



Keep it in the Family?

A general analysis examining differences in corporate policies and performance between listed family firms and non-family firms in Scandinavia

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Abstract

This paper investigates if there are differences in corporate policies and performance between listed family firms and non-family firms in Scandinavia. By utilising accounting- and market data from 1990 to 2020, we examine the firms' investment policy, financial policy, organisational policy, and firm performance. By examining corporate policies, we intend to uncover differences in governance and management practices that may result in family firm outperformance. Our findings show that family firms outperform non-family firms in return on assets and operating return on assets. Furthermore, we discover that family firms have fewer acquisitions, have more debt, pay more dividends, and have less R&D and SG&A expenditures than non-family firms. We suggest that these differences are caused by lower agency costs, increased risk aversion, and a more long-term strategy in family firms than in non-family firms. We note that the findings of this paper may be affected by our family firm definition and endogeneity in the analysis.

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1. Introduction

Family firms are the most common form of firms globally (La Porta et al., 1999; Faccio & Lang, 2002; Morck & Yeung, 2003). They contribute to a significant share of the world GDP and are by some described as the fundament of the world economy (Anderson & Reeb, 2003). Even though the presence of family firms is substantial, the research on this category of ownership is surprisingly small, especially in Scandinavia. We find few studies investigating corporate policies in family firms when examining existing literature on the topic. Hence, we wish to contribute to this somewhat unknown field of study by comparing corporate policies and the performance of listed family firms (FFs) to non-family firms (NFFs) in Scandinavia.

To examine if there is a difference in corporate policies between FFs and NFFs, we find great inspiration in the acclaimed paper “Managing with Style: The Effect of Managers on Firm Policies,” published by Marianne Bertrand and Antoinette Schoar in *The Quarterly Journal of Economics* (2003). Their study investigates whether and how individual managers affect corporate behaviour and performance. They look at three corporate policies (investment policy, financial policy, and organisational policy) and firm performance. We take inspiration from their paper, thus investigating the same corporate policies and applying a similar empirical methodology adjusted and modified to suit our hypothesis and data.

Another motivational aspect of examining FFs in Scandinavia emerged after reading Ulland and Upsaker’s (2020) study on FF performance in the Nordics. They compare the performance of listed FFs from 2000 to 2019 to the Fama and French five-factor model. They find that their Nordic family firm portfolio generated a 2.19 per cent average abnormal monthly return. Their study provides no clear answer to why this abnormal return might occur, but the authors suggest it may result from family ownership. Their findings inspired us to research whether differences in corporate policies between FFs and NFFs could contribute to explaining the outperformance of Scandinavian FFs.

To conduct our research, we first examine whether corporate policies differ between FFs and NFFs. We search for differences in investment policy, examining the magnitude of acquisitions and capital expenditures. Then, we investigate differences in financial policies, including the firms’ amount of leverage, interest coverage, cash holdings, and dividend payouts. Furthermore, we search for differences in organisational policies by analysing R&D and SG&A expenditures. Lastly, we look at performance, examining the return on assets,

operating return on assets, and sales growth. To further analyse the differences between FFs and NFFs, we also examine the financial policies of financially distressed firms.

Our findings suggest that FFs outperform NFFs in Scandinavia on return on assets and operating return on assets. We also find that FFs have different corporate policies than NFFs. FFs perform fewer acquisitions, have more debt, and have a higher dividend payout ratio than NFFs. Furthermore, we find that FFs have lower R&D and SG&A expenditures than NFFs. Additionally, we discover that the corporate policies of FFs are, on average, less sensitive to changes in the firms' size than NFFs. Lastly, we find that when FFs are financially distressed, they are less levered, have higher cash holdings, and have a lower dividend payout ratio than financially distressed NFFs. We suggest that our findings of distinct corporate policies and performance between Scandinavian FFs and NFFs indicate that family ownership leads to more effective corporate governance and firm behaviour than non-family ownership. More precisely, our findings provide preliminary evidence of reduced agency conflicts, a higher degree of risk aversion, a greater fear of losing ownership control, and a more stable long-term growth strategy in FFs than NFFs, resulting in FF outperformance.

It is essential to emphasise that the results from our analysis do not prove causal relationships in our findings of FFs, only correlation. According to Anderson and Reeb (2003), research on the relationship between family ownership and firm performance usually suffers from reversed causality. Therefore, finding casual evidence for FF performance has proven problematic in research and to the best of our knowledge, no similar study has sufficiently solved this issue. Thus, we do not seek to find casual relationships between FFs' corporate policies and performance in our analysis due to time constraints. Instead, we intend to identify correlations that provide a better understanding of family ownership in Scandinavian and provide preliminary evidence for further research.

Existing literature comparing the performance of FFs and NFFs primarily focuses on the US and continental Europe. Anderson and Reeb (2004), Cronqvist and Nilsson (2003), and Amit and Villalonga (2006) suggest that family ownership improves corporate governance resulting in an outperformance compared to non-family ownership. The authors claim the outperformance can be attributed to lower agency costs in FFs than in NFFs due to a better alignment of interests between management and shareholders. However, a general outperformance by FFs is not agreed upon throughout academia. Pérez-Gonzales (2006) and Schulze et al.'s (2001) findings indicate that FFs underperform compared to their counterparts.

Gedajlovic et al. (2012) and Bertrand and Schoar (2006) suggest that the underperformance is due to higher agency costs resulting from wealth expropriation from minority shareholders by family owners. Other studies argue that the underperformance can be caused by resource misallocation (Morck & Yeung, 2003) and resource inefficiency (Almeida & Wolfenzon, 2006). The overall inconclusive results on FFs' performance in academia make the findings of this study interesting, primarily because of the few studies conducted on FFs in Scandinavia. Accordingly, this thesis contributes to the existing literature in the following ways: As our study is the first of its kind in Scandinavia, it offers new insight into differences in performance and corporate policies between listed FFs and NFFs in this region. Additionally, our study provides preliminary evidence that may serve as a basis for further research. Lastly, since the existing FF studies in the US and Europe presents mixed results and no conclusive evidence, our findings provide additional information about how family ownership may affect corporate policies and performance.

The thesis is divided into five parts and proceeds as follows. In the first part, Chapter 2, we review the relevant literature regarding corporate policies and performance in FFs. The chapter aims to give the reader an introduction to the topic and a foundation for further discussion. Following this chapter, Chapter 3 explains how we gather our data and create our FF and NFF samples. Chapter 4 presents the methodological approach we use in the thesis, which methodology considerations we take, our results and discussion of the findings, and a discussion of the robustness of the results. Chapter 5 elaborates on the limitations of this thesis. Lastly, Chapter 6 summarises our findings and presents our conclusion and suggestions for further research.

2. Literature Review

This chapter presents literature on FFs to provide the reader with an overview of the current research landscape. First, we outline the different definitions of FFs in academia and present the chosen definition for our thesis. Then, we present literature on the institutional setting of Scandinavia. The following sections discuss literature on performance and corporate policies in FFs in relation to agency theory, ownership control, and risk attitudes. In the final section of this chapter, we summarize the literature and present our research question.

There exist more than 90 different definitions of FFs, according to the European Commission (2009), and to this day, no standard definition is established. The lack of a definition provides difficulties in finding significant results on FFs agreed upon throughout academia. The following three dimensions are commonly considered in research when defining a FF: (1) the family must own a significant part of the shares in the firm, (2) the family must be the majority shareholder of the firm, and (3) the family must hold a top management position in the firm (Amit & Villalonga, 2006). Furthermore, it is common to define a firm as a FF if the founder or relatives of the founder own shares above a certain threshold. For example, Westhead et al. (2001) require the threshold to be more than 50 per cent to define a firm as a FF. In comparison, La Porta et al. (1999) and Setia-Atmaja et al. (2009) use a threshold of 20 per cent and include that the founder or relatives must be part of the top management. In contrast, Arosa et al. (2010) exclude from their sample firms where the founder or relatives of the founder are neither the CEO nor a part of the management, even if they hold the firm's majority ownership. Berzins et al. (2018) disagree with this definition; they emphasise that it is the family's right to govern and not the actual participation in the management, which is vital for a FF. Ulland and Upsaker (2020) argue that Berzins et al.'s definition is preferable because it identifies ownership as a necessary element that leads to the right to govern, which is more critical than participation in governance. According to this argument, a company does not have to have the founder or relatives of the founder in management positions to be considered a FF.

We agree with the arguments provided by Berzins et al. (2018) and by Ulland and Upsaker (2020), and we choose to follow their definition of a FF. Hence, if the following three requirements are met, a firm is considered a FF in our sample:

1. The founder or individuals related to the founder either by blood or marriage has at least 20 per cent ownership (voting rights) of the firm.

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2. The founder or the family is the majority shareholder.
 3. Participation by the family in management is considered a right but not a necessity.

As there exist no studies comparing the corporate performance between listed FFs and NFFs in Scandinavia, we find it necessary to first elaborate on the institutional setting of the Scandinavian countries. Scandinavia refers to the countries Norway, Denmark, and Sweden. The Scandinavian countries are small open economies but wealthy compared to other OECD and European countries (Sinani et al., 2008). Scandinavia is further characterised by having a high ownership concentration in listed firms (La Porta et al., 1999) and a tradition of large and robust shareholders, primarily due to dual-class shares, pyramid structures, and cross-holdings (Sinani et al., 2008). The countries share similarities in political stability, government effectiveness, corruption control, accountability, and labour regulation, which paints a relatively homogenous picture of the Scandinavian countries. La Porta et al. (1999) find the Scandinavian-civil law to have low investor protection, especially compared to the US and UK, where the common law provides stronger protection. Thus, according to Cronqvist and Nilsson (2003), minority shareholders in Scandinavia are more likely to be expropriated by large controlling owners. However, La Porta et al. (1999) argue that Scandinavia has sufficient law enforcement, accounting quality, and low corruption, compensating for insufficient investor protection.

According to Jensen and Meckling (1976), FFs are ideal for investigating agency problems due to their ownership and management structure. In our analysis of FFs, we address two types of agency problems, type I and II. An increase in either type of agency problem leads to increased agency costs associated with reduced firm performance. Jensen and Meckling (1976) define type I agency problems (AP1) as the problems which arise from the separation of ownership and control between shareholders and managers. The authors suggest that concentrated ownership reduces AP1 conflicts, thus having a favourable impact on firm value because of better alignment of interest between shareholders and managers. In our FF definition, we require the family to be the majority owner and hold at least 20 per cent of the voting shares. Our FF sample is thus characterised by concentrated ownership. Furthermore, in our sample of Scandinavian FFs, it is common for the family to be involved in the management of the firms, thus creating better alignment between owners and managers. Hence, AP1 is relevant to our analysis and discussion of corporate policies and performance in FFs.

Type II agency problems (AP2) refer to the problems between majority and minority shareholders (Jensen & Meckling, 1976). AP2 conflicts typically arise from majority shareholders who expropriate non-controlling shareholders to maximise profits. As the Scandinavian FFs in our analysis all have one significant shareholder, represented by the family, type II agency problems are relevant in discussing our findings. It is often unclear which agency problem dominates the other in FFs (Morck & Yeung, 2003). On the one hand, FFs usually have fewer interest conflicts between managers and shareholders due to the families' large ownership stake and presence in management, resulting in better firm performance. On the other hand, the dominance of the controlling family owners may lead to increased conflicts of interest between the majority- and minority shareholders, resulting in reduced firm performance. Accordingly, we discuss both types of agency problems in relation to our results.

Demsetz and Lehn (1985) claim that FFs have fewer AP1 costs than NFFs because if the family is both the firm's majority shareholder and is part of management, ownership and control conflicts and information asymmetries will decrease. This argument is supported by Anderson and Reeb (2003), who find that a better alignment of interests between shareholders and managers in North America FFs results in a higher Tobin's Q and return on assets than in NFFs. Similarly, Cronqvist and Nilsson (2003) and Martínez et al. (2007) find that FFs in Sweden and Switzerland outperform NFFs on return on assets. Our findings on Scandinavian firms also indicate a higher return on assets in FFs, but contrary to Anderson and Reeb (2003), we find lower levels of Tobin's Q in FFs than NFFs. Morck et al. (1988) and Holderness and Sheehan (1988) research Fortune 500 and listed Italian firms, and equal to our findings, they uncover lower Tobin's Q in FFs than NFFs.

