance of LVMH in the near future holds little appeal compared to the brand's continued allure in the coming decade. Arnault advocates that being a family business helps them to create stronger connections with employees (Arnault, 2018).

A large number of studies have been made on the relation between family ownership and firm performance. Anderson and Reeb (2003), in an accredited paper, study the Standard and Poor's (S&P) 500 firms from 1992 through 1999 and find support for the positive effect of family ownership on profitability. In geographically similar research, Villalonga and Amit (2006) examine Fortune-500 companies in the US during 1994-2000 and report that family ownership only creates value under specific circumstances. Studies have also been made on the European market but primarily on individual countries, including but not limited to France, Germany, and Switzerland (Sraear and Thesmar, 2007; Andres, 2008; Eugster and Isakov, 2019). Sraer and Thesmar (2007) examine 1,000 companies listed on the French stock exchange over the period 1994-2000. They find family firms significantly outperforms non-family corporations in cross-sectional evidence. Andres (2008) studies a sample of 275 German companies in the period of 1998-2004 and finds support for family ownership. However, Andres (2008) notes that if family members are just large shareholders without active involvement, the performance of their companies is not distinguishable from non-family firms. In a neighboring study, Eugster and Isakov (2019) study 195 companies listed on the Swiss stock market over the period 2003-2013. They find that family firms have higher risk-adjusted stock returns than non-family controlled firms.

Contrastingly, Lins, Volpin and Wagner (2013) argue for family firms negative effect on firm-performance in a study of 8,500 firms from 35 countries, such as Japan, Brazil and the UK, during the 2008-2009 financial crisis. The authors find that family-controlled firms cut investment, more relative to other firms, and underperform. In a similarly larger study incorporating multiple countries, Barontini and Caprio (2006) extrapolate on the mixed feelings in the European public opinion on family ownership and examine corporations in 11 countries in continental Europe. In their sample of 675 firms over the period 1999-2001, they find a positive association between family control and operating performance.

Based on the earlier literature presented, we intend to expand on Anderson and

Reeb's paper (2003) and aim to contribute two-fold to existing research. Firstly, we extend on previous literature on the European market and contribute by studying the STOXX Europe 600 index. Our method of proxying the European market using the STOXX Europe 600 relates to Anderson and Reeb's (2003) study of the S&P 500, which represents 80% of the investable US market (S&P Global, 2024) and where our index represents approximately 90% of the free-float market capitalization in Europe (STOXX, 2023). Secondly, we contribute by studying the period between 2010-2022 in comparison to Anderson and Reeb (2003) that examined 1992-1999. This recent period is less studied in family ownership literature and the results could thus help evaluate previous findings from other periods of time. Based on this, the central question our report aims to answer is as follows:

*Does family ownership lead to greater firm performance within the STOXX Europe 600 over the period 2010-2022?*

In our paper we study the relationship between family ownership and firm performance in public companies. We investigate the stock market performance and profitability of family firms and non-family firms listed in Europe from the start of 2010 to the end of 2022, using stock return and return on assets (ROA) as proxies for firm performance. To examine the relationship we do a two-way fixed effects OLS regression on family ownership's effect on firm performance using year, country and industry dummies as fixed effects. We further separate family firms into groups between high and low family ownership, and younger and older firms to better understand the relationship between family ownership and firm performance. Our sample includes 577 firms and where 98 are family-owned. We classify a firm as family-owned by studying the ownership structure to see if the level of ownership or control over voting rights reaches our definition threshold.

Our paper has multiple findings. (1) Family firms have significantly higher ROA than non-family firms when controlling for relevant independent variables in the regression, meanwhile the effect on stock return is inconclusive. The higher profitability, indicated by ROA, can be due to family firms' tendency to invest long-term, have higher labor productivity, and lower cost of debt, amongst other potential explanations. (2) Both younger and older family firms perform better than non-family firms. Younger firms (50+ years since founding) outperform the older firms, which could potentially be explained by founders contributing with unique valuable skills and being more prevalent in younger firms. (3) Firms with high family ownership (50%+ share) have a significant positive effect on firm performance. High ownership's effect on both performance measures were significant and higher than for low ownership family firms. Our first and second findings are concurrent with results presented by Anderson and Reeb (2003), but our third finding does not align with their results on

the effect of high family ownership.

This paper is organized as follows. In section II we present the theoretical background. In section III we describe our methodology and data, providing summary statistics. In section IV we report our main results and related robustness tests. In section V we discuss our empirical evidence and in section VI, we conclude our main findings.

# II. Theoretical Background

## A. Potential Costs of Family Ownership

The costs of family ownership concentrate into families potentially using their control to benefit themselves and not maximize shareholder value to the disadvantage of minority shareholders. Fama and Jensen (1985) present how large undiversified shareholders (such as families) and diversified shareholders are incentivized differently to maximize value. The undiversified shareholders benefit from taking on less risk compared to the diversified owners costing the minority shareholder. Eugster and Isakov (2019) show how family ownership changes the agency problem. The conflict between shareholders and managers is reduced by family ownership to the benefit of all shareholders. This happens since the large shareholder is more incentivized and capable to monitor the agent. However, another agency problem arises between the large and minority shareholders. The large shareholder may try to extort private benefits from the firm. This effect is present in family firms and thus holding shares in them is awarded with a higher risk premium. Cronqvist and Nilsson (2003) find support for this on the Swedish market where they see that controlling vote ownership (25%+ control) negatively affects firm performance (in terms of Tobin's Q and ROA). However, they do not suggest it is a result of "stealing" instead they argue it is due to suboptimal investment decisions and holding on to control for too long. Shleifer and Vishny (1997) suggest that the greatest costs a large shareholder can create is remaining as a manager longer than they should, pointing toward the importance of a competitive recruiting process that family firms sometimes lack.

