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Single Family Offices and their portfolio firms: financial performance, cash holdings, and capital structure

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DISSERTATION

von

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Preface

The present dissertation is the result of my research endeavors as a scholar at the Management Chair of the University of Trier. The journey of completing the dissertation was a formative, educational, and challenging experience that I will look back on with fond memories. The sympathy and support of many individuals, including my advisor, made this achievement possible. I extend my sincerest gratitude to all those who provided encouragement and guidance throughout this journey. Their contributions were invaluable in the successful completion of this dissertation. I am deeply appreciative of this enlightening and inspiring experience.

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List of abbreviations

AktG	Aktiengesetz
ANOVA	Analysis of Variance
AUM	Assets under management
Avg.	Average
BVD	Bureau Van Dijk
CEO	Chief Executive Officer
CFO	Chief Financial Officer
Coeff. / β	Coefficient
DACH	Deutschland/Austria/ Confoederatio Helvetica (Germany, Austria, Switzerland)
DEIs	Direct entrepreneurial investments
DV	Dependent variable
EFO	Embedded Family Office
E.g.	Exempli gratia; for example
Et al.	Et alia
EUR	Euro
Ln/log	Nautral logarithm
M	Mean
Max	Maximum
MFO	Multi Family Office
Min	Minimum
N	Number
OLS	Ordinary Least Squares
P	P-value; probability value
PFO	Professional Family Office
R^2	Coefficient of determination
ROA	Return on Assets
ROS	Return on Sales
RQ	Research Question
S.D.	Standard deviation
SEW	Socioemotional Wealth

SFO	Single Family Office
SIC	Standard Industrial Classification
SME	Small- and Medium-sized Enterprises
UHNWI	Ultra-High-Net-Worth Individual
USA	United States of America
VFO	Virtual Family Office
VIF	Variance Inflation Factor

Zusammenfassung

Familienunternehmen sind in der DACH-Region (Deutschland, Österreich, Schweiz) von großer Bedeutung, da sie einen bedeutenden Anteil am Wirtschaftsleben ausmachen. Sie haben oft eine lange Tradition und tiefe Verwurzelung in der Region sowie ein starkes Netzwerk. Sie gelten meist als besonders stabil und zuverlässig und haben eine starke Bindung zu ihren Mitarbeitern und der Gesellschaft. Familienunternehmen sind typischerweise durch starke Gründerpersönlichkeiten, oft das Familienoberhaupt, geprägt. Das Familienoberhaupt übernimmt hierbei die Rolle des CEOs, Innovators und die des Richters, um Familienstreitigkeiten zu schlichten. Doch auch Familienunternehmen begegnen Schwierigkeiten, insbesondere dann, wenn das starke und einflussreiche Familienoberhaupt aus dem Unternehmen zurücktritt. Die Suche nach einem geeigneten Nachfolger ist eine der größten Herausforderungen, die die Familie bewältigen muss. Eine globale Studie von Familienunternehmen in 50 Ländern bestätigt dieses Problem. 42% dieser Unternehmen haben keinen Nachfolgeplan. Darüber hinaus schaffen es nur 12% der Unternehmen, in die dritte Generation überzugehen, und lediglich 3% erreichen sogar die vierte Generation. In Deutschland werden bis 2026 rund 190.000 Familienunternehmen von diesem Problem betroffen sein. Zudem kann auch das Fehlen einer starken und einflussreichen Persönlichkeit Familienstreitigkeiten und Interessenskonflikte verursachen. Zu guter Letzt können auch fehlende Ressourcen mit Hinblick auf die Förderung des Wachstums ein Problem darstellen. Um all diese Herausforderungen zu bewältigen, entscheiden sich immer mehr Familien dafür, ein single family office (SFO) zu gründen.

Ein SFO ist eine organisatorische Struktur, die sich um die Verwaltung und den Schutz des Vermögens einer einzelnen Familie kümmert und darauf abzielt, das Vermögen über Generationen hinweg zu sichern und zu vermehren. Im Falle eines bestehenden Familienunternehmens kann ein SFO dazu beitragen, einen Nachfolgeplan für das Unternehmen zu entwickeln, um sicherzustellen, dass die Führung an die nächste Generation übergeben wird und das Unternehmen auch in Zukunft erfolgreich bleibt. Es kann auch dazu beitragen, die richtige Strategie für das Familienunternehmen zu entwickeln und zu garantieren, dass es wettbewerbsfähig bleibt. Des Weiteren kann ein SFO das durch den Verkauf des ursprünglichen Familienunternehmens oder durch überschüssige Gewinne erzielte Vermögen der Familie durch Vermögensallokationen und Investitionen, wie zum Beispiel Immobilien oder unternehmerische Direktinvestitionen, vermehren.

Die Verwaltung von Familienvermögen durch SFOs ist weltweit ein bedeutendes Phänomen, weil diese, unter anderem, mehrere Billionen US-Dollar Vermögen verwalten. Da die Anzahl von Familien mit einem hohen Nettovermögen in Zukunft weiter zunehmen wird, wird die Bedeutung von SFOs eine noch größere Rolle spielen. Erst in der zweiten Hälfte des 20. Jahrhunderts begann man im deutschsprachigen Raum, sich mit dem Konzept von SFOs auseinanderzusetzen, und bis 1985 waren lediglich 25 solcher Einrichtungen in der Region bekannt. Inzwischen hat sich die Anzahl der SFOs jedoch deutlich erhöht, und allein in Deutschland wird ihre Zahl auf insgesamt etwa 350 bis 450 geschätzt. Interessanterweise wurden 70% dieser SFOs erst nach dem Jahr 2000 gegründet, was auf ein wachsendes Interesse von Unternehmerfamilien hinweist. Laut der Start-up-Strategie 2022 der deutschen Bundesregierung sollen Family Offices in Zukunft in die Förderung exzellenzorientierter Projekte einbezogen werden. Dadurch wird angestrebt, hochschulübergreifende Ökosysteme zu etablieren, die in regionale und nationale Wertschöpfungsketten eingebunden sind. Um ein tieferes Verständnis für die Struktur von SFOs und insbesondere den Einfluss auf ihre Portfoliounternehmen zu erlangen, untersucht diese Dissertation mittels vier quantitativer empirischer Studien die Vielfalt von SFOs sowie deren Auswirkungen als Eigentümer auf die finanzielle Leistung, die Barmittelbestände und die Kapitalstruktur der betroffenen Unternehmen.

Die vorliegende Dissertation gliedert sich in 7 Kapitel. In Kapitel 1 wird die Motivation und der Aufbau dieser Dissertation vorgestellt. Kapitel 2 befasst sich mit den theoretischen Hintergründen von Familienunternehmen und insbesondere mit den Eigenschaften von Family Offices. Dabei wird zwischen verschiedenen Arten von Family Offices unterschieden, wie zum Beispiel SFOs und multi family offices (MFOs). Ein SFO dient nur einer einzigen vermögenden Familie, während ein MFO mehreren Familien dient. Das Ziel dieses Kapitels ist es, dem Leser ein grundlegendes Verständnis für die Thematik der Family Offices zu vermitteln, um die Analysen in den folgenden Kapiteln besser nachvollziehen zu können.