Chen et al. (2012) and Banker et al. (2014) suggest that FFs have lower SG&A expenditures than NFFs due to better alignment of interest between owners and managers, resulting in less myopic and excessive SG&A spending. This hypothesis is consistent with our findings, as we observe less SG&A expenditures relative to sales in Scandinavian FFs than NFFs. Furthermore, Gilson and Gordon (2003), Ali et al. (2007), and Kang (2017) find evidence supporting this theory; they discover that family owners minimise excessive short-time spending through active participation in the firm.

Furthermore, our findings show that our sample of Scandinavian FFs has a significantly larger dividend payout ratio than NFFs. Our results complement the findings of Pindado et al. (2012),

Setia-Atmaja (2010), Attig et al. (2016), Setia-Atmaja et al. (2009), and Wei et al. (2011), who find that FFs have higher dividend payouts than NFFs in the Eurozone countries, Australia, Switzerland, and China. The authors suggest that the higher dividend payout results from an attempt to resolve conflicts of interest between majority- and minority shareholders and alleviate expropriation concerns. Deslandes et al. (2015), Setia-Atmaja et al. (2009), and Isakov and Weisskopf (2014), who study firms in Canada, Australia, and Switzerland, argue that the higher dividend payouts result from the families' reputation building and income needs. Moreover, Leary and Michaely (2011) report that firms in countries with low investor protection smooth out dividends more consistently, which appears to be the case for the FFs in our sample. However, some studies on Austrian (Gugler, 2003), German (Gugler & Yurtoglu, 2003), Hong Kongese (Chen et al., 2005), and American firms (Hu et al., 2008) find that FFs tend to pay lower dividends than NFFs, suggesting this is due to more pronounced agency problems in FFs. Furthermore, Attig et al. (2016) find a negative correlation between increased profitability and dividend increases in East Asia FFs; conversely, we find that FFs increase dividends when profitability rises. We also find that our financially distressed FFs have a lower dividend payout ratio than distressed NFFs. Demsetz and Lehn (1985), who research FFs in the US, argue that this result may be a consequence of the family's wealth being closely linked to the firm, incentivising the family to take fewer profits for themselves when the firm is struggling.

Seifert and Gonenc (2008) research FFs' liquidity in the US, UK, Germany, and Japan and find that FFs typically have large cash buffers and financial slack in their financial statements compared to NFFs. Ozkan and Ozkan (2004) and Kuan et al. (2011) find a similar result when studying the cash holdings of British and Taiwanese firms. Inconsistent with these findings, our t-test and Wilcoxon test show that FFs have lower cash holdings than NFFs, but in our regression, we find no difference in cash holdings between FFs and NFFs. We suspect that due to the low investor protection in Scandinavia, conflicts between the family and minority shareholders result in lower cash holdings in FFs than NFFs. This hypothesis is based on Pinkowitz et al.'s (2006) findings. They analyse firms in 35 countries and find that the relationship between cash holdings and firm value is much stronger in countries with strong investor protection than in countries with weak investor protection.

Caprio et al. (2011), Franks et al. (2012), and Bauguess and Stegemoller (2008) research acquisitions in FFs, and discover that FFs execute fewer acquisitions than NFFs, suggesting that this distinction originates from the families' aversion to losing ownership control. This

conclusion aligns with our findings, as our FF sample has a lower acquisition ratio than the NFF sample. In addition, we find that increases in assets and cash holdings correlate positively with acquisitions in our FFs, but for NFFs, the correlation with assets is negative, and the correlation with cash holdings is almost non-existent. Hence, our results indicate that FFs prefer to acquire when the family is not at risk of losing controlling ownership. This result aligns with Bouzgarrou and Navatte's (2014) findings, who study acquisitions in listed French FFs and find that the percentage of cash used in target payment positively correlates with family voting rights.

Existing literature also points to differences in risk-taking as a reason for the performance distinctions between FFs and NFFs. On the one hand, Gomez-Mejia et al. (2007) claim that FFs will accept higher levels of risk than NFFs when making a strategic investment if faced with a potential socioeconomic loss of not doing so. The authors find that North American and Spanish FFs engage in more investments than NFFs. On the other hand, Bauguess and Stegemoller (2008), Bianco et al. (2009), Caprio et al. (2011), Faccio et al. (2011), and James (1999) find a lower investment ratio in FFs than NFFs. They argue that this result is a consequence of the families' large ownership stake in the firms, which makes them undiversified compared to the average investor and thus more risk averse. In our sample of listed Scandinavian firms, we find inconclusive evidence of FFs' investment ratio. However, we observe that the investment ratio in FFs appears to be less sensitive to changes in asset size than NFFs. James (1999) finds that FFs invest more efficiently than NFFs because they are more risk-averse and have a longer investment horizon as they intend to pass the firm on to the next generation. Thus, our finding of a lower investment to assets sensitivity in FFs may suggest that their investment policy is less based on immediate gains and more on long-term profitability. Straer and Thesmar (2007) confirm this hypothesis; they find that FFs in France are less impulsive and make fewer decisions based on short-term profits.

When studying leverage ratios in FFs and NFFs in Spain and the UK, Gallo et al. (2004) and Scholes et al. (2012) find that FFs have less debt than NFFs. The authors state that since FFs are risk-averse, they are cautious about debt financing because it increases equity risk. This hypothesis is inconsistent with our findings, as our results show that Scandinavian FFs have a higher leverage ratio than NFFs. Our findings, therefore, complement the findings of King and Santor (2008) and Setia-Atmaja et al. (2009), who find that FFs in Canada and Australia are more levered than NFFs. The authors suggest that family owners prefer debt financing over equity to maintain control over their firms, and they use debt to enforce managerial discipline.

Furthermore, Croci et al. (2011) use a comprehensive European dataset to investigate the effects of family ownership on financing decisions and discover that FFs have more debt than NFFs. They argue that FFs have better access to credit markets than NFFs, leading to a higher debt ratio. In our analysis, we find evidence indicating a lower cost of debt among Scandinavian FFs than NFFs, supporting this hypothesis.

When it comes to R&D and FFs, findings from previous literature are inconclusive. Artz et al. (2010) argue that R&D are long-term investments, so FFs should be expected to devote more resources to R&D than NFFs due to their long-time horizon. Craig and Dibrell (2006), Gudmundson et al. (2003), and Llach and Nordqvist's (2010) findings support this hypothesis. They study firms in the US and Spain and find a positive relationship between FFs and long-term R&D investments. On the other hand, R&D is also associated with high risk (Blazenko & Yeung, 2015), suggesting that FFs should invest less in R&D than NFFs since they are generally more risk-averse. Our findings align with this hypothesis as we find strong evidence that FFs have lower R&D expenditures than NFFs. Furthermore, Chen and Hsu (2009), Munoz-Bullón and Sanchez-Bueno (2011), and Munari et al. (2010), who study family ownership in Chinese, Canadian and Western European firms, suggest that FFs are better at preventing hazardous long-term R&D investments than NFFs. Our results support this hypothesis as we find that return on assets in Scandinavian FFs is almost not sensitive to changes in R&D expenditures, whereas, for NFFs, increases in R&D have a substantial negative correlation with performance.

We contribute to the literature in several ways with our findings. Our study is the first of its kind to examine and thus provide insights into corporate policies and performance in listed family firms in Scandinavia. In addition, we provide new observations to the field of family firm research that both confirm and contradict previous findings. During this literature review, we presented relevant findings from research as well as our results regarding the differences between FFs and NFFs in corporate policies and performance. As illustrated throughout the chapter, there are several inconclusive findings on FFs. However, the research indicates that family ownership generally results in a higher degree of risk-aversion and distinctive corporate governance structures, leading to different corporate policies and performance than NFFs. Most importantly, the literature review provides a foundation for discussing the results of our analysis. By utilising our manually constructed dataset on listed firms in Scandinavia from 1990 to 2020, our thesis aims to investigate if and how Scandinavian FFs firms differ in terms of corporate policies and performance compared to NFFs.

3. Data

This section explains how we gather our data, construct our dataset, and presents relevant descriptive statistics.

3.1 Sample Construction

We have an unbalanced panel data set consisting of listed Scandinavian FFs and NFFs from 1990 to 2020. The specificity of the sample period is a result of data availability. Our lower year limit is 1990 due to the difficulty of retrieving ownership information prior to this decade, and our upper limit is 2020 since data for 2021 is not yet available at the time of our analysis.

We define Scandinavian listed firms as firms listed on the Norwegian, Swedish, or Danish stock exchanges during our sample period. In order to avoid survivorship bias, we also include companies that delisted during our period. Nasdaq Europe provided an overview of historically listed firms in Sweden and Denmark, and Euronext (Oslo Bors) provided an equal overview of Norway. Our overview of listed firms includes the firms' ISIN-number, which we use to retrieve company, accounting- and stock market data from COMPUSTAT. We use the data to construct a series of annual accounting and market variables. We concentrate our analysis on three different sets of corporate decisions (investment policy, financial policy, and organisational policy) and corporate performance. The definition and construction of the specific variables used in our analysis can be found in the Data Appendix.

We choose COMPUSTAT as our database because they provide data on delisted and non-active firms, as opposed to Bureau van Dijk. COMPUSTAT does not hold a complete portfolio of European companies. Hence, we examine how many Scandinavian firms are missing from COMPUSTAT in our period. About six per cent of the firms are not included, and they appear to be a random selection. Thus, we do not think the lack of data will affect our analysis to a significant degree.

After downloading the financial data from COMPUSTAT, we have 1 883 unique companies. As is customary in the study of investment regressions, we exclude firms in the banking and insurance industries as well as utilities from our sample. To preserve consistency across

results, we also exclude these firms in the analysis of non-investment variables¹. Furthermore, the firms in our sample operate in eleven different currencies because the Scandinavian stock exchanges host firms from several continents. In order to compare the firms over time, we convert all accounting- and market figures to a common currency, namely euros. We use the exchange rates to euros at the end of each accounting year for our conversion.

Our thesis's most essential and comprehensive part is identifying the firms as family-owned or not. Unfortunately, there exists no overview or database of FFs in the Scandinavian countries. Hence, we must identify the firms' ownership manually. By our FF definition, a firm is family-owned if the founder or individuals related to the founder either by blood or marriage have at least 20 per cent ownership, and the founder or the family is the majority shareholder. We begin by finding the largest shareholder in each firm. Bureau van Dijk only provides ownership information on currently listed firms and not historical ownership. Hence, we manually look up annual reports for all the 1 883 firms in our sample to identify the largest shareholder. We find the annual reports on the firms' websites, and for older firms, we use the news portal for the different Scandinavian stock exchanges. Due to time constraints, we use the firms' shareholder information from the newest accounting year. The disadvantage of using the newest year is that FFs that stop being FFs during our period are defined as NFF for the entire sample period. Still, we do not consider this to be problematic, as we discovered that most FFs that stopped being FFs were delisted from the stock exchanges when the family sold their shares. Generally, FFs are either merged or acquired by another firm or bought by private equity funds². After identifying the largest shareholder for all 1 883 firms, we must detect if the shareholder is the founder or a relative(s) of the founder. We use several methods to identify the owners as a family or not: We use the accounting- and ownership portals Proff and Proff Forvalt, calling the firms, annual reports, and most often, news articles going back to the 1990s. As this is very extensive manual work, with plenty of room for errors, we conduct the ownership gathering as thoroughly as possible, also double-checking five per cent of the

¹ When we include these observations in the non-investment regressions, our results are virtually unchanged.

² Some examples are Avega Group which were acquired by the Tieto Group (Press Release, 2017) and therefore delisted from Oslo Bors, and Aspiro AB who were acquired by Project Panther Bidco Ltd in 2015 (GlobeNewswire, 2015) and delisted from Nasdaq Stockholm.

sample. After performing this vast and tedious exercise, we created Scandinavia's first database separating listed FFs and NFFs.