## B. Potential Benefits of Family Ownership

Family ownership has several potential benefits such as having longer time perspective, having more control over management, and fostering better relationships with stakeholders. As mentioned above, a large owner reduces the classic agency problem by being able and incentivized to monitor management. This effect is argued by Andres (2008) to be even larger in family firms considering the families often are

undiversified. Being large and undiversified is argued to be a problem by Fama and Jensen (1985), but it also leads to a more incentivized active owner decreasing myopia and inertia often found in bureaucratic organizations. Families, thinking across generations, are more likely to think long-term about profit maximization compared to the quarter-to-quarter way of thinking created by impatient owners. Stein (1988) presents how the long-term view will lead to not giving up long-term investments for the benefit of short-term gains, consequently, creating future value. The longevity also enables stability and continuity in management. Anderson and Reeb (2003) find that the long-term relationships created by the stability allow suppliers and lenders to offer better terms. Casson (1999) claims that families will in comparison to other blockholders abstain from extorting private benefits as they are more concerned with generational wealth and therefore are less likely to destroy value for the short-term benefits. Sraer and Thesmar (2007) annotate that family firms have better labor management and strategic capital usage. Family firms tend to pay lower wages, and, especially those run by their founders and heirs, have higher labor productivity. Furthermore, outside CEOs in family firms are more stringent in use of capital and pay lower interest rates on debt. Anderson and Reeb (2003) also find that family firms enjoy a lower cost of debt financing relative to non-family firms.

# III. Method and Data

## A. Research Focus

Our main research interest is the relation between family ownership and firm performance. This question has been posed before but our research incorporates a new dataset of firms, STOXX Europe 600, and a more recent sample period, 2010-2022. Earlier studies on the subject have argued for both the negatives and positives of family ownership under different circumstances. Poor corporate governance, lacking value maximization focus, and private benefits extortion argue for the former. However, a long-term perspective, more efficient labor management, and better capital use support the latter. The empirical evidence on the topic predominantly finds support for the benefit of family ownership, but the question is still debated. Our central question we want to examine is the impact of family ownership on firm performance by answering: Does family ownership lead to greater firm performance within the STOXX Europe 600 over the period 2010-2022? To better understand this relationship, we further separate and study the impact between high and low family ownership, and younger and older family firms.

## B. Family Firm Definition

To decide if a firm is family-owned or not there are two key questions: what it means to be in control and what a family is. The criterion for deciding if a family is in control of a company is borrowed from previous literature (Faccio and Lang, 2002; Sraer and Thesmar, 2007; Eugster and Isakov, 2019). We define family-owned as either (1) shareholding by the family of at least 20%, or (2) voting rights held by the family of at least 20%. For families that have indirect control of a firm, we use the same method as Faccio and Lang (2002). The method states that if Firm A is owned to 40% by Firm B, and Firm B is owned 60% by a family, the family would indirectly hold 24% of Firm A, thus Firm A would be classified as a family firm.

A 20% ownership stake is generally considered sufficiently significant to allow a family to exert substantial influence over strategic decisions and corporate governance (Faccio and Lang, 2002). Moreover, setting a definitive percentage threshold facilitates more distinctive separation between family and non-family firms (Eugster and Isakov, 2019). However, the extent of the influence can vary greatly depending on the distribution of the remaining shares. In fragmented ownership structures, a 20% stake could be effectively controlling and in more consolidated companies that stake has a smaller influence. Furthermore, this threshold may risk omitting subtle forms of control. It can neglect scenarios where family members exert influence through considerable board representation and when they have management roles that can induce profound impact, which others, such as Villalonga and Amit (2006) better account for. In our study we are limited in our data collection resources and do not consider these factors. There are examples of studies that use a higher threshold, such as Andres (2008) and Lins et al. (2013) that use 25% or more of the voting rights. Although this consequently decreases the pool size of family firms, it simultaneously increases likelihood that the family is involved in the firm's operations and the family ownership effect is enhanced, however, it risks omitting more family firms where families exert subtle forms of control.

When an owner or a group of owners that could be connected have an ownership above the 20% threshold we have to determine if the owner/owners is a family or not. There is a division in the literature between founding-family ownership and family ownership. Anderson and Reeb (2003) and Eugster and Isakov (2019) among others study founding-family ownership. Our research is family ownership, but not limited to founding-families, which is the same as Faccio and Lang (2002) and Sraer and Thesmar (2007). Faccio and Lang (2002) define any non-listed blockholder as a family firm if they cannot prove otherwise. We do not assume family ownership which should lead to less false positives, but leave some firms unclassified. Similarly to Faccio and Lang (2002) and Claessens et al. (2000), we define individual owners as families. Finally, in some instances a company is owned by a foundation. In those

cases we regard the foundation as a family-entity if we determine that the family has control over the foundation through, for instance, the family having board seats.

## C. Sampling and Data Collection

### The Sample

The population of our study encompasses all corporations listed on the STOXX Europe 600 index at the start of 2010 (2010-01-01), including both family-owned and non-family-owned firms. It is a free-float market capitalization index of 600 constituents representing large, mid and small capitalization companies. The index includes over 90% of the free-float market capitalization of the European stock market and covers companies listed across 17 countries in Europe (see Appendix 1.). The sample is representative of the entirety of companies listed on the index, with the exception of a limited number of firms due to a lack of data on ownership structure. Consequently, the sample closely approximates the full representation of the population. The sample comprises 577 firms, 98 of which being family-owned. The period of analysis, spanning from 2010 to 2022, is longer than that of some other studies on the subject which should reduce the impact of time-varying omitted variables. The 577 sample firms and the 12 years studied generate 7,046 stock return and 6,700 ROA observations.

**Table I: Industry Distribution**

The sample is categorized according to the Industry Classification Benchmark (ICB), which divides the sample into 11 different industries. This taxonomy is a classification framework that is commonly applied globally by stock exchanges, data providers, and asset managers (FTSE Russell, 2024). Table I shows that the *Financials* industry constitutes the largest proportion of the sample and the *Real Estate* industry the smallest. The *Consumer Discretionary* industry has the most family firms and the *Telecommunications* industry the least with no family-owned firms.

| Industry (ICB) | Non-Family Owned | Family-owned | % Family-owned |
|---|---|---|---|
| Basic Materials | 36 | 14 | 28.0 |
| Consumer Discretionary | 58 | 24 | 29.3 |
| Consumer Staples | 33 | 11 | 25.0 |
| Energy | 34 | 3 | 8.1 |
| Financials | 106 | 12 | 10.2 |
| Health Care | 28 | 8 | 22.2 |
| Industrials | 92 | 21 | 18.6 |
| Real Estate | 17 | 1 | 5.6 |
| Technology | 19 | 3 | 13.6 |
| Telecommunications | 26 | 0 | 0.0 |
| Utilities | 30 | 1 | 3.2 |
| **Total** | **479** | **98** | **17.0** |