Die Zunahme der ultra-vermögenden Unternehmerfamilien hat dazu veranlasst, tiefer in die Vermögensverwaltungsaktivitäten dieser Familien einzudringen, insbesondere wenn sie in Form eines SFOs organisiert sind. Um dies zu erreichen, hat die vorliegende Studie in Kapitel 3 einen Datensatz von 216 SFOs aus der DACH-Region untersucht, um die Charakteristika, Governance-Strukturen, Vermögensallokation und Investitionen von SFOs zu erfassen. Die Ergebnisse der Studie deuten darauf hin, dass Familienmitglieder aktiv am Management ihrer SFOs beteiligt sind und dass SFOs ein risikoaverses Investitionsverhalten

aufweisen. Bei Direktbeteiligungen in etablierte Unternehmen bevorzugen sie es, als Mehrheitsinvestor aus ihrem Heimatland zu investieren. Ein Drittel der untersuchten SFOs investieren in Start-Ups. Zusätzlich zeigt die Studie, dass SFOs sehr heterogen sind und dies zu erheblichen Unterschieden in ihrer Vermögensverteilung und ihren Unternehmensbeteiligungen führt.

Die Ergebnisse dieser Dissertation legen nahe, dass die Präsenz eines SFOs, als Eigentümer eines Unternehmens, die finanzielle Performance des betreffenden Unternehmens beeinflussen kann. Im Rahmen von Kapitel 4 wird anhand einer manuellen Datenerhebung von 173 Unternehmen aus der DACH-Region die Rolle von SFOs als Firmeneigentümer, untersucht. Unsere Analyse, die auf der Agency-Theorie und der Monitoring-Perspektive basiert, zeigt, dass Unternehmen, die von SFOs gehalten werden, im Vergleich zu Familienunternehmen eine signifikant schlechtere finanzielle Leistung aufweisen. Allerdings konnte festgestellt werden, dass sich diese Leistung verbessert, wenn ein Familienmitglied aus der Eigentümerfamilie des SFOs im Aufsichtsrat oder Vorstand des betreffenden Unternehmens involviert ist.

Kapitel 5 der vorliegenden Dissertation setzt sich mit der Rolle von SFOs als Unternehmenseigentümer auseinander, um ein tiefergehendes Verständnis ihrer Rolle als Investoren zu erlangen. Insbesondere wird untersucht, wie SFOs die Bargeldbestände der Unternehmen beeinflussen, die sie besitzen. Die Ergebnisse zeigen, dass Unternehmen, die sich im Besitz von SFOs befinden, im Vergleich zu Familienunternehmen über einen größeren Bargeldbestand verfügen. Des Weiteren belegen die Ergebnisse, dass SFOs, die ihr ursprüngliches Familienunternehmen veräußert haben, sogar noch größere Bargeldbestände halten. Dieses Ergebnis lässt darauf schließen, dass im Vergleich zu Familienunternehmen bei SFOs und ihren Portfoliounternehmen eine erhöhte Agency-Problematik besteht.

In Kapitel 6 wird die Auswirkung von SFOs auf die Finanzstruktur der betroffenen Portfoliounternehmen untersucht. Die Erkenntnisse zeigen, dass Unternehmen, die von SFOs gehalten werden, einen höheren langfristigen Grad an Verschuldung aufweisen als Familienunternehmen. Darüber hinaus folgen sie ähnlich wie Private-Equity-Unternehmen der Trade-Off-Theorie. Im Gegensatz dazu haben Familienunternehmen in ihren Finanzentscheidungen eine konservativere Haltung und befolgen eher die Pecking-Order-Theorie. Die Ergebnisse zeigen zudem, dass SFOs, die ihr ursprüngliches Familienunternehmen verkauft haben, eine noch höhere langfristige Fremdkapitalquote aufweisen.

Die Bedeutung von SFOs hat in jüngster Zeit zugenommen, jedoch bleibt die Rolle von SFOs ein relativ unerforschtes Gebiet. Insbesondere die Rolle von SFOs als Eigentümer von Unternehmen ist ein Bereich, der weiter erforscht werden sollte. Die in Kapitel 3 bis 6 gewonnenen Erkenntnisse erweitern die Family Office Literatur und dienen als ein Leitfaden für Unternehmerfamilien, die über die Gründung eines SFO nachdenken. Die Auswirkungen der Ergebnisse, mögliche Einschränkungen und Perspektiven für zukünftige Studien werden in Kapitel 7 ausführlich untersucht und diskutiert, um ein umfassenderes Verständnis über SFOs und der Rolle von SFOs als Eigentümer von Unternehmen zu erlangen.

Wissenschaftlicher Werdegang

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Chapter 1

Introduction

In the introduction of this dissertation, the following three sections are presented: Section 1.1 elucidates the underlying motivation behind this thesis, Section 1.2 delineates the thesis's structure and data, and Section 1.3 outlines the research questions that will be examined in the forthcoming chapters.

1.1 Motivation

Family firms play a critical role in underpinning the economies of our communities. They contribute to job creation and stability, exhibit a strong sense of commitment to their local regions and societies, and consistently demonstrate their innovative capabilities. Family firms have a rich entrepreneurial history, which is often passed down from one generation to the next. However, it is not uncommon for the current generation of potential successors to deviate from this tradition and pursue alternative career paths, such as following careers outside of the family business or starting their own ventures due to encouragement from their parents to freely choose their own career paths (Hastenteufel & Staub, 2020; McMullen & Warnick, 2015; Spelsberg, 2011). Family businesses also acknowledge their shortcomings, which may include difficulties in succession planning, limited access to financial resources, the possibility of insufficient qualifications among family members, and the risk of familial disputes. A worldwide investigation conducted by PWC (2016) on family firms in 50 nations attests to the existence of this challenge. The findings reveal that 42% of such businesses lack a proper succession plan, with just 12% successfully transitioning into the third generation, and an even smaller fraction of 3% reaching the fourth. This issue will impact approximately 190,000 family firms in Germany by the year 2026 (LBBW, 2022). To address these challenges, the establishment of a single family office (SFO) may prove beneficial as an intermediary for family businesses (Zellweger & Kammerlander, 2015). SFOs have gained prominence as they are entrusted with managing and safeguarding the wealth of families across the world. It was not until the latter half of the 20th century that entrepreneurial families in German-speaking nations began to explore the concept of SFOs, with only 25 known to exist in the region by 1985. However, the number of SFOs has since increased significantly, with estimates placing their total count in Germany alone at around 350 to 450. Notably, 70% of these SFOs were established after the turn of the millennium, reflecting a growing fascination among entrepreneurial families in creating SFOs (Bierl et al., 2018; Jandt et al., 2021). The creation of an SFO may stem from the sale of the original family business or the utilization of excess profits (Liechtenstein et al., 2008; Rivo-López et al., 2017; Schickinger et al., 2021).