As our sample consists of 1 883 firms over a period of 30 years, cleaning the data is necessary. After cleaning and removing companies in the finance- and utility sectors, we are left with 1 614 companies. An overview of the FFs and NFFs samples per country can be found in Table 1. Our final dataset consists of listed Scandinavian non-financial and non-utilities firms from 1990 to 2020, separated into FFs and NFFs, their associated annual accounting and market variables, and an overview of their biggest shareholder and the corresponding percentage ownership.

TABLE 1
FAMILY FIRMS BY COUNTRY

	Family Firms		Non-Family Firms		Total	
	Quantity	%	Quantity	%	Quantity	%
Norway	89	22 %	319	78 %	408	100 %
Sweden	143	15 %	839	85 %	982	100 %
Denmark	73	33 %	151	67 %	224	100 %
Total	305	19 %	1309	81 %	1614	100 %

Table 1 presents an overview of our firm sample divided into family firm (FF) and non-family firm (NFF) by country. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. The table contains the quantity and percentage share of non-financial and non-utility listed FFs, NFFs, and total firms for Norway, Sweden, and Denmark from 1990 to 2020.

3.2 Sample Description

Table 2 presents descriptive statistics for all the corporate variables of interest divided into three samples: all firms, FFs, and NFFs. The descriptive statistics are not value-weighted. Thus, extreme values affect the mean values, so we emphasise the median values in our

analysis³. We winsorise the variables at their 1 and 99 percentile levels to mitigate the effect of outliers, and Table 2 presents our numbers after this exercise. Furthermore, due to the different availability of our variables in COMPUSTAT, the number of observations per variable varies. For example, R&D expenditures are particularly scarce in the database, and we do not have share price information for all our observations. Hence, our subsequent regression analyses contain differing observations.

From Table 2, it is apparent that FFs are larger than NFFs in terms of sales and assets. In terms of costs, FFs have, not surprisingly given their size, higher R&D and SG&A expenditures than NFFs. When looking at investment policy, we see that FFs have a lower acquisition- and investment ratio than NFFs. Additionally, FFs have a lower Tobin's Q, suggesting a lower market valuation than NFFs. Furthermore, FFs have a higher cash flow than their counterparts, are less financially constrained, and show less distress than NFFs. Regarding financial policy, FFs are more debt-financed, have a higher interest coverage, lower cash holdings, and a higher dividend payout ratio than NFFs. In terms of organisational policy, FFs invest less in R&D and SG&A than NFFs. Lastly, FFs outperform NFFs on return on assets and operating return on assets, but not in sales growth.

³ We will look at the mean values for the dummy variables "Financially Distressed" and "Financially Unconstrained"

TABLE 2
DESCRIPTIVE STATISTICS

	All firms						Family Firms						Non-family Firms					
	n	Mean	Median	St. dev.	Min	Max	n	Mean	Median	St. dev.	Min	Max	n	Mean	Median	St. dev.	Min	Max
Total sales (MEUR)	18152	536.44	42.07	1611.57	0.01	10885.49	3803	700.99	87.85	1800.57	0.01	10885.49	14349	492.83	33.66	1554.79	0.01	10885.49
Total assets (MEUR)	19189	603.56	43.92	1868.42	0.16	13365.83	3920	835.96	97.89	2107.20	0.16	13365.83	15269	543.90	35.49	1797.26	0.16	13365.83
log(R&D exp.)	6265	0.93	0.97	2.40	-9.22	5.53	1040	1.35	1.30	2.77	-7.27	5.53	5225	0.85	0.93	2.31	-9.22	5.53
log(SG&A exp.)	15558	2.05	1.93	2.41	-9.22	7.46	2958	2.54	2.53	2.54	-7.83	7.46	12600	1.93	1.78	2.36	-9.22	7.46
Acquisitions	4876	0.16	0.03	1.20	0.00	55.18	1001	0.12	0.02	1.09	0.00	26.11	3875	0.17	0.03	1.22	0.00	55.18
Investment	14524	0.76	0.24	2.01	0.00	15.44	3049	0.64	0.22	1.92	0.00	15.44	11475	0.79	0.25	2.03	0.00	15.44
Tobin's Q	10752	2.58	1.56	2.90	0.56	18.75	2085	2.36	1.39	2.68	0.56	18.75	8667	2.63	1.60	2.94	0.56	18.75
Cash Flow	16686	-13.16	0.24	68.47	-543.00	65.90	3490	-4.59	0.33	48.60	-543.00	65.90	13196	-15.43	0.21	72.66	-543.00	65.90
Financially Distressed	10029	0.28	0.00	0.45	0.00	1.00	1999	0.27	0.00	0.44	0.00	1.00	8030	0.29	0.00	0.45	0.00	1.00
Financially Unconstrained	10761	0.25	0.00	0.43	0.00	1.00	2086	0.29	0.00	0.46	0.00	1.00	8675	0.24	0.00	0.43	0.00	1.00
Leverage	13928	0.55	0.55	0.22	0.08	1.30	2991	0.57	0.57	0.20	0.08	1.30	10937	0.54	0.55	0.23	0.08	1.30
Interest Coverage	12202	87.21	9.51	324.42	-21.32	2252.45	3008	96.71	9.75	342.10	-21.32	2252.45	9194	84.10	9.46	318.38	-21.32	2252.45
Cash Holdings	16697	26.76	0.94	108.99	0.00	881.70	3496	17.03	0.62	84.27	0.00	881.70	13201	29.34	1.07	114.51	0.00	881.70
Dividend/Earnings	19025	0.09	0.00	0.19	0.00	1.06	3899	0.14	0.00	0.23	0.00	1.06	15126	0.08	0.00	0.17	0.00	1.06
R&D	5990	0.12	0.04	0.21	0.00	1.33	1003	0.07	0.03	0.10	0.00	1.33	4987	0.13	0.04	0.22	0.00	1.33
SG&A	14612	1.62	0.30	5.82	0.00	43.35	2862	0.63	0.25	2.59	0.00	43.35	11750	1.86	0.31	6.34	0.00	43.35
ROA	17568	-0.04	0.08	0.42	-2.26	0.63	3610	0.06	0.10	0.31	-2.26	0.63	13958	-0.07	0.07	0.44	-2.26	0.63
OROA	17584	-0.05	0.04	0.36	-1.98	0.56	3613	0.04	0.07	0.26	-1.98	0.56	13971	-0.07	0.03	0.38	-1.98	0.56
Sales Growth	16490	0.13	0.08	0.71	-8.36	8.74	3498	0.10	0.08	0.55	-7.06	7.08	12992	0.14	0.08	0.75	-8.36	8.74

Table 2 presents descriptive statistics for our sample firms divided into all firms, family firms, and non-family firms. The sample is unbalanced and consists of 1 614 listed firms from Norway, Sweden, and Denmark from 1990 to 2020. The reported values are after winsorizing at the 1 and 99 percentile. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. *Financially Distressed* and *Financially Constrained* are dummy variables. Details on the definition and construction of the variables reported in the table are available in the Data Appendix. Not all variables are available for each year and firm.

4. Empirical Results and Analysis

This chapter presents our empirical results and analysis. We begin by presenting our applied empirical methodology and regression model, followed by our methodology considerations. Then we present our empirical results with a corresponding discussion of our findings. Lastly, we discuss the robustness of our results.

4.1 Empirical Methodology and Regression Models

This section will elaborate on the empirical methodology and regression models used in our analysis. We wish to examine differences in corporate policies and performance between listed Scandinavian FFs and NFFs. Bertrand & Schoar (2003) performed a similar study on the effect of managers on firm policies. We take inspiration from this paper and utilise the same dependent- and control variables in our regressions. We look at performance and three corporate policies: investment policy, financial policy, and organisational policy. We adjust Bertrand and Schoar's (2003) model to fit our analysis and explore other dependent and independent variables.

The basis of our regressions is an unbalanced panel data set consisting of 1 664 FFs and NFFs in Scandinavia from 1990 to 2020. We apply a linear OLS regression model with time-fixed effects on our data. We include time-fixed effects to control for variables that are constant across entities but vary over time, thus reducing omitted variable bias. We also create group fixed effects by including a dummy variable equalling one if a firm is defined as a FF. We cluster all our standard errors at the year level to avoid the effect of fluctuations in the macroeconomic environment in our results.

For each dependent variable, we perform the following regression:

$$y_{it} = \alpha_t + \beta FF + \beta X_{it} + \beta FF \times X_{it} + \epsilon_{it}$$

Where y_{it} represents the dependent variables for firm i at time t within our four different categories of interest. α_t represents year fixed effects, and FF is a dummy equal to one if the firm is a family firm. βX_{it} represents a vector of time-varying firm-level controls, and

$\beta_{FF} \times X_{it}$ are interaction terms between our family firm dummy and our firm-level controls, created to examine differences in sensitivity between FFs and NFFs. Lastly, ϵ_{it} is the error term. Some of our regressions also include more than one time-invariant variable and a corresponding interaction term with the family firm dummy.

4.2 Methodology Considerations

We perform our analysis with multiple regression models, which place specific demands on the variables we use. This section aims to explain how we ensure statistically fit variables in our analysis, along with a discussion of reversed causality.

Our data sample has up to 19 000 observations and includes companies that have been listed and delisted during our 30-year period. Hence, we can assume that our data is normally distributed and does not contain survivorship bias. We also log transform some of our variables to reduce skewness in the distribution. Furthermore, all of our regression models are linear in parameters. Additionally, we test our independent- and control variables for multicollinearity and adjust or remove variables that do not pass the test.

However, the main problem in our study, and in studies conducted on FFs in general, is the difficulty in proving causality because of the possible presence of reversed causality in the results. Cronqvist and Nilsson (2003) and Anderson and Reeb (2003) emphasise that the relation between firm performance and family ownership suffers from this problem. The authors highlight that the issue is defining whether family ownership promotes performance or if the performance motivates families to keep their ownership of the firm. They argue that FFs, typically run by a founder or a close relative of the founder, are expected to have good information about the firm's future trajectory. Therefore, one may anticipate that the founders will keep their ownership only if the firm's prospects are promising. Furthermore, in our regressions, we cannot conclude if our independent variables drive our dependent variables or the other way around. For example, we do not know if higher sales growth leads to more investments or if the increase in investments results in higher sales growth. We attempt to reduce reversed causality and other types of endogeneity in our regressions by including variables for observable firm characteristics, namely our time-varying firm-level controls. These control variables function as proxies for firm-specific differences. In addition, we use lagged variables and fixed effects in order to limit the problem.

Our analysis may fail to overcome all the endogeneity issues even when performing these measures, which is a limitation of our research. Therefore, we cannot exclude the possibility that elevated firm performance results from family ownership, nor that elevated firm performance is an endogenous outcome of other unobserved factors. In general, we cannot conclude that changes in our independent- and control variables cause changes in our dependent variables. We bear this in mind when interpreting our results.

4.3 Results

In this section, we present the results of our regressions. All our findings will immediately be discussed and compared to previous research conducted on FFs. We cover our results in the following order: differences in means and medians, investment policy, financial policy, organisational policy, and firm performance.

4.3.1 Differences in Means and Medians

Before running any regressions, we test if the difference in means and medians in the corporate variables between FFs and NFFs in Table 2 under chapter 3.2 are statistically different and not different due to chance. Table 3 reports the difference in means and medians between the FF and NFF samples for the variables in Table 2 which are used further in the subsequent analysis. Also included in the table are the t-statistic and corresponding significance level from our test of differences in means and Wilcoxon's effect size and corresponding significance level from our test of differences in medians⁴. Equal to Table 2, the values in this table are not value-weighted, so we choose to emphasise the median figures in our analysis.

As shown in Table 3, there are statistically significant differences between the two groups on all our measures, except for the number of financially distressed firms, interest coverage, and sales growth. Similar to the findings of Caprio et al. (2011), Franks et al. (2012), Bauguess and Stegemoller (2008), and Bouzgarrou and Navatte (2014), our FF sample has significantly fewer investments in terms of acquisitions and capital expenditures. Furthermore, our test on Tobin's Q shows that FFs have a lower value than NFFs, which is in line with the findings of Morck et al. (1988) and Holderness and Sheehan (1988), but inconsistent with previous

⁴ Wilcoxon's effect size is the Z statistic divided by square root of the sample size.

research by Anderson and Reeb (2003). We also see that our FFs have a substantially higher cash flow than NFFs. We cannot conclude to any difference in the number of financially distressed firms in each sample as we only have significance at the ten per cent level⁵. Furthermore, the FF sample consists of more financially unconstrained firms than the NFF sample, which we do not find surprising as the FFs in our sample, on average, are larger.