**Table II: Country Distribution**

Table II presents the country of the companies' headquarters within the index. Although some of the companies are headquartered outside of Europe, they are all listed on one of the 17 European stock exchanges and therefore part of the sample. Companies headquartered outside of Europe represent 1.73% of the sample. The *United Kingdom* is the largest part of the sample and *Belgium* has the highest concentration of family ownership, excluding *Luxembourg* with only two companies.

| Industry (ICB) | Non-Family Owned | Family-owned | % Family-owned |
|---|---|---|---|
| Austria | 10 | 1 | 9.1 |
| Belgium | 8 | 9 | 52.9 |
| Bermuda | 2 | 0 | 0.0 |
| Denmark | 12 | 4 | 25.0 |
| Finland | 18 | 2 | 10.0 |
| France | 59 | 22 | 27.2 |
| Germany | 42 | 13 | 23.6 |
| Greece | 10 | 1 | 9.1 |
| Ireland; Republic of | 9 | 0 | 0.0 |
| Italy | 22 | 3 | 12.0 |
| Jersey | 2 | 0 | 0.0 |
| Luxembourg | 1 | 3 | 75.0 |
| Mexico | 0 | 1 | 100.0 |
| Netherlands | 26 | 4 | 13.3 |
| Norway | 11 | 2 | 15.4 |
| Portugal | 5 | 3 | 37.5 |
| South Africa | 1 | 0 | 0.0 |
| Spain | 25 | 6 | 19.4 |
| Sweden | 24 | 10 | 29.4 |
| Switzerland | 37 | 7 | 15.9 |
| United Arab Emirates | 1 | 0 | 0.0 |
| United Kingdom | 151 | 7 | 4.4 |
| United States of America | 3 | 0 | 0.0 |
| **Total** | **479** | **98** | **17.0** |

### Data Collection

In order to classify if firms are family-owned or not, we manually collect ownership data on the 600 constituents using Refinitiv Eikon as the primary data source[1]. In instances where Refinitiv Eikon is unable to provide adequate ownership structure details, we consult the firms' annual reports and official websites as alternative sources. For some constituents data on ownership structure or actual owner is not available causing us to omit 23 firms in our analysis out of the 600 companies in the STOXX Europe 600. We assess if a firm is family-owned by examining ownership at the start of 2010 and at the end of 2022, and then assuming that it have been family-owned during the full period. This assumption is made due to the labor-intensive nature of our data collection process. As suggested by earlier research on family ownership (Anderson and Reeb 2003; Barontini and Caprio, 2006; Sraer and Thesmar, 2007; Andres, 2008), family firms are often characterized by long-term ownership and strategy. Families seldom change ownership over a sample period (Andres, 2008) and on average families hold their ownership stakes for 75.9 years in the US (Anderson and Reeb, 2003). Investments are thus often held over generations, suggesting a lower frequency of ownership turnover in family firms.

For some companies delisted during the period (2010-2022), Refinitiv Eikon does not furnish details on industry classification. In those occurrences, official company websites are used to classify firms according to the Industry Classification Benchmark (same taxonomy used by Refinitiv Eikon). In the cases where the founding year is not provided by Refinitiv Eikon, other sources are used such as official company websites. In a few cases where a firm undergoes changes in structure and/or merges, the founding year is considered the main business' founding year.

We gather data on ROA using the information system Bloomberg. Yearly ROA is collected from 2010-12-31 through 2022-12-31. In a few instances Bloomberg provides a company's ROA at a different date than December 31st because of a split fiscal year. The companies with missing year-end data reporting ROA in the first half of the year are allocated to the end of the year before, e.g. ROA reported on 2013-02-31 is placed in the 2012 ROA column. For the companies with split fiscal year reporting ROA in the second half of the year is allocated to the end of that year, e.g. a company that reported ROA on 2013-10-30 is placed in the 2013 ROA column.

[1]Refinitiv Eikon includes a wide array of company and financial data and is used across academia and industry (SSE Library, 2024).

## D. Variables and Measurement

### Firm Performance

In our study, we use stock return and ROA (Net Income) as two proxies for firm performance, in order to assess performance from an external investor's perspective and from intrinsic firm profitability. Similarly, Eugster and Isakov (2019), Lins et al. (2013) and Villalonga and Amit (2006) also apply a comparable stock price assessment measure approach. Some studies employ other measures such as ROA, ROE or Tobin's Q (Anderson and Reeb, 2003; Morck, Shleifer and Vishny, 1988; Barontini and Caprio, 2006; Sraer and Thesmar, 2007). Stock return measures the firms' total return each year during the period between 2010 and 2022. The total return encompasses not only stock return but also all dividends and spinoffs. It is therefore the true return of holding the stock during each period. See equation:

$$Stock\ Return = \frac{Ending\,Value + Dividends + Spinoffs}{Beginning\,Value}$$

ROA (Net Income) is the other proxy used for firm performance. ROA is calculated by dividing a firm's net income by book value of total assets each year for the period between 2010 and 2022. See equation:

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Stock return is not used frequently in previous literature, however, a recent study use a similar approach in the Swiss market (Eugster and Isakov, 2019). Eugster and Isakov (2019) use a portfolio-based approach; grouping stocks based on family ownership in two portfolios which they reallocate each year. ROA is employed frequently across previous literature. The use of ROA based on net income is relatively common, as evidenced by Anderson and Reeb (2003). Noteworthy, with both measures is that our sample size decreases each year. This is a consequence of the delistings, mergers and bankruptcies that occur during the period.

### Control Variables

Several control variables and dummies (year, country and industry) are used in the analysis. Year dummies are used as time-specific effects (fixed between firms) and

industry dummies are used as firm-specific effects (fixed over time). Year and industry dummies are standard in previous literature, for instance, applied by Anderson and Reeb (2003) in a similar matter. There are fewer studies conducted across borders, but frequent in those is the use of country dummies for firm-specific effects, as exemplified by Lins et al. (2013).