The central goal of an SFO is to ensure the preservation and growth of a wealthy family across multiple generations. As the number and magnitude of such wealthy families is projected to rise, SFOs are expected to become increasingly sought after (Hagan, 2021; Welsh et al., 2013; Wessel et al., 2014). The academic literature on family offices

differentiates between SFOs and multi-family offices (MFOs) (Rivo-López et al., 2017; Wessel et al., 2014). SFOs are exclusively responsible for the asset management of a single family, whereas MFOs provide their services to multiple families (Kenyon-Rouvinez & Park, 2020; Rivo-López et al., 2017). The focus of this dissertation is on SFOs. This decision is informed by the fact that MFOs are commonly managed by third-party institutions such as banks, brokerage firms, or professional service boutiques (Elliott, 2010; Welsh et al., 2013), thus limiting the direct influence of families over their operations.

However, the field of research on SFOs remains in its nascent stage. This can largely be attributed to the challenge of accessing accurate and transparent information about SFOs, as families tend to exercise a high degree of discretion in these matters (Decker & Lange, 2013; Zellweger & Kammerlander, 2015). Given the limited public availability of data on SFOs (Liechtenstein et al., 2008; Rivo-López et al., 2017), the majority of academic studies in this area is either conceptual or qualitative in nature (Kenyon-Rouvinez & Park, 2020; Rivo-López et al., 2017; Schickinger et al., 2021; Welsh et al., 2013; Wessel et al., 2014). The literature focuses on several key topics related to SFOs, including their goals, entrepreneurial investment behavior, and governance structures (Decker & Lange, 2013; Schickinger et al., 2021; Welsh et al., 2013; Zellweger & Kammerlander, 2015).

As the primary objective of an SFO is to increase and preserve a family's wealth, these organizations engage in various asset allocation strategies, including direct entrepreneurial investments. As a result, SFOs often assume the role of owners and blockholders in firms. Previous research has investigated blockholder ownership in various contexts, including private equity firms (Renneboog et al., 2007), family ownership (Andres, 2008), hedge funds (Brav et al., 2008), and foundations (Achleitner et al., 2020; Block et al., 2020; Herrmann & Franke, 2002). The ramifications of SFOs have yet to receive adequate attention, despite their growing prominence as succession vehicles for business-owning families. Despite the critical role that family businesses and SFOs play in the economy, academic understanding in this area remains limited (Schickinger et al., 2021; Welsh et al., 2013). This is an important gap in knowledge that requires examination, and this study aims to contribute by investigating the influence of an SFO as a blockholder on the businesses it oversees. SFO-owned firms exhibit notable distinctions from traditional family businesses in regard to their investment portfolio, governance structures, intergenerational entrepreneurial behavior, and financial resource preferences. While family businesses maintain an original investment portfolio, SFO-owned firms have expanded their portfolio to encompass external entrepreneurial investments. In terms of governance structures, family businesses operate

under a closed group of family owners, whereas SFOs serve as intermediary structures. The motivation for passing on entrepreneurial investments to future generations also varies between these two types of businesses. Lastly, SFO-owned firms may exhibit different preferences for financial resources, such as a preference for equity over debt.

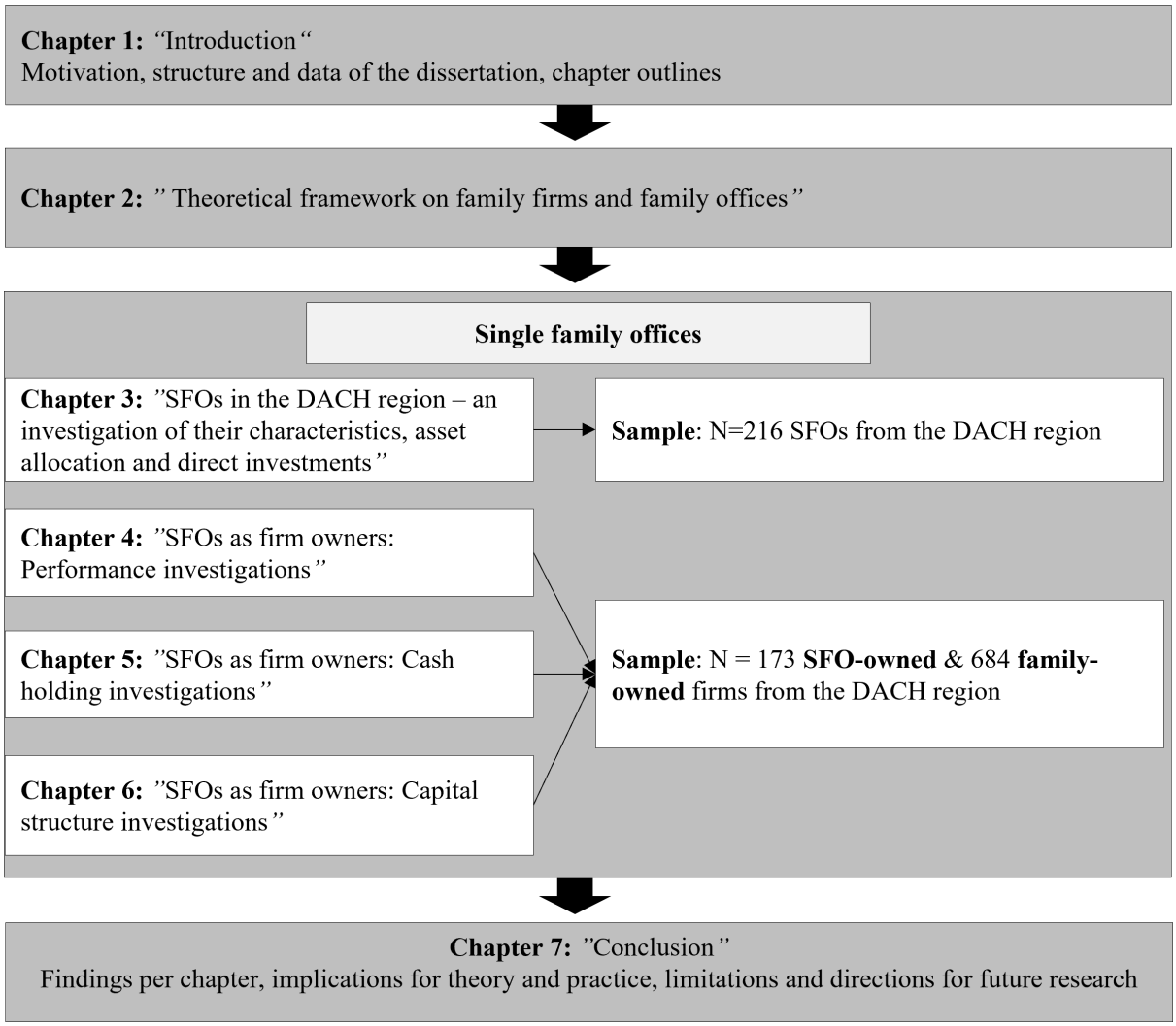
This dissertation seeks to deepen the understanding of SFOs as owners of firms through four empirical studies. The findings of this research will contribute to the academic literature on the topic and provide practical guidance to business-owning families on the effective management and utilization of SFOs as a vehicle for long-term succession and investment.