There are no conclusive results in the literature on whether FFs have more or less debt than NFFs. Different studies have found FFs to be both more or less leveraged. Our tests show that FFs have significantly less leverage than NFFs, which aligns with the findings of Gallo et al. (2004) and Scholes et al. (2012). We also see that FFs have lower cash holdings, inconsistent with the findings of Seifert and Gonenc (2008), Ozkan and Ozkan (2014), and Kuan et al. (2011). Moreover, our FFs have a higher dividend payout ratio, which is consistent with Pindado et al. (2012), Setia-Atmaja (2010), Attig et al. (2016), Setia-Atmaja et al. (2009) and Wei et al.'s (2011) findings. Our FFs have a lower R&D ratio, consistent with the findings of several other studies (e.g., Chen & Hsu, 2009; Muñoz-Bullón & Sanchez-Bueno, 2011; Munari et al., 2010). Furthermore, the SG&A ratio of our FFs is substantially lower than for our NFFs, consistent with the findings of Chen et al. (2012) and Banker et al. (2014). Lastly, the t-test and Wilcoxon test highly indicate that our FFs outperform the NFFs on both return on assets and operating return on assets, consistent with the findings of Anderson and Reeb (2003), Cronqvist and Nilsson (2003) and Martínez et al. (2007).

⁵ In our analysis we will only consider coefficients with significance level less than or equal to 5 per cent as statistically significant.

TABLE 3
DIFFERENCE IN MEAN AND MEDIAN BETWEEN FF AND NFF

	Mean Differences	<i>t-value</i>		Median Differences	Wilcoxon Z test <i>effsize</i>	
Total sales (MEUR)	208.164	-6.515	****	54.187	0.139	****
Total assets (MEUR)	292.065	-7.550	****	62.405	0.140	****
log(R&D exp.)	0.504	-5.503	****	0.370	0.068	****
log(SG&A exp.)	0.606	-11.943	****	0.754	0.099	****
Acquisitions	-0.047	1.192	ns	-0.006	0.052	***
Investment	-0.150	-3.726	****	-0.025	0.048	****
Tobin's Q	-0.269	4.039	****	-0.207	0.066	****
Cash Flow	10.841	-10.447	****	0.120	0.111	****
Financially Distressed	-0.015	1.653	*	0.000	0.013	ns
Financially Unconstrained	0.056	-5.087	****	0.000	0.051	****
Leverage	0.023	-5.372	****	0.029	0.051	****
Interest Coverage	12.609	-14.310	****	0.290	0.016	ns
Cash Holdings	-12.307	7.077	****	-0.449	0.080	****
Dividend/Earnings	0.060	-15.390	****	0.001	0.163	****
R&D	-0.060	13.574	****	-0.008	0.076	****
SG&A	-1.230	17.308	****	-0.065	0.133	****
ROA	0.130	-20.574	****	0.036	0.143	****
OROA	0.110	-20.723	****	0.039	0.137	****
Sales Growth	-0.040	3.550	****	-0.006	0.015	ns

Table 3 reports tests of difference in means and medians for the family and non-family firm samples for the variables used further in the subsequent analysis. Column (2) presents the mean difference between the FF and NFF samples, and column (3) presents the t-statistic and corresponding significance level from our test of differences in means. Column (4) contains the median difference between the samples, and column (5) includes the Wilcoxon's effect size (*effsize*), calculated as Z-statistics divided by the square root of the sample size and corresponding significance level from our test of differences in medians. *, **, ***, and **** indicate statistical significance at the 10%, 5%, 1% and 0.1% levels, respectively.

4.3.2 Investment Policy

Table 4 reports our regression results for investment policy. We use two dependent variables, acquisition- and capital expenditures, to investigate the differences in investment policy between FFs and NFFs. We regress our dependent variables on year fixed effects, the lagged logarithm of total assets, sales growth, a family firm dummy (FF), cash holdings, and lagged Tobin's Q. We also include interaction terms between our family firm dummy and all the above-mentioned variables. We use assets as a proxy for firm size, sales growth as a proxy for growth and performance, cash holdings as a proxy for short-term liquidity, and Tobin's Q to measure the market's perception of the firms' growth opportunities, as well as a proxy for misvalued equity. All four regressions have standard errors clustered by year⁶.

Acquisitions

The first dependent variable in Table 4 is acquisition expenditure (as a fraction of lagged total assets)⁷. The family firm dummy has a coefficient equal to minus 0.394 and is statistically significant at the one per cent level. Hence, our FFs have a lower acquisition ratio to assets than NFFs, consistent with our Wilcoxon test of difference in medians. Given that the average NFF has an acquisition ratio of 0.17, the result indicates a 2.34 times lower acquisition ratio in FFs, a sizeable economic difference. This result is as expected as it aligns with prior findings by Caprio et al. (2011), Franks et al. (2012), and Bauguess and Stegemoller (2008), who study acquisitions by large FFs in Europe and the US. They argue that FFs are less likely to conduct acquisitions because they want to assure persistence of control, especially when the family are in danger of losing the majority ownership. However, as we lose several observations in this regression, we suspect that our result's economic magnitude is in fact, less significant⁸. Table 3 in chapter 3.2 includes all acquisition observations and shows that the FFs' average acquisition ratio is five percentage points lower than NFFs, which seems more reasonable.

⁶ We also tested clustering the standard errors by firm and by firm and year. There were no changes to the significance level or major changes to the interpretation of any of the coefficients. This result is also the case for all of the following regressions.

⁷ The regression for acquisition expenditures were estimated on a smaller sample due to the inconsistent availability of the variable in COMPUSTAT.

⁸ We lose observations because we have included Tobin's Q as a variable in the regression. The Tobin's Q calculation includes market values, which we do not have for all the firms in the sample. We chose to keep Tobin's Q as a variable because it is significant and increases our R-squared with 34.6 percentage points.

We also observe in Table 4 that for FFs, an increase in assets positively correlates with acquisition expenditures, as opposed to NFFs, where asset growth correlates with acquisition decline. On average, if the assets in FFs double, the acquisition ratio will increase by 18 per cent (3.0 percentage points), whereas for NFFs, the acquisition ratio will decline by 12 per cent (2.1 percentage points). These results may indicate that NFFs use acquisitions as a growth strategy before reaching a considerable size, while FFs choose to perform acquisitions when the firm is large enough to not dilute the families' shares to a significant degree which would be in line with the findings of Caprio et al. (2011) on large continental European firms.

Furthermore, for NFFs, higher sales growth is correlated with an increase in the acquisition ratio, whereas for FFs, there is almost no change in the acquisition ratio when sales growth changes. For example, a one percentage point increase in sales growth will for the average NFF correlate with a 1.68 per cent increase in the acquisition ratio, but for FFs, the result is negative 0.11 per cent. These findings may indicate that FFs, to a lesser extent than NFFs use acquisitions as a growth tool, which also aligns with the findings of Caprio et al. (2011).

Additionally, we observe that the acquisition ratio of FFs is more sensitive to changes in cash holdings than for NFFs. The average NFF and FF have cash holdings (defined as cash and short-term investments over net property, plant, and equipment at the beginning of the fiscal year) of 29 and 17, respectively. When cash holdings increase by one, the acquisition ratio of an average FF increases by 13 per cent (2.2 percentage points) compared to one per cent (0.1 percentage points) in NFFs. Whether increased cash holdings incentivise FFs to acquire or if the acquisitions lead to higher cash holdings is uncertain. However, this result may imply that FFs prefer to acquire when they can pay with cash instead of stocks to retain ownership which is in line with Bouzgarrou and Navatte (2014), who studied acquisitions in listed French FFs. They find that the percentage of cash used in payment is positively associated with family voting rights.

Capital Expenditure

Our second dependent variable is capital expenditures (as a fraction of lagged net property, plant, and equipment). The average investment ratio in our sample of FFs and NFFs is 0.64 and 0.79, respectively. We observe no statistical difference in the investment ratio between FFs and NFFs in our regression in Table 4, which contradicts our t-test and Wilcoxon test of difference in means and medians. Our tests, which are significant at the 0.1 per cent level, show that FFs, on average, have a 15 percentage point lower investment ratio than NFFs. This

result is inconsistent with Gomez-Mejia et al. (2007), who find that FFs in Spain have more investments than NFFs. However, our test results are consistent with the findings of Bauguess and Stegemoller (2008), Bianco et al. (2009), Caprio et al. (2011), and Faccio et al. (2011), who find a lower investment ratio in European and America FFs than NFFs. They state that the lower investment ratio in FFs is due to more risk-aversion among family owners than the average investor. Since the families have a substantial ownership stake in the firms, they are not diversified, leading to this increased risk-aversion.

However, we do observe differences in terms of investment sensitivity. For FFs, investment is less sensitive to changes in asset size than for NFFs. According to regression (2) in Table 4, a doubling of the average firm's assets correlates with a decline in investment ratios by 14 per cent for NFFs and 9 per cent for FFs. Sraer and Thesmar (2007) suggest that FFs are less impulsive and make fewer decisions based on immediate gains. Thus, our results of a lower investment to assets sensitivity in FFs may support Sraer and Thesmar's (2007) findings, as well as the hypothesis of James (1999), suggesting that FFs are more long-term minded and, thus, less affected by short-term changes in firm characteristics.

Summary

Our investment policy analysis shows that Scandinavian FFs have different investment policies than Scandinavian NFFs. They conduct fewer acquisitions than NFFs, and our findings also indicate a lower degree of capital expenditures. Based on our investment policy results, which are consistent with the studies by Bauguess and Stegemoller (2008), Bianco et al. (2009), Caprio et al. (2011), Faccio et al. (2011), and Franks et al. (2012), we suggest that family ownership in Scandinavia is associated with different risk attitudes and growth strategies compared with non-family ownership. More specifically, in line with the described literature, we propose that family ownership in Scandinavian listed firms might cause them to pursue a distinct acquisition strategy from NFFs to preserve their ownership stakes. Additionally, following Bianco et al. (2009), Faccio et al. (2011), and James (1999), we suggest that family ownership may lead to a different investment strategy for Scandinavian FFs than NFFs since family owners tend to be more averse to risk and more concerned with long-term goals.

We also perform the investment policy analysis during periods of crisis to determine if FF policies change or if there are any new differences between FFs and NFFs⁹. Our findings indicate that FFs are no longer significantly less likely to engage in acquisitions and investments than NFFs. In addition, there are no significant changes in the acquisition ratio for either sample and no changes in the investment ratio of FFs. However, NFFs report an investment ratio 15 percentage points lower during crisis periods, which explains why the significant difference in investment between FFs and NFFs disappears in this analysis. In contrast to NFFs, our results illustrate that FFs adhere to their investment strategy even in periods of crisis.

⁹ To perform our crisis analysis, we run our regressions on three panels: (1) all firm observations during crisis periods, (2) FF observations with a crisis dummy, and (3) NFF observations with a crisis dummy. We also perform t-tests and Wilcoxon's tests on the difference in means and medians between "FF and NFF during crisis", "FF during and not during crisis", and "NFF during and not during crisis". A crisis period includes a defined crisis year and the following two years, consistent with (Simoes Vieira, 2014). We include the burst of the dot.com bubble (2001), the financial crisis (2008), the oil price crisis (2014), and the corona crisis (2020). The results are available upon request.