The natural logarithm of market capitalization in millions of euros is used as a control variable. The logarithm is employed to more accurately reflect the effects of size differences and is in line with previous literature, such as Anderson and Reeb (2003). Firm age is defined as the number of years since the founding of the firm and also represented as the logarithm for the same reason market capitalization is. Another control variable is long-term debt-to-assets ratio, which is used to capture leverage. The aforementioned control variables are used to control for firm characteristics, such as size and risk. All control variables are firm and year specific leading to 12 data points per firm (if the firm has remained publicly traded). These variables (or close comparatives) are commonly used in previous literature.

## E. Summary Statistics

Figure 1 and tables III, IV and V report summary statistics for the data applied in our study. The data set comprises 577 firms that were part of the STOXX Europe 600 index in 2010 and covering their financial history and performance from 2010 through 2022. *Stock Return* is the annual return and *ROA* is the average return on total assets over net income. *Market Cap (€000 000)* is the average market capitalization of the firms in the beginning of 2010, reported in millions of euros. *LT Debt/Assets* is leverage measured using book value of long-term debt over book value of total assets from the beginning of 2010 through 2022. Figure 1 shows the cumulative return of family respective non-family firms. In Table III we see the number of data points of each specific variable and their respective mean, standard deviation, minimum and maximum values. The average yearly *Stock Return* (total return) is 8.66%, the average *ROA* is 4.35%. In general we see a high variance across all the variables in the sample looking at the standard deviation. Table IV presents a difference of means between family firms and non-family firms and reports *P-value* in the third column. The table reports that the average annual *Stock Return* for family firms is 10.40% and 8.32% for non-family firms, thus family firms have a 2.08% higher yearly return. The average annual *ROA* for family firms is 6.14% in comparison to 3.94% for non-family firms. Table V reports the correlation data for variables used in the analysis.

**Figure 1: Graph of Total Returns During Period**

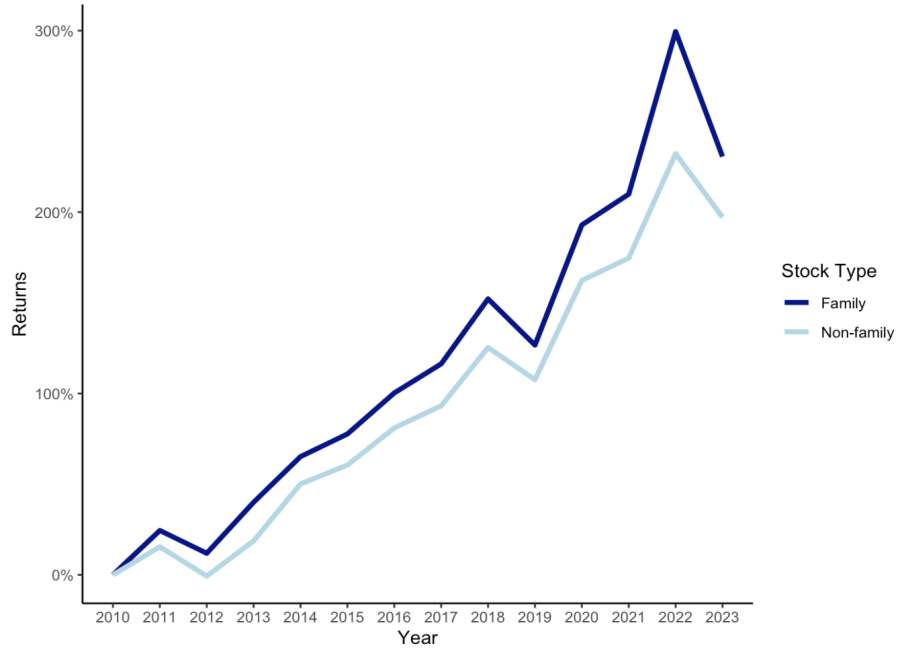



**Table III: Summary Statistics Over Full Sample**

| Statistic | N | Mean | St. Dev. | Min | Max |
|---|---|---|---|---|---|
| Stock Return (%) | 7,046 | 8.66 | 34.76 | −99.70 | 501.20 |
| ROA (Net Income, %) | 6,700 | 4.35 | 9.96 | −297.26 | 347.60 |
| LT Debt/Assets (%) | 5,199 | 20.51 | 17.91 | 0.00 | 225.34 |
| Market Cap €000 000 | 7,145 | 11,178 | 19,354 | 495 | 140,337 |
| Firm Age | 7,381 | 44 | 47 | 0 | 526 |

**Table IV: Differences of Means**

| Statistic | Family | Non-family | P-value |
|---|---|---|---|
| Number of firms | 98 | 479 | - |
| Stock Return (%) | 10.40 | 8.32 | 0.03 |
| ROA (Net Income, %) | 6.14 | 3.94 | 0.00 |
| LT Debt / Assets (%) | 18.91 | 20.51 | 0.37 |
| Market Cap (€000 000) | 10,131 | 11,742 | 0.00 |
| Firm age (years) | 53 | 41 | 0.04 |

**Table V: Correlation Matrix**

| | Family | Stock Return | ROA | LT Debt/ Assets | Market Cap | Firm Age |
|---|---|---|---|---|---|---|
| Family | 1.00 | | | | | |
| Stock Return | 0.03 | 1.00 | | | | |
| ROA (Net Income) | 0.08 | 0.13 | 1.00 | | | |
| LT Debt/Assets | −0.05 | 0.00 | −0.06 | 1.00 | | |
| Market cap | 0.04 | −0.04 | 0.18 | −0.03 | 1.00 | |
| Firm age | 0.09 | −0.03 | −0.01 | −0.05 | 0.11 | 1.00 |

## F. Research Design

This study employs a quantitative research methodology to investigate the relationship between family ownership and firm performance. The relationship is examined over the period from 2010 to 2022. Firm performance is proxied in two ways: stock return and ROA (as defined in section III.D.). The effect of family ownership, defined as per our definition, is analyzed on the two performance measures and is the main interest of the study. To better understand the dynamics of family ownership we later in the study further separate the sample of family firms into groups based on level of ownership by the family and age of the firm. To analyze the effect level of ownership has on performance, we split the family firms into a high and low ownership group. In the high ownership group, families hold over 50% of the capital or control of the voting rights. In the low ownership group, families hold between 20-50% of the capital or control over the voting rights. To analyze the effect of a firm's age, we split the family firms into young and old firms. In the group of young family firms, the companies were founded less than 50 years ago. In the group of old family firms, the companies were founded 50 years ago or more. The split between older and younger firms is the same method employed by Anderson and Reeb (2003).