1.2 Structure of the dissertation

The present dissertation explores the phenomenon of SFOs and their role as owners of firms through four comprehensive quantitative empirical studies. In the first chapter, the topic is introduced and contextualized, and Chapter 2 outlines the theoretical framework that underpins the research. Chapter 3 provides a descriptive overview of SFOs in the DACH (Germany, Austria, Switzerland) region, encompassing an examination of their characteristics, governance structures, asset allocations, and direct investments. Chapter 4 delves into the financial performance of SFO-owned firms and the impact of owner family members on financial outcomes. The cash holdings of these firms are analyzed in Chapter 5, while Chapter 6 focuses on the capital structure of SFO-owned firms. The final Chapter 7 summarizes the key findings of the research, discussing their implications for both theoretical and practical perspectives, as well as the limitations and concludes with recommendations for future research.

A meticulous manual data collection process was employed to identify a total of 216 SFOs in the DACH region. The sample size for each chapter of the study varies, based on the individual structure and research question of each section. Chapter 3 provides analysis at the SFO level, using a sample of 216 SFOs. On the other hand, Chapters 4 through 6 analyze 173 SFO-owned firms, compared to 684 family-owned firms. Figure 1.1. presents an overview of the structure of this dissertation.

Figure 1.1. Structure of the dissertation



1.3 Chapter outlines

1.3.1 Chapter 2: Theoretical framework on family firms and family offices

In this chapter, an exploration will be undertaken into the theoretical framework of family offices, delving into the evolution of family firms and the growing significance of intermediaries such as SFOs in addressing succession challenges. The various types and structures of family offices will be examined, accompanied by a comprehensive overview of the current literature and insights from research and practitioners in the field.

1.3.2 Chapter 3: SFOs in the DACH region – an investigation of their characteristics, asset allocation and direct investments

The growing popularity of SFOs has shed light on the significance of transgenerational wealth management as an exclusive service for entrepreneurial families (Schickinger et al., 2021; Welsh et al., 2013). These entities, which are established after families have sold their business or accumulated significant wealth, serve as a repository for pooling family assets and providing a range of financial, administrative, and personal services (Bierl et al., 2018; Kenyon-Rouvinez & Park, 2020; Rivo-López et al., 2017). Despite the growing interest in SFOs, the literature is still limited and has largely focused on their structures and services (Decker & Lange, 2013; Rivo-López et al., 2017; Welsh et al., 2013; Zellweger & Kammerlander, 2015). However, qualitative studies by Schickinger et al. (2021) and Wessel et al. (2014) have started to investigate the impact of SFO heterogeneity on their goals. Yet, to this day, research has been lacking in terms of providing quantitative evidence on the characteristics, governance structures, asset allocation, and investment behavior of SFOs. To address this research gap, Chapter 2 investigates the following research questions:

> ***RQ1*****:** *What are the key components that characterize SFOs? Does heterogeneity exist between SFOs? How is the investment behavior of SFOs characterized?*

A systematic examination of the research questions is pursued through a multi-step approach. First, a comprehensive analysis of empirical data and previous literature is undertaken to characterize SFOs. In the second stage, the sample of SFOs is classified into three groups based on the identified characteristics. Finally, an in-depth examination is conducted to analyze the impact of these attributes on the governance structure and investment behavior of the SFOs. Analysis of variance (ANOVA) is utilized to determine the presence of statistically significant differences among the SFOs. Additionally, a hierarchical cluster analysis is performed to assess taxonomic heterogeneity in the investment activities of the SFOs. By utilizing data collected from a sample of 216 SFOs located in the German-speaking region (Germany, Austria, and Switzerland), statistically significant differences among the SFOs are revealed.

1.3.3 Chapter 4: SFOs as firm owners: Performance investigations

The role of SFOs as firm owners has received limited attention in the academic literature. Nonetheless, previous studies have demonstrated that SFOs tend to make direct investments and acquire majority stakes (Bierl et al., 2018). As substantial stakeholders, SFOs have the potential to enhance the financial performance of their portfolio companies by monitoring corporate managers (Shleifer & Vishny, 1997). The impact of blockholders such as families, private equities or venture capital firms, hedge funds, and foundations on the financial performance of their owned firms has been extensively studied (Achleitner et al., 2011; Achleitner et al., 2020; Andres, 2008; Block et al., 2020; Brav et al., 2008; Herrmann & Franke, 2002). However, the influence of SFOs as blockholders has yet to be investigated. It remains unknown how SFOs influence the performance of the firms they own. Therefore, Chapter 4 addresses this research gap and investigates the performance of SFO-owned firms by addressing the following research questions:

> ***RQ2*****:** *How do SFO-owned firms compare to family-owned firms with regards to their financial performance? To what extent do management or supervisory involvement and stock market listing influence the financial performance of SFO-owned firms?*

To address these inquiries, a quantitative research approach is adopted, integrating both univariate and multivariate analyses. The study is grounded in an agency perspective, building upon prior research on the monitoring capabilities of firm owners(Jensen & Meckling, 1976). Clustered OLS regressions are employed to examine the financial performance of 173 SFO-owned firms and 684 family-owned firms, using return on assets (ROA) and return on sales (ROS) as dependent variables over the 10-year period from 2011 to 2020. In addition, further analyses are conducted, encompassing additional cross-sectional tests with alternative dependent variables.

1.3.4 Chapter 5: SFOs as firm owners: Cash holding investigations

A recent body of empirical literature has shed light on the phenomenon of firms retaining a substantial and increasing proportion of their assets in form of cash (Dittmar et al., 2003; Ferreira & Vilela, 2004; Opler, 1999). Cash holdings are an integral aspect of corporate financial management, as they allow companies to maintain liquidity, manage risk, support their day-to-day financial operations, and finance long-term investments (Almeida et al., 2013; Opler, 1999). Despite the examination of cash holdings in family-owned firms (Kuan et al., 2011; Ozkan & Ozkan, 2004), the impact of cash holdings on firms owned by SFOs

has yet to be studied. Hence, there exists a need to delve into this aspect to enhance the understanding of the behavior of SFO-owned firms in terms of their cash holdings. Chapter 5 examines the cash holdings of SFO-owned firms and addresses this gap by asking the following research question:

RQ3*: *How do SFO-owned and family-owned firms differ in terms of cash holdings?