TABLE 4
INVESTMENT POLICY

	<i>Dependent variable:</i>	
	Acquisitions (1)	Investment (2)
log(assets_lag)	-0.021*** t = -4.428	-0.111*** t = -11.629
sales_growth	0.283*** t = 4.231	0.284*** t = 4.253
cash_holdings	0.001*** t = 3.085	0.008*** t = 7.291
tobinQ_lag	0.018** t = 2.222	0.032** t = 2.362
FF	-0.394*** t = -6.533	-0.232 t = -1.632
log(assets_lag):FF	0.051*** t = 6.194	0.037** t = 2.299
sales_growth:FF	-0.301*** t = -3.441	0.467* t = 1.745
cash_holdings:FF	0.021*** t = 6.853	0.002 t = 0.532
tobinQ_lag:FF	0.006 t = 0.629	-0.009 t = -0.277
FE by year	Yes	Yes
Clustered SE by	Year	Year
Observations	2,881	8,064
Adjusted R ²	0.560	0.197

Table 4 reports the results from our fixed effects OLS panel regressions on investment policy. The sample is the FF and NFF panel data set as described in chapter 3 and Table 2. Details on the definition and construction of the variables reported in the table are available in the Data Appendix. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. The standard errors are clustered at the year level. We regress the dependent variables *acquisitions* and *investment*, on year fixed effects, the lagged logarithm of total assets, sales growth, cash holdings, lagged Tobin's Q, and our family firm dummy (FF). Furthermore, we include interaction terms between the family firm dummy and our time-variant variables. For each independent variable, we report the corresponding coefficient, t-statistic, and significance level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

4.3.3 Financial Policy

Table 5 focuses on financial policy, and our dependent variables are leverage, interest coverage, cash holdings, and dividends over earnings. Included in all regressions are year fixed effects, the lagged logarithm of total assets, the rate of return on assets (ROA), cash flow, a dummy for financially distressed firms, and our family firm dummy. Also included are interaction terms between all the above-mentioned variables and the family firm dummy¹⁰. We use assets as a proxy for firm size, ROA as a proxy for performance, cash flow as a proxy for excess cash, and we include a distressed dummy to examine if there are any differences in financial policy between financially distressed FFs and NFFs. We cluster the standard errors by year.

Leverage

Our first financial policy is leverage, calculated as the firms' book value of debt to total capital. Equal to our t-test and Wilcoxon test, we observe in regression (1) in Table 5 that FFs have a higher leverage ratio than NFFs, which is statistically significant at the one per cent level. We see that FFs, on average, have a 9.4 percentage point higher leverage ratio than NFFs, which is an increase of 17 per cent compared to the average NFF. As previously mentioned, the literature is inconclusive on whether FFs use more or less debt. The findings of Gallo et al. (2004) and Scholes et al. (2012) on Spanish and British firms indicate that FFs are less leveraged than NFFs. These findings are not surprising as we would expect FFs to have a lower debt ratio since leverage increases the risk of bankruptcy, and fewer API conflicts decrease the need for interest payments as a disciplinary management device. On the other hand, when we consider the control perspective, we would expect FFs to be more leveraged as they would not want to dilute their shares by issuing equity, which is consistent with King and Santor (2008) and Setia-Atmajaja et al.'s (2009) findings on Canadian and Australia FFs. Furthermore, findings from Croci et al. (2011) indicate that FFs have better access to credit markets and, consequently, a higher debt ratio. Our analysis also tests for differences in the cost of debt between FFs and NFFs, and we discover that FFs indeed have lower debt costs

¹⁰ We also experimented with adding the cost of debt as an independent variable in our financial policy regressions, because we discovered when performing our t-test and Wilcoxon test that FFs have a lower debt cost than NFFs. The results were unaffected.

than NFFs¹¹. We believe the lower debt cost can result from FFs' investment policy. As we discovered, FFs are more modest in their investments, which might be explained by a higher degree of risk aversion, thus lowering the cost of debt.

From Table 5, we also observe that the sensitivity of FFs' leverage ratio to changes in asset size is almost zero, as opposed to a slight positive correlation among NFFs. To illustrate, if the average firm's assets double in size, NFFs will experience a three per cent increase in their leverage ratio, whereas FFs have no change. Hence, the average FF in our sample maintains a constant debt to equity ratio despite changes in size. This result may indicate that FFs adhere to what they consider to be the optimal capital structure which entails a stricter leverage policy with less room for exceptions to achieve short-term gains. This hypothesis is in line with Sraer and Thesmar (2007) and James (1999), who claim that FFs are less impulsive and tend to make more long-term decisions than NFFs.

Taking a closer look at financially distressed firms, we find that they have, both economically and statistically, significantly larger debt financing than non-distressed firms. However, for distressed FFs, leverage ratios are two percentage points lower than distressed NFFs.

Interest Coverage

Our second financial policy variable in Table 5 is interest coverage, calculated as EBITDA over interest expenditures. In this regression, FFs have lower interest coverage than NFFs, which contradicts our Wilcoxon test, where we see no significant difference. The negative family firm coefficient in regression (2) implies a reduction in interest coverage of 152 if the firm is a FF, which is a 1.81 times lower interest coverage in the average FF than the average NFF. A lower interest coverage in FFs may be explained by their debt financing, which is significantly higher than NFFs, resulting in more interest expenditures. Furthermore, the interest coverage in FFs is less sensitive to changes in asset size than NFFs. For the average NFF, a 100 per cent increase in assets correlates with a 28 per cent reduction in interest coverage, whereas for the average FF, the reduction is only nine per cent. This result aligns with our findings on NFF and FFs' leverage to assets sensitivity. However, in FFs, the interest coverage is more sensitive to changes in ROA than for NFFs. For example, a one per cent

¹¹ Cost of debt is the after-tax cost of debt, calculated as interest expenditures over interest-bearing short-term and long-term debt, multiplied by one minus the marginal tax rate. We use each country's statutory tax rate for each year as our marginal tax rate.

increase in ROA for the average firm correlates with an 11 and 18 per cent increase in interest coverage for NFFs and FFs, respectively.

Cash Holdings

Our third variable of interest is cash holdings expressed as cash and short-term investments over lagged net property, plant, and equipment. Unlike our t-test and Wilcoxon test, which show statistically significant lower cash holdings for FFs, we observe no significant difference between FFs and NFFs in regression (3) in Table 5. Our results indicating lower or no difference in the cash holdings of FFs contradicts the findings of Seifert and Gonenc (2008), who study FFs in the US, UK, and Germany. They find that FFs have considerable cash buffers and financial slack in their financial statements compared to NFFs. Ozkan and Ozkan (2004) and Kua et al. (2011) also find similar results on a sample of British and Taiwanese firms. Since the US and UK have better investor protection than Scandinavia (La Porta et al., 1999), we suspect that our contradicting findings result from differences in conflicts between the family and minority shareholders in these countries. Pinkowitz et al. (2006) analyse firms in 35 countries and find that the relationship between cash holdings and firm value is much stronger in countries with strong investor protection than in countries with weak investor protection. Therefore, we suggest that the low level of investor protection in Scandinavia may induce family owners to reduce cash holdings in their firms in order to allay the concerns of minority shareholders regarding expropriation.

Although our findings on the entire sample of firms do not align with previous literature, we observe in Table 5 larger cash holdings in financially distressed FFs compared to distressed NFFs. For example, if the average firm in our sample is distressed, cash holdings are 86 per cent and 30 per cent lower for NFFs and FFs, respectively, compared to non-distressed firms.

Dividend over Earnings

Our last financial variable is dividends over earnings (EBITDA), the firms' dividend payout ratio. Regression (4) in Table 5 shows that FFs have an economically and statistically significant higher payout ratio than NFFs, consistent with our t-test and Wilcoxon test. For the average FF, the dividend payout ratio is nine percentage points higher than the average NFF, which corresponds to a 1.34-fold difference. Our result aligns with Pindado et al. (2012), Attig et al. (2016), Setia-Atmaja (2010), Setia-Atmaja et al. (2009) and Wei et al. (2010), who also find that FFs in the Eurozone, East Asia, Australia, and China have a higher dividend payout ratio than NFFs. The authors suggest that FFs use dividends to overcome agency problems

between the majority (the family) and minority shareholders and between outside and inside (the family) shareholders. By paying higher dividends, there is less cash flow left for the management, which often includes one or more family members, to use in their interest and less cash flow for the majority- and inside owners to use for their benefit. Hence, as Scandinavia has low investor protection, reducing the cash flow left after paying the debt- and equity holders might be a tool the family owners use to lower the threat to minority- and outside owners that corporate resources will be used to benefit the family. In addition, as shown in Table 3 and Table 7, our FFs are more profitable than our NFFs. As stated in the pecking order hypothesis, highly profitable firms are more capable of paying dividends than less profitable ones (Fama & French, 2002). In this sense, differences in profitability may also explain FFs' higher dividend payout ratio. However, some studies in Austria (Gugler, 2003), Germany (Gugler & Yurtoglu, 2003), Hong Kong (Chen et al., 2005), and the US (Hu et al., 2008) find that FFs pay less dividends than NFFs, suggesting this is due to more pronounced AP2 conflicts in FFs. Conversely, our opposite finding and the fact that FFs in Scandinavia outperform NFFs can be preliminary evidence that FFs in this region successfully reduce agency conflicts between the family and minority shareholders.

Furthermore, our results indicate that the payout ratio of FFs is not sensitive to changes in asset size, as opposed to NFFs. As shown in Table 5, a doubling of the average firm's assets correlates with an increase of 17 per cent (1.4 percentage points) in the dividend payout ratio of NFFs and no change for FFs. This result is in line with Pindado et al. (2012), who find that FFs in Europe have more stable dividend payouts to alleviate expropriation concerns of minority investors. In addition, Leary and Michaely (2011) find that firms in countries with low investor protection smooth dividends more and that smoothing dividends is most prevalent among firms with higher dividend levels, which aligns with our result on the dividend policy in FFs.

In contrast, payout ratios in FFs are more sensitive to changes in return on assets than in NFFs. By taking the average dividend payout ratio for NFFs as a benchmark, we can observe that a one per cent increase (decrease) in ROA correlates with an increase (decrease) of 1.0 per cent and 2.7 per cent, respectively, in dividend payout ratios for NFFs and FFs. This result is not consistent with Attig et al. (2016), who find that East Asia FFs with increased profitability are associated with lower dividend increases than other firms. The authors claim that the family owners retain earnings to extract private benefits. Conversely, our findings indicate that FFs increase dividends when profits rise.

Lastly, we note that financially distressed FFs have a dividend payout ratio almost 50 per cent lower than distressed NFFs. In FFs, according to Demsetz and Lehn (1985), the family's wealth is closely connected to the firm's welfare since the family is much more likely to be highly financially and emotionally invested in the firm than the average investor. Our finding aligns with this theory since we suspect that when FFs struggle, the family prioritise the firm's health over personal profit by reducing dividend payouts more extensively than NFFs.

Summary

Our financial policy analysis shows that Scandinavian FFs have different financial policies than Scandinavian NFFs. We find strong evidence that FFs have more debt and a higher dividend payout ratio than NFFs. Our analysis is inconclusive regarding differences in interest coverage and cash holdings. Using our financial policy results, we suggest that in Scandinavia, family ownership is associated with different governance structures than non-family ownership due to low investor protection. We also propose that the financial policies in Scandinavian FFs are characterised by the families' attempt to preserve control of their firms. More specifically, in alignment with King and Santor (2008) and Setia-Atmajia et al.'s (2009) findings, we propose that the differences in financing strategies we observe in our analysis between Scandinavian FFs and NFFs may reflect the preference of family owners to take on a greater equity risk as opposed to dilution. In addition, following Pindado et al. (2012) and Seifert and Gonenc (2008), we suggest that Scandinavian FFs try to alleviate agency problems between the family and minority shareholders by not keeping excessive cash holdings and by pursuing a dividend strategy with higher and more stable payouts than NFFs.