We study the relationship between family ownership and performance using a two-way fixed effects model for our OLS regression analysis, which is similar to Anderson and Reeb's (2003) method. Our fixed effects are dummy variables for year, country and industry. The control variables we use are firm- and year-specific. The regressions' significance level is adjusted for serial correlation and heteroskedasticity using the Huber White Sandwich Estimator for variance[2].

[2]Heteroskedasticity and serial correlation is a problem family ownership studies face. We adjust the significance level for both problems using the Huber White Sandwich Estimator for variance. This is a common practice in previous literature (Anderson and Reeb, 2003; Sraer and Thesmar, 2007; Eugster and Isakov, 2019, among others) making the models more robust and efficient.

The following four regressions use different control variables and dummies with the final regression providing the main results of the study:

$$Firm\ Performance = \beta_0 + \beta_1 * Family_{Dummy} + \beta_{2-15} * Year_{Dummies} + \epsilon$$

$$\begin{aligned} Firm\ Performance =& \beta_0 + \beta_1 * Family_{Dummy} + \beta_{2-15} * Year_{Dummies} + \\ & \beta_{16-37} * Country_{Dummies} + \epsilon \end{aligned}$$

$$\begin{aligned} Firm\ Performance =& \beta_0 + \beta_1 * Family_{Dummy} + \beta_{2-15} * Year_{Dummies} + \\ & \beta_{16-25} * Industry_{Dummies} + \epsilon \end{aligned}$$

$$\begin{aligned} Firm\ Performance =& \beta_0 + \beta_1 * Family_{Dummy} + \beta_{2-5} * Control\ Variables + \\ & \beta_{6-19} * Year_{Dummies} + \beta_{20-29} * Industry_{Dummies} + \\ & \beta_{30-51} * Country_{Dummies} + \epsilon \end{aligned}$$

Where:

*Firm performance* = Stock return and ROA (based on Net Income)
*Family* = Family ownership, high or low family ownership, or young or old family firms. Binary variables equaling 1 if it is family-owned and 0 otherwise.
*Country* = Country in which the firm's headquarter is located.
*Industry*= Industry in which the firm is operating in, as defined by the ICB industry level taxonomy.
*Control variables*= Ln(Market cap ('000 000€)), Ln(Age (years since inception)) and long-term debt-to-assets

## G. Limitations

Our study is limited by quality of data, omitted variable bias and endogeneity. As conferred in previous literature, (Faccio and Lang, 2002; Anderson and Reeb, 2003; Andres, 2008, amongst others) gathering the data required to classify a firm as family-controlled is challenging. In our sample, we fail to classify 23 companies out of the 600 constituents. The firms we cannot label fall into two types: (1) it is not possible to find data on owners of a company or (2) it is not possible to find data on a specific owner. Out of the firms we do not classify, a majority are delisted which causes some concern as the sample becomes systematically biased against delisted firms. For the second type of unclassified firms we establish that a firm has a controlling shareholder, however, we cannot identify who that shareholder is and therefore, unable to label it

as either family-owned or not. In these instances, there is likely an overrepresentation of family firms not being identified. These systematic problems are a limitation to the study, however they only account for approximately 5% of the sample.

Another quality of data limitation to the study is missing data for certain control variables. Most notably, we only have 5,199 data points of long-term debt-to-assets compared to ROA where we have 6,700, making the variable less useful. From what we have seen is that the missing long-term debt-to-assets data points are seemingly random and thus should not introduce bias into the results. The ROA regressions are subject to slight inaccuracies in time due to some of the firms with a split fiscal year. As stated in section III.C., we miss calendar year-end ROA for some companies with split fiscal year reporting. We place those ROA data points in the column at the end of the year before or at the end of that year depending on if they reported in the first or second half of the year. The simplification could cause some bias due to systematic trends that could exist in firms with split fiscal years. For instance, it could be more prevalent in certain industries or countries. However, this is only the case for a limited number of companies and thus its effects should not be consequential.

The results could also suffer from omitted variable bias. The relationship between family ownership and the dependent variables may be driven by a missing variable. Based on earlier literature, our study aims to include various different control variables that are suitable proxies for different firm characteristics, such as the firm's risk, size and quality. One omitted variable that limits the study is other large blockholders. This variable can be used to help distinguish the effects of family ownership from the effects of a large blockholder. However, previous literature have found other blockholders to be insignificant as a control variable when regressing for effects from family ownership, such as Eugster and Isakov (2019).

The study is potentially also limited by endogeneity problems most notably reverse causality. Do family ownership cause firm performance or does firm performance lead to family ownership? Families have better access to management and may have better insights into the firm overall, which could mean they have an information advantage over smaller investors and could thus avoid poorly performing stocks. Some studies use Instrumental Variables (IV) models to debias the results from potential endogeneity. We use OLS models which are in line with Anderson and Reeb (2003). They use OLS models to derive their main results and IV-model as a robustness test where they found no significant differences compared to the OLS results. The arguments against reverse causality are also strong. Firstly, the difficulty in predicting future firm performance. Even though family firms may have an information advantage over smaller investors this is likely not the case over larger institutions. Secondly, Anderson and Reeb (2003) find families' average holding period to be 75.9 years. They argue that families therefore would have to have incredible foresight to be able to predict, on average, 75.9 years into the future. On a similar note, Eugster and Isakov

(2019) argue the long holding periods indicate families' goal is to preserve their firm compared to value maximization which is another argument against reverse causality. Therefore, as accredited previous literature use OLS and the strong arguments against reverse causality we consider the risk of biased results in OLS regressions due to reverse causality to be low.