To address the research question, a quantitative approach is employed in Chapter 5 of the study. An agency perspective is utilized to examine the impact of SFO ownership on cash holdings in firms. The cash holdings of SFO-owned firms are compared to those of family-owned firms to uncover insights. OLS linear regressions with clustered standard errors are applied to test the direct effect of the equity stake held by the SFO or founding family on cash holdings in the portfolio firms. Careful matching of the sample based on industry and firm size is conducted to ensure a fair comparison. The analysis aims to provide a better understanding of the characteristics and behavior of SFOs in terms of cash management.

1.3.5 Chapter 6: Capital structure of single family office-owned firms

The decisions regarding financing play a crucial role in ensuring the long-term survival of a firm (Koropp et al., 2014; Jansen et al., 2022), as they directly impact various aspects of the firm's financial landscape. These aspects include financial stability (Gertler & Hubbard, 1990), growth potential (Hackbarth & Mauer, 2012; Billett et al., 2007), bankruptcy risk (Castanias, 1983; Ayres & Dolvin, 2019), and the cost of capital (Molly et al., 2012; Chua et al., 2011). Despite some preliminary research into the leverage of SFOs themselves (Schickinger et al., 2022) and family firms (Bacci et al., 2018; Koropp et al., 2013), the effect of SFOs on the financing decisions of the firms they own remains largely unexamined. Thus, the capital structure of SFO-owned firms persists a significant aspect that requires further investigation. Therefore, Chapter 6 examines the capital structure of SFO-owned firms and addresses this gap by asking the following research question:

RQ4*: *How do single family office-owned and family-owned firms differ in terms of debt financing?

The sample from Chapter 4 is utilized, employing an exploratory research approach to examine the capital structure of SFO-owned firms. OLS linear regressions with clustered standard errors are applied to test the direct effect of the equity stake held by the SFO or founding family on the capital structure of the portfolio firm. This study is informed by a thorough review of the literature on the factors that influence financial decision-making

(Gompers et al., 2016; Schickinger et al., 2022) with a particular focus on the pecking order theory (Myers & Majluf, 1984) and trade-off theory (Schickinger et al., 2022).

1.3.6 Chapter 7: Conclusion

The concluding chapter of this thesis offers a succinct summary of the central conclusions derived from each preceding chapter. Furthermore, this chapter delves into the practical and theoretical implications of the findings, acknowledges the limitations of the study, and proposes avenues for future research.

Chapter 2

Theoretical framework on family firms and family offices

Chapter 2 of this dissertation presents the theoretical framework for family firms and family offices. It covers the development, various definitions and types of family offices, as well as the reasons for their establishment. The chapter also discusses the services provided by family offices, along with key considerations for business families when establishing one. The chapter concludes with two practical reports.

2.1 Family firms

According to the literature, family firms are defined by specific characteristics that make them unique. Significant family involvement in the firm and the dominance of family members in the management of the firm, ensure transgenerational control of the founder family. These dimensions underscore the importance of family involvement for the effective management and the long-term success of the family business. Finally, the transfer of ownership and management to the next generations should follow (Chua et al., 1999; A. Yu et al., 2012).

Family firms tend to take a long-term view and invest heavily in innovative capabilities to develop expertise over time (Kammerlander & Prügl, 2016; Werner et al., 2013). Furthermore, family firms pursue goals that are not exclusively focused on maximising firm value, as their operations are often guided by family-centred objectives (Chua et al., 1999; Stafford et al., 1999). These goals may include creating wealth for family members, acquiring and creating social and economic wealth, maintaining family harmony and providing employment opportunities for family members (Berrone et al., 2012).

Accordingly, family firms may be relatively more successful than other types of firms. Various studies have confirmed this hypothesis over time by revealing the link between firm ownership and financial performance (Anderson & Reeb, 2003; Andres, 2008; Audretsch et al., 2013). The relative success of family businesses can be explained by a combination of motivational factors and strategic management. For example, family business managers are often motivated by a desire to protect family wealth, cohesion and socio-emotional wealth (image, influence, status and legacy, etc.) (Schickinger et al., 2021; Strike et al., 2015). An important concept in this context is that of 'extended horizons', meaning that family members act in the family's interest rather than the individual's interest because of loyalty and stability (James, 1999). Thus, both the managers and the owners of the family business have a common interest in the greater good of the family. In addition, family businesses offer the advantages of greater control, exclusivity, discretion and flexibility compared to non-family businesses (Chua et al., 2012). Similarly, effective mentoring and support leads to transgenerational transfer of business experience, skills, expertise and networks. Ultimately, some of the benefits of family businesses translate into relatively better financial performance (Gonzalez et al., 2019; Hansen et al., 2020). Thus, family businesses make an important contribution to many economies and are the backbone of job creation, innovation and competitiveness.

However, there is also a downside to family firms. Specifically, if inefficient family members are assigned with important tasks, family benevolence can lead to ineffeciencies. This could also limit the family's ability to sanction or challenge maladministration. Studies show that such problems increase in successive generations as family size increases, ties become looser and consequently individual and family goals diverge (Verbeke & Kano, 2012). Thus, effective succession planning is a crucial challenge for family businesses. On the one hand, they have to secure their business success in the long term. And on the other hand, they have to reconcile it with their family structures and values. Personal relationships between entrepreneurs and potential successors can also lead to conflicts, which highlights the importance of setting clear expectations and requirements to avoid potential conflicts that can lead to a failure of succession and the subsequent consequences for the family business (Spelsberg, 2011).

A study by PWC (2016) confirms the problems of succession. According to a survey including family firms from 50 countries, 42% of family businesses do not have a succession plan and 12% make it to the third generation, while only 3% make it to the fourth generation. Furthermore, between 2022 to 2026, about 190,000 companies are due to be handed over in Germany (LBBW, 2022). The main problem of this handover often lies in the search for a suitable successor within one's own family or in the business environment. If this is not successful due to the problems described above or other circumstances, the sale of the company is often considered.

To address this problem, families could set up an intermediary such as a family office for their family business to manage succession and to hold, grow and invest the family's wealth for several generations. The existing literature in the field of family offices is poorly researched. To better understand the family office phenomenon, the following chapters discuss the characteristics of family offices in detail.

2.2 Family office phenomenon

2.2.1 History

The concept of a family office is a straightforward one: a wealthy entrepreneurial family establishes a financial back office dedicated exclusively to the management of its assets and wealth (Canessa et al., 2018) Family offices have a long history, having been established by wealthy families since centuries. They originated as single-family enterprises centuries ago in various forms, such as major domus in ancient Rome, family-owned banks in Europe, and family trusts in England (Liechtenstein et al., 2008).