TABLE 5
FINANCIAL POLICY

	<i>Dependent variable:</i>			
	Leverage	Interest Coverage	Cash Holdings	Dividends/ Earnings
	(1)	(2)	(3)	(4)
log(assets_lag)	0.014*** t = 9.307	-23.676*** t = -14.007	-5.007*** t = -7.256	0.014*** t = 12.658
ROA	0.076*** t = 5.144	902.456*** t = 8.102	25.707*** t = 3.286	0.085*** t = 8.490
cash_flow	0.00003 t = 0.435	1.104** t = 2.707	-0.935*** t = -11.390	-0.00000 t = -0.057
Distressed	0.187*** t = 20.511	-33.952*** t = -5.180	-25.130*** t = -9.215	-0.089*** t = -9.982
FF	0.094*** t = 6.413	-152.280*** t = -3.799	0.285 t = 0.036	0.110*** t = 7.532
log(assets_lag):FF	-0.015*** t = -6.568	16.130*** t = 4.353	-1.183 t = -0.929	-0.014*** t = -5.102
ROA:FF	0.008 t = 0.283	625.761*** t = 3.346	5.922 t = 0.364	0.140*** t = 5.385
cash_flow:FF	0.0001 t = 1.461	1.040 t = 0.650	-0.042 t = -0.263	0.0001* t = 1.927
Distressed:FF	-0.020** t = -2.074	25.162 t = 1.286	16.380*** t = 3.593	-0.039*** t = -3.520
FE by year	Yes	Yes	Yes	Yes
Clustered SE by	Year	Year	Year	Year
Observations	7,403	6,788	9,707	9,629
Adjusted R ²	0.172	0.176	0.392	0.178

Table 5 reports the results from our fixed effects OLS panel regressions on financial policy. The sample is the FF and NFF panel data set as described in chapter 3 and Table 2. Details on the definition and construction of the variables reported in the table are available in the Data Appendix. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. The standard errors are clustered at the year level. We regress the dependent variables on year fixed effects, the lagged logarithm of total assets, return on assets (ROA), cash flow, a dummy equal to 1 if a firm is financially distressed, and our family firm dummy (FF). Furthermore, we include interaction terms between the family firm dummy and the variables mentioned above. For each independent variable, we report the corresponding coefficient, t-statistic, and significance level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

4.3.4 Organisational Policy

Table 6 reports our results for the organisational policy variables. We use two dependent variables, R&D and SG&A, to investigate if there are any differences between FFs and NFFs¹². We regress our dependent variables on year fixed effects, the lagged logarithm of total assets, return on assets, cash flow, and our family firm dummy. We also include interaction terms between our family firm dummy and all the above-mentioned variables. We use assets as a proxy for firm size, ROA as a proxy for performance, and cash flow as a proxy for excess cash. Both regressions have standard errors clustered by year.

Research and Development Expenditures

R&D represents the firms' research and development expenditures and is calculated as the sum of R&D expenditures divided by lagged total assets. From regression (1) in Table 6, we see that FFs have 4.9 percentage points lower R&D expenditures than NFFs, consistent with our t-test and Wilcoxon test. The average NFF have an R&D ratio equal to 0.13, which implies a 38 per cent reduction in the R&D ratio of an average FF. This result contradicts the findings of Craig and Dibrell (2006), Gudmundson et al. (2003), and Llach and Nordqvist (2010), who find a positive relationship between FFs in the US and Spain and R&D investments. The authors argue that R&D is long-term investments, so due to FFs' long investment horizon, they should devote more resources to R&D than NFFs. However, Chen and Hsu (2009), Munoz-Bullón and Sanchez-Bueno (2011), and Munari et al. (2010), who study FFs in China, Europe, and Canada, find a negative relationship between FFs and R&D expenditures, which is in line with our results. The authors state that R&D are high-risk investments, and since FFs are more risk averse than NFFs, they will use fewer resources on R&D. Furthermore, their findings also imply that the risk-aversion among FFs makes them better at preventing hazardous long-term R&D projects.

From Table 6, we also note that R&D in FFs is less sensitive to changes in asset size and ROA than in NFFs. The results are statistically significant at the 5 per cent and 1 per cent levels. However, these differences in sensitivity are not particularly significant from an economic standpoint. In general, a one per cent increase (decrease) in assets and ROA correlates with a

¹² The regression for R&D expenditures were estimated on a smaller sample due to the inconsistent availability of the variable in COMPUSTAT.

decrease (increase) of 0.07 per cent and 2.34 per cent in R&D for NFFs, and a 0.02 per cent and 0.87 per cent decrease (increase) in R&D for FFs.

Selling, General, and Administrative Expenditures

Our second organisational variable is SG&A, expressed as selling, general and administrative expenditures over sales. From regression (2) in Table 6, our family firm dummy indicates that FFs have statistically significant lower SG&A expenditures than NFFs, in line with our t-test and Wilcoxon test. Compared to the average NFF, the average FF has an SG&A ratio that is 40 per cent lower. According to some studies, the distinction in SG&A expenditures between FFs and NFFs stems from differences in the magnitude of AP1 costs (Chen et al., 2012; Banker et al., 2014). Due to the separation of ownership and management in NFFs, non-family managers can make myopic SG&A decisions, like exploiting the SG&A budget for empire building or meeting earnings targets, causing extensive SG&A spending regardless of the firm's SG&A needs. Family members, who usually have a long-term perspective, minimise this problem through active participation in the FF (Gilson & Gordon 2003; Ali et al. 2007; Kang 2017). Thus, research on this topic suggests that family ownership aligns SG&A expenditures with the firm's capability to convert those resources into long-term value, rather than wasting them on short-term goals, which may contribute to FFs' outperformance.

Additionally, in Table 6, we observe that SG&A in FFs is less sensitive to changes in asset size and ROA than in NFFs, a statistically significant finding at the 5 per cent level. Similarly to the results concerning R&D expenditures, these differences in sensitivity have little economic significance. For the average firm, an increase (decrease) of one per cent in assets or ROA corresponds to a decrease (increase) of 0.06 per cent and 2.89 per cent in SG&A for NFFs, and a decrease (increase) of 0.02 per cent and 1.61 per cent for FFs.

Summary

Our analysis of organisational policy shows that Scandinavian FFs employ different organisational policies than Scandinavian NFFs. There is strong evidence that FFs have lower R&D and SG&A expenditures than NFFs. Based on our findings on organisational policy, we suggest that in Scandinavia, family ownership is associated with different governance structures and risk profiles than non-family ownership. More specifically, in line with Chen and Hsu (2009), Munoz-Bullón and Sanchez-Bueno (2011), and Munari et al. (2010), we propose that the differences in R&D investment we observe in our analysis between Scandinavian FFs and NFFs may reflect a higher degree of risk aversion among FFs.

Furthermore, following Gilson and Gordon (2003), Ali et al. (2007), and Kang (2017), we suggest that Scandinavian FFs have lower SG&A expenditures relative to sales than NFFs, because of better alignment between management and shareholders, which may result in higher performance.

TABLE 6
ORGANISATIONAL POLICY

	<i>Dependent variable:</i>	
	R&D (1)	SG&A (2)
log(assets_lag)	-0.009*** t = -3.396	-0.103*** t = -6.026
ROA	-0.303*** t = -22.264	-5.383*** t = -13.383
cash_flow	0.00004 t = 0.733	-0.011*** t = -2.869
FF	-0.049*** t = -3.349	-0.751*** t = -4.373
log(assets_lag):FF	0.006** t = 2.540	0.058** t = 2.345
ROA:FF	0.190*** t = 4.874	2.394** t = 2.552
cash_flow:FF	-0.0001 t = -0.509	0.007 t = 1.312
FE by year	Yes	Yes
Clustered SE by	Year	Year
Observations	5,810	13,104
Adjusted R ²	0.430	0.198

Table 6 reports the results from our fixed effects OLS panel regressions on organisational policy. The sample is the FF and NFF panel data set as described in chapter 3 and Table 2. Details on the definition and construction of the variables reported in the table are available in the Data Appendix. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. The standard errors are clustered at the year level. We regress the dependent variables, *R&D* and *SG&A*, on year fixed effects, the lagged logarithm of total assets, return on assets (ROA), cash flow, and our family firm dummy. Furthermore, we include interaction terms between the family firm dummy and the variables mentioned above. For each independent variable, we report the corresponding coefficient, t-statistic, and significance level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

4.3.5 Performance

Table 7 reports our results for corporate performance, where we focus on three measures: return on assets, operating return on assets, and sales growth. We use three different regression models because we lose more than 70 per cent of our observations if we combine them¹³. The standard for all models is to regress our dependent variables on year fixed effects and our family firm dummy, and we cluster the standard errors by year.

Return on Assets

The first performance measure we investigate is the standard return on assets (ROA), computed as EBITDA divided by lagged total assets. Scandinavian FFs deliver a significantly higher return on assets than their counterparts in all three models in Table 7, consistent with our t-test and Wilcoxon test. From our descriptive statistics in Table 2 under chapter 3.2, we see that, on average, FFs have a ROA of 6 per cent while NFFs have a ROA of minus 7 per cent. Hence, the average of our three positive family firm coefficients in Table 7 corresponds to a ROA of 10.5 per cent for FFs, substantially higher than NFFs. This result is consistent with the S&P 500 firms in Anderson and Reeb's (2003) study, who report that FFs offer a 6.7 per cent higher return than NFFs, Cronqvist and Nilsson (2003) find that their Swedish FFs deliver a 6 per cent higher return than NFFs and Martínez et al. (2007) report that their Chilean FFs offer a 2.6 per cent higher return than NFFs.

In regression (1), we notice that FFs' ROA is less sensitive to changes in Tobin's Q than NFFs. If Tobin's Q increases (decreases) by one for the average firm, it correlates with a decrease (increase) in ROA of 66 and 19 per cent for NFFs and FFs, respectively. We have also included a dummy for financially unconstrained firms as an independent variable. A firm is financially unconstrained if it is among the top 25 percentile in market capitalisation for the current year. Not surprisingly, financially unconstrained firms have a higher ROA than financially constrained firms. Moreover, financially unconstrained FFs deliver an 11 percentage points lower ROA than financially unconstrained NFFs, which indicates that performance, in addition to corporate policies, in FFs is also less sensitive to size.

¹³ We lose 70 per cent of the observations because the availability of R&D expenditures and acquisition expenditures in COMPUSTAT is limited, thus including these variables in the same regression model will limit the observations to firms which have all the variables of interest registered in their data.

Furthermore, in regression (3), we notice that the ROA in FFs is almost unaffected by changes in R&D expenditures (expressed as the logarithm of R&D expenditures), as opposed to NFFs which experience a negative correlation between increased R&D and ROA. A doubling of R&D expenditures in the average NFF corresponds to a 46 per cent reduction in ROA and only 3 per cent for the average FF. This relationship may indicate that FFs generally have more profitable R&D projects than NFFs. As previously mentioned, FFs are perceived as more risk-averse than NFFs, and hence more careful when engaging in R&D (Caprio et al., 2011). The FFs' careful approach to R&D projects might lead to more value-increasing investments than value-destructive investments compared to NFFs. This hypothesis is supported by Chen and Hsu (2009), Munoz-Bullón and Sanchez-Bueno (2011), and Munari et al. (2010), who study family ownership in Chinese, Canadian, and Western European firms. They suggest that FFs are better at preventing hazardous long-term R&D investments than NFFs.

We also observe that increases in SG&A expenditures (expressed as the logarithm of SG&A expenditures) positively correlate with ROA, but to a much smaller extent for FFs. For example, a doubling of SG&A expenditures in the average NFF corresponds to a 1.71-fold increase in ROA and only 0.67 times for the average FF. Moreover, we observe that ROA positively correlates with asset size, but the ROA in FFs is less sensitive to asset size changes than NFFs. A doubling of assets in the average NFF corresponds to a 62 per cent increase in ROA and only a 20 per cent increase for the average FF. Our findings of a lower ROA to SG&A and assets sensitivity in FFs compared to NFFs may indicate a lower performance to size sensitivity in FFs in general. This result can imply that the benefits of being a larger firm are not as decisive for performance in FFs as for NFFs.

Furthermore, for FFs, we also see a positive correlation between increases in the acquisition ratio and ROA. Conversely, for NFFs, we observe a negative correlation at the 10 per cent significance level. Again, we point to FFs' risk aversion and their careful approach to investments to try to explain this positive correlation between acquisitions and performance, which we do not observe in the NFFs.

Operating Return on Assets

An issue regarding the use of return on assets as a performance measure is that the systematic differences in the rates of return on assets between FFs and NFFs may not represent actual differences in performance but rather differences in aggressiveness of accounting practices or willingness to "cook the books". We address this concern by using an alternative accounting

measure of performance that is less susceptible to accounting manipulations and better reflects actual operating performance: operating cash flow (as a ratio of lagged total assets). Regressions (2), (4), and (6) in Table 7 have operating return on assets (OROA) as their dependent variable, and the models are equal to the ones we performed on ROA. These regressions' economic and statistical results are almost identical to our ROA regression results. Hence, we can conclude that FFs have better performance than NFFs.