# IV. Results and Robustness Tests

## A. Results

**Table VI: Stock Return and ROA**

This table reports family ownership's effect on *Stock Return* and *ROA* only controlling for time-specific effects through *Year Dummy*. In the left column, the results show family ownership having a positive significant effect ($p<0.05$) of 2.10% on *Stock Return*. The right column presents that family ownership has a highly significant ($p<0.01$) positive effect on *ROA*, with *ROA* on average being 2.19% higher for family firms than non-family firms.

| | *Dependent Variable:* | |
|---|---|---|
| | Stock Return | ROA (Net Income) |
| | (1) | (2) |
| Family | 2.100** | 2.194*** |
| | (0.891) | (0.342) |
| Year Dummy | Yes | Yes |
| Constant | Yes | Yes |
| Observations | 6,500 | 6,810 |
| $R^2$ | 0.017 | 0.129 |
| Adjusted $R^2$ | 0.015 | 0.128 |
| Residual Std. Error | 9.953 (df = 6486) | 1.903 (df = 6796) |
| F Statistic | 8.673*** (df = 13; 6486) | 77.734*** (df = 13; 6796) |
| *Note:* | | *p<0.1; **p<0.05; ***p<0.01 |

**Table VII: Controlling for Country and Industry**

This table reports family ownership's effect on *Stock Return* and *ROA* whilst controlling for time-specific effects through *Year Dummy*, and controlling for firm-specific effects through *Country Dummy* (headquarters) and *Industry Dummy* sep-

arately. When including the country as a dummy, Family has a significant positive effect (p<0.05) of 1.99% on *Stock Return* and a highly significant (p<0.01) positive effect of 2.42% impact on *ROA*. Evident by the results, looking at the small changes compared to Table VI, we see that country is not a significant impacting factor when comparing family-owned firms with non-family-owned. When controlling for industry, the family ownership's effect on *Stock Return* is positive but insignificant at 0.70%. Thus a part of the significant effect by Family on *Stock Return* presented in Table VI can be attributed to family firms operating in greater performing industries. The effect on *ROA* is significant (p<0.01) at 1.19%, but likewise lower than in Table VI. The results underscores that industry is an important factor when assessing family ownership's effect on *Stock Return* and *ROA*.

| | Controlling for Country | | Controlling for Industry | |
|---|---|---|---|---|
| | *Dependent Variable:* | | | |
| | Stock Return | ROA | Stock Return | ROA |
| Family | 1.989** | 2.421*** | 0.696 | 1.189*** |
| | (0.957) | (0.351) | (0.920) | (0.411) |
| Year Dummy | Yes | Yes | Yes | Yes |
| Country Dummy | Yes | Yes | No | No |
| Industry Dummy | No | No | Yes | Yes |
| Constant | Yes | Yes | Yes | Yes |
| *Note:* | | | | *p<0.1; **p<0.05; ***p<0.01 |

**Table VIII: Differentiating Between Family Firms**

Table VIII reports the results of a two-way fixed effects OLS regression model determining different family ownership groupings' effect on *Stock Return* and *ROA*. *Year Dummy*, *Country Dummy* and *Industry Dummy* are our fixed effects. The control variables applied are *Ln(Market Cap)*, *Ln(Firm Age)* and *LT Debt/Assets*. The findings show that *Family* exert a positive but insignificant impact of 0.64% on *Stock Return*. *Family*'s effect on *ROA* is significantly (p<0.05) positive at 1.21%. *High Family Ownership* has a slight significant positive effect on *Stock Return* and a distinctive positive impact on *ROA*. We also regressed for low family-owned firms (20-50%), however, the results are not shown in the table to increase readability. We

found a non-significant negative effect on *Stock Returns* and non-significant positive effect on *ROA* strengthening the results that high family ownership lead to better firm performance. *Old Family Ownership* has a slight significant positive effect on *Stock Return* and a more distinctive significant positive impact on *ROA*. Similarly, we also regressed for young family-owned firms (less than 50 years old), but not shown in the table either. We saw an insignificant negative effect on *Stock Return* and a positive significant effect on *ROA*. The effect of *Old Family Ownership* on *Stock Return* is higher and on *ROA* is smaller than for young family-owned firms.

| | *Dependent Variable:* | | | | | |
|---|---|---|---|---|---|---|
| | Stock Return | | | ROA (Net Income) | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Family | 0.635 | | | 1.206** | | |
| | (1.141) | | | (0.500) | | |
| High family-ownership | | 2.409* | | | 1.487*** | |
| | | (1.296) | | | (0.338) | |
| Old-family ownership | | | 2.167* | | | 0.832** |
| | | | (1.285) | | | (0.356) |
| ROA (Net Income) | 0.390* | 0.382* | 0.390* | | | |
| | (0.201) | (0.197) | (0.201) | | | |
| Ln(Market Cap) €000 000 | −1.438** | −1.293** | −1.451** | 1.224*** | 1.184*** | 1.220*** |
| | (0.589) | (0.585) | (0.588) | (0.171) | (0.172) | (0.171) |
| Ln(Firm Age) | −0.696 | −0.715 | −0.906 | −0.503*** | −0.465*** | −0.546*** |
| | (0.597) | (0.588) | (0.626) | (0.175) | (0.163) | (0.169) |
| LT Debt/Assets | −0.321 | −1.114 | −0.429 | −3.311 | −3.005 | −3.373 |
| | (4.445) | (4.502) | (4.444) | (2.153) | (2.198) | (2.161) |
| Year Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | Yes | Yes | Yes | Yes | Yes | Yes |
| *Note:* | | | | | | *p<0.1; **p<0.05; ***p<0.01 |

## B. Robustness Tests

Studying different types of firm performance measures and types of family ownership make the results more robust. As stated in section III.G , the study can potentially suffer from the quality of the data and omitted variable bias. Even though this is still a constraint of the study, running several regressions using different variables decreases the risk of failing to detect these types of problems. To test the robustness of the results we changed the data in two key ways. Firstly, a division of the period into two parts. This is done to see that the period we chose is not a significant factor driving results. Thus, we divided the data into a beginning period (2010-2016) and an end period (2017-2022) and tested both the periods on Stock Returns and ROA.