The model of family offices evolved after the Industrial Revolution, with the establishment of the first modern family office in the form of the House of Morgan (the family office of the Morgan family) in the United States of America in the 19th century (Bierl et al., 2018; Canessa et al., 2018). The employees of these new organizations were responsible for taking care of the family's external financial interests with a level of professionalism that equaled or exceeded that of the family business. Managers dedicated to wealth planning and asset allocation were hired to ensure that the family's assets were properly managed while family members were traveling and conducting business (Decker & Lange, 2013).

In addition to the Morgan Family, other examples of family offices include those implemented by the Rockefeller, Weyerhaeuser, Phipps, Dupont, and Guggenheim families. In Germany, however, families only began to deal with the topic of SFOs in the second half of the 20th century. In fact, more than half of all family offices in Germany were established after the year 2000, which is in contrast to the United States where family offices have a longer tradition. It is estimated that there are currently between 350 and 450 SFOs in Germany, all of which are structured as seperate legal entities (Bierl et al., 2018). Furthermore, the start-up strategy for 2022 by the Federal Government emphasizes the role of family offices in the promotion of excellence-driven projects that seek to establish cross-university ecosystems integrated with regional and national value chains (BMWK, 2022). This highlights the significance of family offices in general.

2.2.2 Definition and types

Family office

In the literature, there is no uniformity in how a family office is defined. Various authors define family offices differently.

Rivo-López et al. (2017), defines a family office as follows: The traditional idea behind a family office is that it is a business managed by and for a family. Its primary purpose is to centralize the management of the family's assets, and its financial resources come from the family's own capital, often accumulated over generations.

Decker and Lange (2013) describes a family office as follows: A family office is an administrative entity that manages complex financial and personal matters for one or more families over multiple generations, providing them with advice and guidance.

Canessa et al. (2018) defines it as follows: A family office is an independent organizational unit that serves the needs of one or more families or individuals with

significant and complex asset portfolios. Its core objective is to organize and manage the family's wealth by consolidating assets and optimizing services for sustainable growth over the long term. The family office offers active consulting to individual members or the family as a whole, while ensuring that there is no conflict of interest.

While these definitions vary in nuances, they agree on the defining element that family offices are established to manage business matters of an entrepreneurial family.

Single family office

Zellweger and Kammerlander (2015) define an SFO as a private entity solely owned by one entrepreneurial family. Its primary purpose is to manage that family's assets with a long-term perspective, among other responsibilities.

Canessa et al. (2018) defines an SFO as follows: When a family creates a separate staff and technical infrastructure that is exclusively dedicated to managing the family's private assets and is organizationally and physically separate from the company, this is known as a SFO.

In Europe, it is commonly recommended that a SFO should be established for a net worth between EUR 200 to 300 million (Decker & Lange, 2013). Leading a SFO requires a highly qualified expert in capital markets who can utilize their knowledge for the benefit of the family. It is ideal for the directors of a family office to have executive experience in private banking or as financial managers for capital investments. While the cost of such experts may be high, the value of their expertise in addressing capital market questions is significantc (Canessa et al., 2018). In terms of operating expenses for an SFO, it is estimated to be around 1.5% to 2% of assets under management (AUM), or roughly $1 million for a fully operational SFO (Kenyon-Rouvinez & Park, 2020).

Multi family office

MFOs are established to address the needs of multiple wealthy families and are typically managed by the families themselves, banks, or other external service providers (Bierl et al., 2018). It is important to note that there are variations in the structure and operations of MFOs. For instance, a classic independent MFO owned by several unrelated entrepreneurial families (Liechtenstein et al., 2008) may be owner-managed, with services provided exclusively to the owners. Nevertheless, it does not preclude the possibility of other families becoming shareholders at a later stage to benefit from the services offered (Canessa et al., 2018). However, if a bank or external service provider offers this service to multiple

families, it is referred to as a Professional Family Office (PFO) (Kenyon-Rouvinez & Park, 2020). For entrepreneurial families unable to establish their own SFO, joining an MFO or PFO can be a feasible alternative, requiring assets typically between EUR 20 and 30 million. Due to economic conditions and the pursuit of business growth, MFOs and PFOs have begun to allow families with assets between EUR 5 and 10 million to participate (Decker & Lange, 2013).

Virtual family office

In cases where families prefer not to establish a legal entity to access family office services, they may opt for a virtual family office (VFO) by outsourcing most of their services to external service providers and advisors. A VFO can be considered a form of SFO, which offers flexibility and cost-effectiveness by keeping operating costs low (Bierl et al., 2018; Kenyon-Rouvinez & Park, 2020). Bierl et al. (2018) further suggest that virtual SFOs are predominantly used for smaller asset sizes, typically up to approximately EUR 30 million, and in the context of next-generation wealth succession planning, where low-cost, flexible and digitized asset management is preferred.

Embedded family office

The embedded family office (EFO) represents an intermediate stage between virtual and legally independent SFOs. Specifically, the EFO is a department within the family business and typically under the purview of the chief financial officer (CFO) or board of directors, but it is legally a part of the family business (Bierl et al., 2018). With an EFO, the family retains direct control over its assets, as noted by Kenyon-Rouvinez and Park (2020).

Given the above categorizations of family offices, it is evident that authors and researchers have delineated and classified family offices in various ways, lacking a unique definition. Nevertheless, family offices share distinct characteristics, including the administration of assets owned by entrepreneurial families.

2.3 Reasons for establishing family offices

The establishment of a family office can arise through various individual and diverse paths for instance after the sale of the family business or in the event of significant excess cash (Canessa et al., 2018; Schickinger et al., 2021). For instance, the sale of the family business can lead to unfamiliar territory and risk of family disintegration, especially among entrepreneurial families. The loss of the business task can leave a sense of emptiness among family members. Therefore, a family office is established to counteract the disintegration and

provide a new entrepreneurial purpose, serving as a common anchor and "new family business". When considering a family office, the entrepreneurial family must take into account the change in the nature of the wealth portfolio. Creating new structures that are free from conflicts of interest and building competent networks are crucial for effectively structuring, diversifying, and investing assets, particularly in the initial phase (Canessa et al., 2018).

Moreover, a comprehensive study conducted by Deloitte (2020) presents five compelling reasons why entrepreneurial families should take into account the establishment of a family office.