Sales Growth

Our last performance variable of interest is sales growth, expressed as the firms' year-by-year change in the logarithm of sales. In regression (7) in Table 7, we observe no statistically significant difference in sales growth between FFs and NFFs, in line with our Wilcoxon test and contrary to a previous study conducted by Berzins et al. (2018) who find that Norwegian FFs on average tend to have a somewhat lower sales growth than NFFs. However, for NFFs, an increase in the acquisition ratio is positively correlated with sales growth, but for FFs, the positive correlation is minimal.

Summary

Based on our analysis of performance, Scandinavian FFs outperform Scandinavian NFFs. When analysing the mean and median differences, which are statistically significant at the 0.1 per cent level, FFs have a 13.0 and 3.6 per cent higher return on assets and an 11.0 and 3.9 per cent higher operating return on assets. However, no statistically significant difference in sales growth compared to Scandinavian NFFs. From our findings and existing literature (Anderson & Reeb, 2003; Cronqvist & Nilsson, 2003; Martínez et al., 2007), we suggest that family ownership is associated with higher firm performance in Scandinavia, an association that may be explained in part by different governance structures, risk attitudes, and time horizons than non-family ownership. More specifically, and consistent with existing literature, we propose that family ownership in Scandinavian listed firms encourages distinctive governance structures because they try to reduce AP2 conflicts and generally have fewer AP1 conflicts. Our performance results may indicate that FFs are successful at reducing these conflicts. Additionally, we propose that FFs are better at executing value-enhancing investments due to their risk-aversion and better alignment of interest between owners and managers, which may explain their higher performance. Finally, we suggest that the FFs' long-term outlook makes them more resistant to short-term gain-driven decisions, thereby improving their performance over the long run.

TABLE 7
PERFORMANCE

	<i>Dependent variable:</i>						
	ROA	OROA	ROA	OROA	ROA	OROA	Sales Growth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FF	0.052*** t = 5.209	0.059*** t = 5.253	0.293*** t = 13.254	0.283*** t = 19.171	0.180*** t = 9.618	0.191*** t = 13.906	-0.126 t = -1.703
tobinQ_lag	-0.046*** t = - 20.583	-0.043*** t = - 22.883					
uncon_rank	0.258*** t = 16.223	0.222*** t = 15.197					
FF:tobinQ_lag	0.033*** t = 5.929	0.024*** t = 4.714					
FF:uncon_rank	-0.113*** t = - 10.654	-0.100*** t = - 13.665					
RnD_log			-0.032*** t = -8.232	-0.028*** t = -8.252			
SGnA_log			0.119*** t = 28.730	0.098*** t = 28.240			
FF:RnD_log			0.030*** t = 5.082	0.037*** t = 8.152			
FF:SGnA_log			-0.072*** t = - 10.967	-0.074*** t = - 17.786			
log(assets_lag)					0.043*** t = 9.756	0.041*** t = 11.835	-0.044*** t = -7.620
acq_TA					-0.023* t = -1.813	-0.017 t = -1.284	0.317*** t = 3.714
FF:log(assets_lag)					-0.029*** t = -9.501	-0.031*** t = - 13.836	0.021* t = 1.877
FF:acq_TA					0.051*** t = 3.850	0.040*** t = 3.052	-0.245*** t = -2.833
FE by year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE by	Year	Year	Year	Year	Year	Year	Year
Observations	8,617	8,624	5,595	5,599	4,875	4,876	4,820
Adjusted R ²	0.241	0.220	0.254	0.213	0.150	0.152	0.151

*The table description can be found on the following page

Table 7 reports the results from our fixed effects OLS panel regressions on performance. The sample is the FF and NFF panel data set as described in chapter 3 and Table 2. Details on the definition and construction of the variables reported in the table are available in the Data Appendix. A firm is defined as a FF if the following three criteria are met: (1) The founder or individuals related to the founder by blood or marriage has at least 20 per cent ownership of the firm, (2) The founder or the family is the majority shareholder and (3) Participation by the family in management is considered a right but not a necessity. The standard errors are clustered at the year level. We regress the dependent variables on year fixed effects and the family firm dummy (FF) in all models. Included in model (1) and (2) are lagged Tobin's Q, a dummy equal to 1 if the firm is financially unconstrained, and interaction terms between our FF dummy and the mentioned variables. In model (3) and (4) are the logarithm of R&D and SG&A expenditures included, as well as interaction terms with the FF dummy and the mentioned variables. Included in model (5), (6), and (7) are the lagged logarithm of total assets, the firms' acquisition ratio, and interaction terms between the FF dummy and the mentioned variables. For each independent variable, we report the corresponding coefficient, t-statistic, and significance level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

4.4 Robustness of Results

This section will elaborate on the robustness of the results provided in the previous chapter. Our most important limitation is our family firm definition, as differences in requirements may change our results. Thus, we check if there are significant changes in our results if we change the family ownership threshold to 50 per cent instead of 20 per cent. We discover more robust evidence for a lower investment ratio among FFs than NFFs when using the new threshold. Furthermore, FFs no longer have significantly less R&D expenditures than NFFs. Apart from this, there are no noteworthy changes. Hence, we find our results robust to changes in ownership threshold¹⁴. However, we cannot test for changes in the results by altering the social dimension of our family firm definition, as we lack the necessary data. Our results may change if we include, for example, that the family must be part of the management team for the firm to qualify as a FF.

To further examine the robustness of our results, we also use an alternative approach to control for industry differences. Specifically, we control for potential industry effects by using the subset of industries containing both FFs and NFFs (i.e., exclude industries with 100 per cent FFs or NFFs). We find similar results as those reported in chapter 4.3. Furthermore, since the oil and gas industry highly influences the Oslo Stock Exchange, we also examine whether our

¹⁴ It is worth noting that our sample of FFs is reduced from 305 to 121 firms when we change to ownership threshold from 20 per cent to 50 per cent.

results change when removing the energy sector (GIC sector 10). The results are similar to those in chapter 4.3. Because firm-year observations can intensify outlier bias, we repeat our analysis using pooled OLS regressions, leading to similar results. To conclude, we find that our results are robust to various alternative specifications.

5. Conclusion

This study examined the possible effect of family ownership on corporate policies and performance on a sample of 1 614 listed Scandinavian firms from 1990 to 2020. We define a family firm (FF) as a firm where the founder, or individuals related to the founder either by blood or marriage, has at least 20 per cent ownership. Active participation by the family is not necessary but rather a right. Furthermore, we have used a linear OLS model with fixed effects to test if FFs are significantly different from NFFs in terms of investment policy, financial policy, organisational policy, and firm performance.

As a complement to the corporate governance literature on family ownership, this study analyses a hitherto unresearched region, Scandinavia. In addition, our study provides preliminary evidence that the unique characteristics of FFs are also prevalent in Scandinavia, which is not a given since Scandinavia has its own distinctive institutional environment. Moreover, we demonstrate how these FF characteristics most likely influence the corporate policies of these firms, such as dividends, leverage, and investment decisions. This difference in corporate decision making between FFs and NFFs may, in turn, provide additional explanations for the different performance of the two firm categories.

Our results show that Scandinavian FFs have a higher return on assets and operating return on assets than Scandinavian NFFs. These results are statistically significant and in line with prior research on listed FFs in the US (Amit & Villalonga, 2006; Anderson & Reeb, 2003) and Europe (Cronqvist & Nilsson, 2003; La Porta et al., 1999; Morck et al., 1988). Furthermore, our results uncover different corporate policies in FFs than NFFs. We find that FFs have a lower acquisition ratio, more debt, and a higher dividend payout ratio than NFFs. Compared to NFFs, they also have lower R&D and SG&A expenditures. Interestingly, our findings also indicate that FFs' corporate policies are less sensitive to changes in size than NFFs. Additionally, we find that when FFs are financially distressed, they are less levered, have higher cash holdings, and have a lower dividend payout ratio than financially distressed NFFs. Following the literature described throughout our thesis, we suggest our results on corporate policies in FFs may derive from a higher risk aversion, a higher degree of monitoring and control, more active participation in management, and a more long-term goal orientation in FFs than NFFs. To conclude, our findings provide preliminary evidence that these differences in governance structures, investment strategies, and risk attitudes in FFs compared to NFFs contribute to FF outperformance.

We also note that our analysis suffers from an endogeneity problem caused by reversed causality. Therefore, we cannot conclude if family ownership leads to different corporate policies and performance or if the differences in corporate policies and performance encourage the families to keep their shares. We thus encourage further research to try to cope with this problem. Furthermore, we recommend comparing listed firms with family ownership to those with block ownership to identify which corporate policies and performance outcomes stem from family ownership versus block ownership. Even though this will not solve the reversed causality problem, it will further narrow down the possible unique aspects of family ownership. Moreover, it will be interesting to investigate if the results change when including a social dimension in the definition of a FF. Including variables related to the families' involvement in the board and management of the firms might improve our understanding of the possible effects of family ownership in Scandinavia.

6. Data Appendix

The corporate variables used in this paper are extracted from one major data source: COMPUSTAT. COMPUSTAT reports company financials and market data of more than 47 000 active and 37 000 inactive companies in North America and other countries worldwide. The data goes back to approximately 1987 for the European countries. The data are drawn from annual reports, and sample large companies with substantial public ownership. The specific variables used in the analysis are defined as follows:

VARIABLES	EXPLANATION
Acquisitions	Acquisition expenditures over lagged total assets
Investment	Capital expenditures over net property, plant, and equipment at the beginning of the fiscal year
Sales growth	The year-by-year change in the logarithm of total sales
Cash holdings	Defined as cash and short-term investments over net property, plant and equipment at the beginning of the fiscal year
Average Tobin's Q	The market value of asset divided by the book value of assets. Where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common equity
Leverage	Long-term debt plus debt in current liabilities over long-term debt plus debt in current liabilities plus the book value of common equity
Interest coverage	EBITDA over interest expenses
Dividends over earnings	The ratio of the sum of common dividends and preferred dividends over EBITDA
Return on assets	The ratio of EBITDA over lagged total assets
Cash flow	The sum of earnings before extraordinary items and depreciation over net property, plant, and equipment at the beginning of the fiscal year
Financially distressed	A dummy equal to one if the firm has an Altman's Z-score below 1.82. Calculated using the formula for Altman's Z-score
R&D	The ratio of R&D expenditures over lagged total assets
SG&A	The ratio of selling, general, and administrative expenses over sales
Operating return on assets	The ratio of operating cash flow over lagged total assets
Financially unconstrained	A dummy equal to one if the firm is among the top 25 % percentile in terms of market capitalization within the current fiscal year

7. References

- Ali, A., Chen, T.-Y., & Radhakrishnan, S. (2007). Corporate Disclosures by Family Firms. *Journal of Accounting and Economic*, pp. 238-286.
- Almeida, H., & Wolfenzon, D. (2006, January). A Theory of Pyramidal Ownership and Family Business Groups. *The Journal of Finance*.
- Amit, R., & Villalonga, B. (2006). How do Family Ownership, Control and Management Affect Firm Value? *Journal of Financial Economics*, 80 (1), pp. 385-417.
- Anderson, R., & Reeb, D. (2003). Founding-Family Ownership and Firm Performance. Evidence from the S&P 500. *Journal of Finance*, 58 (3), pp. 1301 - 1328.
- Anderson, R., & Reeb, D. (2004). Board Composition: Balancing Family Influence in S&P 500 Firms. *Administrative Science Quarterly*, 49 (2), pp. 209-237.
- Arosa, B., Iturralde, T., & Maseda, A. (2010, December). Outsiders on the Board of Directors and Firm Performance: Evidence from Spanish Non-Listed Family Firms. *Journal of Family Business Strategy*, Vol. 1, pp. 236-245.
- Artz, K., Donald, N., Hatfield, D., & Cardinal, L. (2010). A Longitudinal Study of the Impact of R&D, Patents, and Product Innovation on Firm Performance. *Journal of Product Innovation Management*, Vol. 27, Issue 5, pp. 725-740.
- Attig, N., Boubakri, N., El Ghouli, S., & Guedhami, O. (2016). The Global Financial Crisis, Family Control, and Dividend Policy. *Financial Management*, Vol. 45, Issue 2, pp. 291-313.
- Banker, R., Byzalov, D., Ciftci, M., & Mashruwala, R. (2014). The Moderating Effect of Prior Sales Changes on Asymmetric Cost Behavior. *Journal of Management Accounting Research*, pp. 221-242.
- Bauguess, S., & Stegemoller, M. (2008). Protective governance choices and the value of acquisition activity. *Journal of Corporate Finance*, Vol. 14, Issue 5, pp. 550-566.
- Bennedsen, M., Nielsen, K., Perez-Gonzalez, F., & Wolfenzon, D. (2007). Inside the Family Firm: The Role of Families in Succession Decisions and Performance. *The Quarterly Journal of Economics*, Vol. 122, Issue 2, pp. 647-691.