**Table IX: Effect in Different Time Periods**

Table IX reports the family ownership's effect on firm performance over two different time periods. *Family*'s effect on *Stock Return* in the beginning period is slightly negative, meanwhile the effect on the return in the end period is positive. *Family*'s effect on *ROA* in the beginning period has a positive effect of 0.50% and in the ending period a significant ($p<0.01$) positive effect of 1.88%. Considering that families' effect on both proxies for firm performance has the same trend, it is more likely that parts of the differences between families and non-families come from unobserved effects that differ over time. However, comparing tables VIII and IX, we see that families' effects on *Stock Return* were not significant in Table VIII either. Thus, it being insignificant in Table IX is not unexpected. For *ROA*, even though the difference is quite large, the effect in the early period is still positive and losing some statistical significance by dividing the sample is to be anticipated.

## Table IX: Effect in Different Time Periods

| | *Dependent Variable:* | | | |
|---|---|---|---|---|
| | Stock Return | | ROA (Net Income) | |
| | (2010-2016) | (2017-2022) | (2010-2016) | (2017-2022) |
| Family | −0.071 | 1.513 | 0.498 | 1.879*** |
| | (1.552) | (1.633) | (0.368) | (0.628) |
| ROA (Net Income) | 1.030*** | 0.165*** | | |
| | (0.123) | (0.174) | | |
| Ln(Market Cap) €000 000 | −3.043*** | 0.127 | 0.932*** | 1.375*** |
| | (0.690) | (0.802) | (0.125) | (0.183) |
| Ln(Firm age) | −0.831 | −0.779 | −0.091 | −1.022*** |
| | (0.755) | (0.946) | (0.169) | (0.371) |
| LT Debt/Assets | −2.379 | 3.311 | −5.092*** | −2.021 |
| | (5.271) | (6.801) | (1.194) | (1.970) |
| Year Dummy | Yes | Yes | Yes | Yes |
| Industry Dummy | Yes | Yes | Yes | Yes |
| Country Dummy | Yes | Yes | Yes | Yes |
| Constant | Yes | Yes | Yes | Yes |
| Observations | 2,255 | 2,386 | 2,262 | 2,398 |
| $R^2$ | 0.258 | 0.185 | 0.191 | 0.113 |
| Adjusted $R^2$ | 0.245 | 0.172 | 0.177 | 0.099 |
| Residual Std. Error | 30.993 (df = 2215) | 31.767 (df = 2347) | 6.738 (df = 2223) | 11.815 (df = 2360) |
| F Statistic | 19.743*** (df = 39; 2215) | 14.009*** (df = 38; 2347) | 13.814*** (df = 38; 2223) | 8.113*** (df = 37; 2360) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

The second change in the data is excluding the top 5% best performing stocks (in total return) during the period. Some well known family firms, such as LVMH, Hermès and Investor, have had extraordinary returns during the period of the study. An objection to the results could thus be that the better performance is not driven by families as a whole, but instead by a few families with superior capabilities.

**Table X: Exclusion of Top 5% Performing Firms**

Table X shows the results of this exclusion. *High Family Ownership* and *Old Family Ownership* no longer has a positive significant effect on Stock Return. The change in effect on *ROA* is minimal and the only difference of significance is that *Family*'s effect is more distinct (p<0.01). Overall the variations are small and the exclusion of the top 5% of performing firms seems to have no impact on family ownership's effect on firm performance. Other exclusions of the data are tested as well such as top and bottom 5%, top 10%, and top and bottom 10%. These varying exclusions of top and bottom firms suggest our results on family firms having superior *ROA* are robust and the limited effect on *Stock Return* is steady.

| | *Dependent Variable:* | | | | | |
|---|---|---|---|---|---|---|
| | Stock Return | | | ROA (Net Income) | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Family | 0.603 | | | 1.343*** | | |
| | (1.167) | | | (0.508) | | |
| High family-ownership | | 1.834 | | | 1.552*** | |
| | | (1.344) | | | (0.345) | |
| Old-family ownership | | | 1.610 | | | 0.798** |
| | | | (1.312) | | | (0.355) |
| ROA (Net Income) | 0.386* | 0.379* | 0.386* | | | |
| | (0.207) | (0.203) | (0.206) | | | |
| Ln(Market Cap) €000 000 | −1.506** | −1.335** | −1.514** | 1.080*** | 1.046*** | 1.075*** |
| | (0.591) | (0.588) | (0.589) | (0.172) | (0.175) | (0.172) |
| Ln(Firm age) | −0.374 | −0.390 | −0.527 | −0.545*** | −0.503*** | −0.582*** |
| | (0.603) | (0.594) | (0.633) | (0.179) | (0.167) | (0.175) |
| LT Debt/Assets | 1.689 | 0.680 | 1.572 | −2.728 | −2.447 | −2.810 |
| | (4.511) | (4.568) | (4.513) | (2.202) | (2.248) | (2.211) |
| Year Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Dummy | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | Yes | Yes | Yes | Yes | Yes | Yes |

*Note:* *p<0.1; **p<0.05; ***p<0.01

In summary, our results display multiple findings on different groupings of family ownership's effect on firm performance. Table VI reports significant positive association of family ownership on stock return and ROA. Table VII discerns a continued significant positive effect from family on both measures after controlling for country dummies. After controlling for industry, only ROA is positively impacted by family ownership with significance. Table VIII further controls for independent variables and fixed effects. High family ownership and old family ownership only have a slight significant positive effect on stock return, while Family have none. The effect on ROA is significant in all groupings except low family-owned firms. Finally, the robustness tests showed the findings on families' effects on ROA are resilient.

# V. Discussion

The results of our study indicate that, when only controlling for time-specific effects, family firms exhibit higher returns on the stock market and are more profitable compared to non-family firms. From the perspective of an equity investor, the results indicate that investing in family-owned firms should yield on average 2.1% better returns each year, as demonstrated in Table VI. The higher returns of family firms as a group is illustrated in Figure 1. However, assuming an efficient market, a consequence of higher returns is increased risk. Eugster and Isakov (2019) suggest that holding shares in family firms should be awarded with a higher risk premium due to the increased agency costs. Still, we observe higher ROA in family-owned firms, which should not be a consequence of added agency risks.

When controlling for the country of headquarters in Table VII, the significant positive effect remains with a slight decrease of families' effect on stock return and an increase in the effect on ROA. This suggests country-specific economic and regulatory environments are not an explanation that bear substantial significance for family firms' outperformance. When controlling for industry, the significance of family ownership on stock returns disappears. Indicating that a notable amount of the stock outperformance is attributed to families owning firms in industries that have yielded higher returns.