- **Personal**: A family office provides a personalised and dedicated service to only one family.
- **Privacy**: The preservation of privacy is of paramount importance for affluent families, and a family office provides a means to achieve this. By consolidating all personal information such as family charters, deeds of donation, shareholder agreements, and incorporation documents in one secure location, access is restricted to only a select few. In this way, the family office acts as a protector and overseer of the family's privacy.
- **Prosperity**: Entrepreneurial families aim to achieve growth and generate income from their wealth. However, as wealth is dispersed among multiple family members of varying ages and requirements, it is essential to consider the revenue stream for all family members. Maintaining a balance between wealth and financial needs is crucial, and expecting individual family members to achieve this balance is impractical. Instead, a more comprehensive analysis of the family's needs, business continuity, and investment diversity is required. The family office provides a suitable solution to this exercise.
- **Perpetuity**: In the early stages of a family office, the founders of the family business are typically the ones who manage the family wealth. However, this approach can lead to unplanned growth and can be problematic in the event of sudden death. It also goes against the core value of perpetuity, which is important to wealthy families who have a long-term perspective beyond just one generation. The family office can help the family define a clear purpose and create a legacy that transcends individual family members. Additionally, family offices can provide value in terms of personal estate planning to prevent unintended consequences of succession plans. Proper governance is essential to managing family wealth effectively, and the family office can play a crucial role in

ensuring good governance and having a succession plan in place for the event of a key member's demise.

- **Professionalism**: A family office is established to bring a level of professionalism to managing increasingly complex family wealth, especially in international settings. As family wealth grows, it can quickly become too much for the family to manage alone, and there is a trend toward managing personal investments as a separate business in addition to the core family business. This business should be run professionally with a dedicated team of experts who can tailor wealth management to fit the family's needs and the individual needs of its members. Professionalism also provides an advantage in terms of compliance and asset reporting, which can be managed more consistently and uniformly by a dedicated family office team. Furthermore, there is a psychological argument for external advice or management of the family wealth, as family members may become too emotionally involved and risk mixing family and business matters. The external advice and involvement of a family office can also be beneficial for managing increasingly international family wealth and family businesses, which require a holistic approach and professional management.

2.4 Services offered by family offices

Family offices provide multiple services (e.g., Liechtenstein et al., 2008; Rivo-López et al., 2017; Rosplock & Hauser, 2014; Welsh et al., 2013; Wessel et al., 2014) to business owning families, which can be divided into three categories: investment strategy activities, family-focused services and administrative task.

Investment strategy activities comprise an essential component of the family office's role, which includes guiding and advising the family on the formulation of a sustainable asset allocation and management strategy. As a manager of wealth managers, the family office serves as an extension of the family, providing valuable support in the implementation of its investment objectives. It aids in the selection of competent managers to oversee the family's assets and ensures that their performance aligns with the family's investment goals.

Moreover, the family office functions as a controller, continually monitoring the overall asset portfolio's development, individual asset classes, and investments. Regular reports are delivered to family members, detailing the portfolio's performance in a format, level of detail, and timing that satisfies their requirements. The family office's close monitoring of investments allows for prompt identification of underperforming assets and enables

optimization or remedial measures to be taken to address issues. The family office also takes responsibility for supervising the work of external partners such as banks, wealth managers, real estate managers, and other financial service providers, ensuring that their work is aligned with the family's investment strategy (Decker & Lange, 2013; Rivo-López et al., 2017; Rosplock & Hauser, 2014).

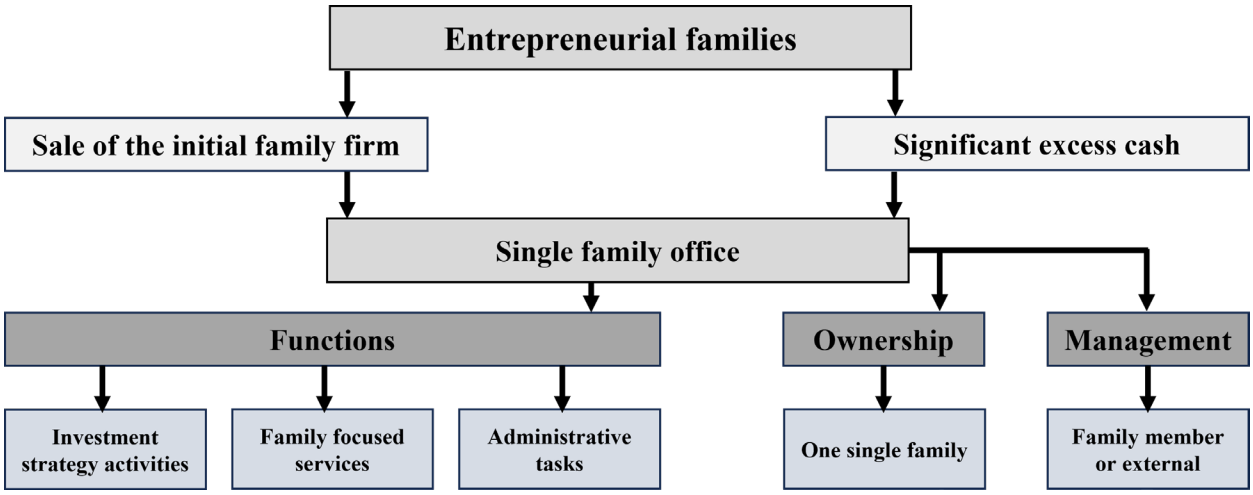
Family-focused services offered by the family office include support for family governance, philanthropy, personal life, and succession planning. The family office plays a vital role in implementing family governance strategies, coordinating family activities, and organizing educational programs to cultivate responsible ownership among the next generation. It is also involved in coordinating philanthropic activities and providing support to ensure that they align with the family's values and objectives (Decker & Lange, 2013; Liechtenstein et al., 2008).

Administrative tasks are essential for managing a private fortune effectively, and the family office is responsible for performing many of these tasks. One such task involves providing tax and legal advice related to investment issues, ownership, and other legal matters, which is particularly important, if these services are not obtained from external specialists.

In addition, the family office serves as an authorized representative for the family, managing relationships with banks, wealth managers, real estate managers, and other service providers. By taking on challenging responsibilities such as monitoring and managing third-party vendors, reviewing offers, negotiating contracts, controlling completed work, and monitoring costs, the family office relieves the family of these burdens.

Furthermore, the family office serves as an informational gatekeeper, managing and analyzing the influx of data and information related to the family's complex wealth portfolio. By breaking down this data into manageable chunks, proposing countermeasures when necessary, and presenting it to the family in a concise form, the family office enables the family to make informed decisions, optimize their wealth management strategies, and protect their assets for future generations (Canessa et al., 2018; Kenyon-Rouvinez & Park, 2020; Rivo-López et al., 2017). As the main focus of this dissertation is on SFOs, Figure 2.1. illustrates the structure of these organizations.

Figure 2.1. Structure of a single family office



Own illustration based on (Rivo-Lopez et al. 2017; Schickinger et al. 2021; Kenyon-Rouvinez & Park 2020)

2.5 Considerations for establishing SFOs

Entrepreneurial families often share a common goal of increasing their economic value, but their individual preferences regarding risk, asset classes, liquidity, dividends, time horizon, noneconomic goals, and socioemotional wealth can differ. This diversity can lead to conflicts among family blockholders, resulting in the extraction of private benefits of control by the incumbent owner(s), which harms the other family owners and the minority owners of the firm. Such conflicts can also increase difficulties and costs by creating loyalty conflicts among directors, an atmosphere of mistrust and uncertainty, and ultimately strategic inertia that may affect the firm's competitiveness (Berrone et al., 2012; Chrisman et al., 2012; Verbeke & Kano, 2012).