-
- Bertrand, M., & Antoinette, S. (2003, November). Managing with Style: The Effect of Managers on Firm Policies. *The Quarterly Journal of Economics*, Vol. 118, Issue 4, pp. 1169–1208.
- Bertrand, M., & Schoar, A. (2006). The Role of Family in Family Firms. *Journal of Economic Perspectives* Vol. 20, Issue 2, pp. 73-96.
- Berzins, J., Bøhren, Ø., & Stacescu, B. (2018). The Governance and Finance of Norwegian Family Firms: Main Characteristics of the Population. *BI Norwegian Business School*.
- Bianco, M., Golinelli, R., & Parigi, G. (2009). Family Firms and Investments. *ECGI - Finance Working Paper No. 269/2009*.
- Bouzgarrou, H., & Navatte, P. (2014). Family Firms and the Choice of Payment Method in Domestic and International Acquisitions. *Management International*, 107–124.
- Caprio, L., Croci, E., & Del Giudice, A. (2011). Ownership Structure, Family Control, and Acquisition Decisions. *Journal of Corporate Finance* 17(5).
- Chen, D., Li, S., & Lei, G. (2012). Government Governance, Ownership Structure and Investment Decision: Evidence from Chinese Family Listed Firms. *Journal of Financial Research* (3), pp. 124- 137.
- Chen, H., & Hsu, W. (2009). Family Ownership, Board Independence, and R&D Investment. *Family Business Review*, 22, pp. 347-362.
- Chen, Z., Cheung, Y., Stouraitis, A., & Wong, A. (2005). Ownership Concentration, Firm Performance and Dividend Policy in Hong Kong. *Pacific-Basin Finance Journal* 13, pp. 431-449.
- Craig, J., & Dibrell, C. (2006). The Natural Environment, Innovation and Firm Performance: A Comparative Study. *Family Business Review*, Vol. 19, pp. 275-288.
- Cronqvist, H., & Nilsson, M. (2003). Agency Costs of Controlling Minority Shareholders. *The Journal of Financial and Quantitative Analysis*, Vol. 38, pp. 695-719.
- Demsetz, H., & Lehn, K. (1985). The Structure of Corporate Ownership: Causes and Consequence. *Journal of Political Economy*, Vol. 93, pp. 1155-1177.
- Deslandes, M., Landry, S., & Fortin, A. (2015, January). The Effects of a Tax Dividend Cut on Payout Policies: Canadian evidence. *International Journal of Managerial Finance*, Vol. 11, pp. 2-22.

- European Commission. (2009). *Final Report of the Export Group. Overview of Family Business*. Retrieved from <http://ec.europa.eu/enterprise/policies/sme/>
- Faccio, M., & Lang, L. (2002). The Ultimate Ownership of Western European Corporations. *Journal of Financial Economics, Vol. 65*, pp. 365–395.
- Faccio, M., Marchica, M., & Mura, R. (2011, November). Large Shareholder Diversification and Corporate Risk-Taking. *The Review of Financial Studies, 24, Issue 11*, pp. 3601–3641.
- Fama, E., & French, K. (2002). Testing Trade-Off and Pecking Order Predictions about Dividends and Debt. *The Review of Financial Studies Vol. 15, No. 1*, pp. 1-33.
- Franks, J., Mayer, C., Volpin, H., & Wagner, H. (2012). The Life Cycle of Family Ownership: International Evidence. *Review of Financial Studies, . 25*, pp. 1675-1712.
- Gallo, M., Tàpies, J., & Cappuyns, K. (2004). Comparison of : Financial *Family Business Review, 17*, pp. 303–318.
- Gedajlovic, E., Carney, M., Chrisman, J., & Kellermanns, F. (2012, July). The Adolescence of Family Firm Research: Taking Stock and Planning for the Future. *Journal of Management 38* pp. 1010-1037.
- Gilson, R., & Gordon, J. (2003). Controlling Controlling Shareholders. *University of Pennsylvania Law Review, Vol. 152*.
- GlobeNewswire. (2015, March 16). *GlobeNewswire*. Retrieved from Aspiro applies for delisting from Nasdaq Stockholm: <https://www.globenewswire.com/en/news-release/2015/03/16/715585/0/en/Aspiro-applies-for-delisting-from-Nasdaq-Stockholm.html>
- Gomez-Maija, L., Haynes, K., Núñez-Nickel, M., Jacobsen, K., & Moyano-Fuentes, J. (2007, March). Mills, Socioemotional Wealth and Business Risks in Family-Controlled Firms: Evidence from Spanish Olive Oil. *Administrative Science Quarterly 52(1)*, pp. 106-137.
- Gudmundson, D., Tower, C., & Hartman, F. (2003). Innovation in Small Businesses: Culture and Ownership Structure Do Matter. *Journal of Developmental Entrepreneurship, 8* pp. 1–17.

-
- Gugler, K. (2003, July). Corporate Governance, Dividend Payout Policy, and the Interrelation Between Dividends, R&D, and Capital Investment. *Journal of Banking & Finance* 27 pp. 1297-1321.
- Gugler, K., & Yuroglu, B. (2003). Corporate Governance and Dividend Pay-out Policy in Germany. *European Economic Review*, . 47, 4, pp. 731-758.
- Holderness, C., & Sheehan, D. (1988). The Role of Majority Shareholders in Publicly Held Corporations. *Journal of Financial Economics*, 20, pp. 317-346.
- Hu, Y., Wang, D., & Zhang, S. (2008) *Founding Family Ownership, Management and Payout Policy*. Anaheim, CA: Annual Meeting of American Accounting Association.
- Isakov, D., & Weisskopf, J. (2014). Are Founding Families Special Blockholders? An Investigation of Controlling Shareholders' Influence on Firm Performance'. *Journal of Banking and Finance*, 41 pp. 1-16.
- James, H. (1999). Owner as Manager, Extended Horizons and the Family Firm . *International Journal of the Economics of Business* pp. 41-55.
- Jensen, M., & Meckling, W. (1976). Theory of the Firm: Managerial Behaviour, Agency Cost and Ownership Structure. *Journal of Financial Economics*, Vol. 3, pp. 305-360.
- Kang, F. (2017). Do Family Firms Purchase More Nonaudit Services than Non-Family Firms? *International Journal of Auditing*, 21, pp. 212-221.
- Kuan, T., Li, C., & Chu, S. (2011). Cash Holdings and Corporate Governance in Family-Controlled Firms. *Journal of Business Research*, Elsevier, . 64 pp. 757-764.
- La Porta, R., Lopez-de-Silanes, F., & Schleifer, A. (1999). Corporate Ownership Around the World. *The Journal of Finance*, Vol 54, pp. 471-518.
- Leary, M., & Michaely, R. (2011, October 11). Determinants of Dividend Smoothing: Empirical Evidence. *The Review of Financial Studies*, Vol 24, Issue 10, pp. 3197–3249.
- Llach, J., & Nordqvist, M. (2010). Innovation in Family and Non-Family Businesses: A Resource Perspective. *International Journal of Entrepreneurial Venturing*, 2, pp. 381–399.

- Martínez, J., Stöhr, B., & Quiroga, B. (2007, June). Family Ownership and Firm Performance: Evidence from Public Companies in Chile. *Family Business Review*, Vol. 20, No. 2, pp. 83-94.
- Morck, R., & Yeung, B. (2003). Agency Problems in Large Family Business Groups. *Entrepreneurship Theory and Practice*, 27(4), pp. 367–382.
- Morck, R., Shleifer, A., & Vishny, R. (1988). Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics*, Vol. 20, pp. 293-315.
- Munari, F., Oriani, R., & Sobrero, M. (2010). The Effects of Owner Identity and External Governance Systems on R&D Investments: A Study of Western European Firms. *Research Policy* 39, pp. 1093-1104.
- Muñoz-Bullón, F., & Sanchez-Bueno, M. (2011). The Impact of Family Involvement on the R&D Intensity of Publicly Traded Firms. *Family Business Review* 24(1), pp. 62-70.
- Ozkan, A., & Ozkan, N. (2004). Corporate Cash Holdings: An Empirical Investigation of UK Companies. *Journal of Banking and Finance*, 28, pp. 2103-2134.
- Pérez-González, F. (2006). Inherited Control and Firm Performance. *American Economic Review*, pp. 1559-1588.
- Pindado, J., Requejo, I., & De la Torre, C. (2012). Do Family Firms Use Dividend Policy as a Governance Mechanism? Evidence from the Euro zone. *Corporate Governance*, Vol. 20, Issue 5, pp. 413-431.
- Pinkowitz, L., Stulz, R., & Williamson, R. (2006, December). Does the Contribution of Corporate Cash Holdings and Dividends to Firm Value Depend on Governance? A Cross-country Analysis. *The Journal of Finance*, Vol 61, Issue 6, pp. 2725-2751.
- Press Release. (2017, December 1). *Tietoevry*. Retrieved from Tieto Complete the public offer for Avega to Strengthen its Footprint in Sweden:
<https://www.tietoevry.com/en/newsroom/all-news-and-releases/press-releases/2017/12/tieto-completes-the-public-offer-for-avega-to-strengthen-its-footprint-in-sweden/>
- Scholes, L., Wilson, N., Wright, N., & Noke, H. (2012, February 10). *Listed Family Firms: Industrial and Geographical Context, Governance and Performance*. Retrieved from

Available at SSRN: <https://ssrn.com/abstract=2002906> or
<http://dx.doi.org/10.2139/ssrn.2002906>

- Schulze, W., Lubatkin, H., Dino, R., & Buchholtz, A. (2001). Agency Relationships in Family Firms: Theory and Evidence. *Organization Science*, pp. 99-116.
- Seifert, B., & Gonenc, H. (2008). The International Evidence on the Pecking Order Hypothesis. *Journal of Multinational Financial Management*, Vol. 18, issue 3, pp. 244-260.
- Setia-Atmaja, L.(2010, April). Dividend and Debt Policies of Family Controlled Firms: The Impact of Board Independence. *International Journal of Managerial Finance*, pp. 128-142.
- Setia-Atmaja, L., Tanewski, G., & Skully, M. (2009, September). The Role of Dividends, Debt and Board Structure in the Governance of Family Controlled Firms. *Journal of Business Finance and Accounting*, Vol. 36, Issue 7-8, pp. 863-898.
- Simoes Vieira, E. (2014). The effect on the performance of listed family and non-family firms. *Managerial Finance*, Vol. 40, No. 3, pp. 234-253.
- Sinani, E., Stafsudd, A., Thomsen, S., Edling, C., & Randøy, T. (2008, May). Corporate Governance in Scandinavia: Comparing Networks and Formal Institutions. *European Management Review*, pp. 27-40.
- Sraer, D., & Thesmar, D. (2007). Performance and Behavior of Family Firms: Evidence from the French Stock Market. *Journal of the European Economic Association*, 2007, Vol. 5, Issue 4, pp. 709-751.
- Upsaker, T., & Lorentzen Ulland, A. M. (2020, December). Performance of Nordic Public Family Firms. *Norwegian School of Economics*.
- Wei, Z., Wu, S., Li, S., & Chen, W. (2011). Family Control, Institutional Environment and Cash Dividend Policy: Evidence from China. *China Journal of Accounting Research*, Vol. 4, Issues 1-2,, pp. 29-46.
- Westhead, P., Cowling, M., & Howorth, C. (2001, December). The Development of Family Companies: Management and Ownership Imperatives. *Family Business Development*, Vol. 14, Issue: 4, , pp. 369-385.