The results in Table VIII indicate that when controlling for the relevant variables, family ownership exhibits a positive significant association with ROA. This suggests that profitability, as proxied by ROA, is 1.21% higher than in non-family firms. The effect proves robust by our conducted tests, though some variance over time is found. Our results concur in part with Anderson and Reeb (2003) who also find support for higher profitability in family firms. They note, the advantages of family ownership can include increased governance abilities, higher economic incentive due to a concentrated position, and a better long-term time horizon. Sraer and Themsar (2007) also

find that family firms have higher ROA. They present potential management styles attributed to family firms that can explain the outperformance. The authors posit that founders are more productive, heir-managers pay lower wages due to long-term employment contracts, and outside professional CEOs operate at lower ratios of capital to labor.

Table VIII also presents old family ownership's significant effect of 0.83% on ROA, which is lower than the effect from younger family firms. The findings are similar to Anderson and Reeb (2003) who find that younger family firms have a higher ROA. Anderson and Reeb (2003) argue a reason could be that founders are generally more present in younger firms and they add unique value-adding skills, but with firm age the descendants take over and contribute less to the firm's performance. Indirectly Villalonga and Amit (2006), Andres (2008), and Barontini and Caprio (2006) also examine the effect of firm age on the relation between family firms and firm performance by studying the difference in performance between founder CEOs and descendant CEOs. Postulating that descendant-managed firms are generally older than founder-managed firms, these authors find that younger, founder-led, firms perform better than those led by descendants, similar to our results in support of younger firms.

In contrast to family ownership's positive effect on ROA, we do not find that family ownership's effect on stock returns is significantly different from 0 after controlling for independent variables. The estimated effect is 0.64% which is not high enough to draw any strong conclusions. There is a limited amount of earlier research conducted on the relation between stock performance and family performance. Eugster and Isakov (2019) argue the reason is the efficient market hypothesis and that all differences in ownership structure should already be priced in. This is a compelling reason due to the lack of significant returns we find, however, Eugster and Isakov (2019) themselves find a significant effect on stock returns in the Swiss market from family ownership. Considering the use of different control variables and markets studied there may be unobserved differences that drive the difference in the results. In our study, we find support for a positive effect of high family ownership on stock returns (compared to no effect on regular family ownership). This is in line with earlier reasoning by Eugster and Isakov (2019), as higher family ownership should increase the agency risks and in turn increase the risk premium. This could be an explanation to our results, however, it only explains the higher stock returns and not why we saw a similar effect on ROA.

As illustrated in Table VIII, high family ownership is associated with a significant ($p<0.01$) positive effect of 1.49% on ROA, in comparison to the total sample of family firms, where the positive effect is 1.21%. High family ownership firms exhibiting greater performance than low family ownership firms is consistent with Cronqvist and Nilsson (2003) findings. They find controlling minority shareholders (25-50%) is associated with the highest agency costs and lowest performance. Anderson and

Reeb's (2003) challenge these results arguing that family ownership's positive effect on ROA starts to decrease at 30.8%. Anderson and Reeb (2003) also find that after 60% ownership the returns of family firms perform worse than non-family firms.

The discrepancies between our findings and those of Anderson and Reeb (2003) on high and low family ownership could be explained by the differences in research focus and methodology. They study founding-family ownership whilst we include additional types of family firms. Their paper also applies control variables that we do not employ. Variables include, but are not limited to, management ownership, CEO pay and independent board members, which we do not account for due to data constraints. Moreover, since they separate between founding-controlled, descendant-controlled, and professional CEO-controlled, greater consideration is taken to the involvement of the family in the firm operations. In our study, we apply a different commonly used definition of a family firm, however, it does not directly take into consideration the involvement of the family in the business. It is possible that in our sample, low ownership family firms are less active than high ownership family firms where the families can exercise more control. Andres (2008) argues that family involvement is central in order for family firms to outperform non-family firms. Consequently the poorer performance from low family ownership may instead be caused by passive ownership compared to active involvement by the family. Despite the differences in methodology, our divergent results on the effect of high and low family ownership are still of interest. It is also possible these discrepancies could be attributed to differences between family firms in the US and European markets, or alternatively, to the fact that our more recent sample period may have coincided with a period of change in the characteristics of family firms.

# VI. Conclusion

Our paper studies the relationship between family ownership in listed companies and firm performance within the STOXX Europe 600 index. Studying the European market, we find evidence that family ownership leads to better firm performance in certain aspects, but inconclusive in others. As a collective, family firms have higher stock returns than non-family firms over our sample period. We cannot however deduce that the effect is due to a significant positive association between family ownership and stock returns. We find substantial evidence that family ownership has a positive significant effect on ROA. Finding this result in another market and over a different time period than that of Anderson and Reeb (2003) is compelling support for family ownership's positive effect on profitability. The effect of ROA is more prominent in young family firms than old and the strongest for firms with high family ownership. The results indicate that family ownership is beneficial for profitability and does not have negative implications for firm-value. We strengthen earlier findings that family ownership is as good, and in aspects better of an ownership-structure than non-family ownership. Our results on the effect of different levels of family ownership challenge previous findings on the US market and contribute to potentially highlighting either disparities between US and European family firms or differences in family firms over time.

For future researchers, we recommend further study on the effect of high family ownership on firm performance. The existing literature is divided on this topic, but our findings indicate a positive effect of family ownership on firm profitability. As in the study by Anderson and Reeb (2003) it could be interesting to map out differences in management and family-involvement in our sample of the European market. Comparing the dynamics of family-involvement between low and high ownership firms could deepen the understanding of the impact of high family ownership on firm performance.

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# Appendix

### Appendix 1. STOXX Europe 600

The STOXX Europe 600 is a free-float market capitalization index of 600 constituents representing large, mid and small capitalization companies. It includes over 90% of the free-float market capitalization of the European stock market. It includes companies listed across 17 countries of the European region: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. The STOXX Europe 600 index offers exposure to a broad array of industries within Europe with the top one's being health-care, industrial goods and services, banks, technology and food, beverage and tobacco. The top-weighted countries are the UK, France, Switzerland, Germany and the Netherlands (STOXX, 2024).