Entrepreneurial families facing family blockholder conflicts may establish an intermediate organizational entity, such as a family office, in order to separate family owners from their assets. This separation creates a buffer that limits the destructive dynamics arising from family blockholder conflicts by preventing uncoordinated family interference in the business. SFOs are particularly effective in addressing family blockholder conflicts by reducing centrifugal forces within the family that could result from generational drift and the dilution of wealth. They achieve this by unifying the family, maintaining cohesion and power over time, and preserving wealth through the formalization of investment guidelines and delegation of wealth management tasks to a professional fiduciary (Zellweger & Kammerlander, 2015).

While institutionalized structures like SFOs offer many benefits for managing family wealth, there are also significant costs to consider. One of the main risks of SFOs is that they are vulnerable to double-agency costs, especially if non-family professionals are involved. This is because the family officer (the first-tier agent) and the asset managers (the second-tier agents) work for different organizations and are not subject to the same hierarchical control (Carney et al., 2014; Zellweger & Kammerlander, 2015).

As a result, the family officer may engage in self-dealing or collude with asset managers to pursue their own interests rather than those of the family. Additionally, SFOs incur direct costs from operating outside the current asset structure, including personnel, office, and technology expenses. Although SFOs are typically small, these costs can be significant relative to the amount of wealth being managed (Canessa et al., 2018; Zellweger & Kammerlander, 2015).

Therefore, families should carefully consider the potential risks and costs of establishing a SFO before doing so. They need to weigh the potential for double-agency costs and the direct expenses involved in running an independent office (Canessa et al., 2018).

Thus, it is crucial for business families to engage competent and trustworthy representatives who will act in the best interests of family members. Such representatives should possess considerable experience in partner selection and negotiating wealth management mandates, and they should be loyal to the family's goals. Poorly designed bonuses can undermine trust, especially if they promote risky investment strategies or apply only to specific asset classes. Furthermore, hasty integration of asset management can create conflicts of interest and impede success (Canessa et al., 2018).

When establishing an SFO, it is advisable to start with a few core competencies and gradually add other services over time. Additionally, families should prioritize investments in areas where they have experience and expertise, such as their original firm. Limiting investments to two or four asset classes ensures easier monitoring and management. Direct investments, including board membership and management involvement, can provide families with valuable insights into the activities of their representatives, thereby enhancing their ability to prevent misconduct and optimize performance (Canessa et al., 2018).

2.6 Practical reports

Our research results are extended by incorporating two recent practical findings conducted by UBS and Deloitte. The Citi Private Bank (2022) survey provides valuable insights into the investment strategies and concerns of family offices. The results show that a majority of family offices are based in North America and control significant wealth, with over 53% controlling more than $500 million.

The main near-term worries for family offices are inflation, recession, geopolitical uncertainty, and interest rate increases. These concerns reflect the current economic and political climate, as inflation erodes the purchasing power of assets, while recession and geopolitical uncertainty can affect market volatility and investment returns. Increasing interest rates can also lead to higher borrowing costs and lower investment returns.

Asset allocation is an important aspect of portfolio management. The survey reveals that family offices allocate their investments across a range of asset classes, including public equity, real estate, private equity, fixed income, cash, hedge funds, and commodities. Real estate is the most popular asset class, followed by public equity and private equity.

It is also highlighted that almost half of family office portfolios (47%) are managed in-house, while 42% being managed by external investment managers, and the remaining 11% being held as cash for liquidity. This suggests that family offices place a high value on control and expertise in managing their investments.

When it comes to direct investment, family offices prefer investing in real estate (37%) and operating businesses (33%). Additionally, they prefer to have a controlling stake in these investments (37%), which allows them to have a greater influence over the operations of the business and its long-term strategy.

In terms of sectors, family offices tend to focus on healthcare, information technology, real estate, energy, and financial services for their public market investments. These sectors are seen as having strong growth potential and offering diversification benefits.

Finally, it is revealed that family offices prioritize preserving asset value, preparing the next generation as responsible wealth owners, and managing transitions as their top concerns. These priorities reflect the long-term perspective of family offices, which aim to ensure the continued growth and success of the family's wealth across generations. Table 2.1. gives an overview of the key findings.

Table 2.1. Citi Private Bank – Family office survey

Key findings	
Sample of the survey	126 family offices are distributed as **60% in North America**, 17% in Latin America, 11% in Europe, Middle East & Africa, and 17% in Latin America. **Over 53% controlling more than $500 million.**
Near-term worries	The main near-term worries for family offices are **inflation**, **recession**, **geopolitical uncertainty**, and **interest rate** increases.
Asset allocation	**23%** public equity including funds, **20%** real estate, 15% private equity including funds, 15% fixed income, 12% concentrated positions, 10% cash & cash equivalent securities, 4% hedge funds, and 1% commodities.
Portfolio management	**47%** of the portfolio is managed in house, **42%** managed by external investment managers and 11% held as cash for liquidity
Preference for type of direct investment	**37%** Real estate, **33%** operating business, 19% Venture / angel investing, 9% others and 2% direct debt
Preference for stake in direct investing	**7%** observer Seat, **13%** Board member, 19% minority, 24% passive and **37%** controlling (25%+ ownership)
Preference sectors for direct investing	In terms of sectors, **real estate**, **information technology** and **healthcare** are the primary focus of family offices for direct investments.
Preference sectors for public markets	Family offices predominantly invest in sectors such as **healthcare**, **information technology**, **real estate**, **energy**, and **financial services**.
Family office concerns	Family offices prioritize **preserving asset value**, **preparing next generation** as responsible wealth owners, and **managing transitions** as top concerns.

Own illustration based on (Citi Private Bank – Family office survey, 2022)

The UBS (2022) provides valuable insights into the investment strategies and concerns of SFOs across different regions. While there are some similarities in terms of asset class preferences, there are also some notable differences.

In the US, SFOs are primarily concerned with rising inflation, with 35% citing it as their top concern. Equities are the preferred asset class, with 33% investing in developed markets and 3% in developing markets. Private equity also garners significant attention, as 33% of SFOs invest directly or via funds. Interestingly, most SFOs opt for investments within the US, with only 8% directing their investments towards Western Europe.

In contrast, SFOs in Latin America prioritize addressing rising inflation, surpassing their US counterparts, with 50% citing it as their top concern. Equities remain a preferred asset class, attracting 39% of SFO investments in developed and developing markets. Private equity holds substantial appeal as well, with 17% of SFOs investing directly or via funds. However, while only 18% of SFOs invest in Latin America, a significant majority (54%) choose to invest in the USA.

SFOs in Switzerland exhibit greater concern for global geopolitics than inflation, with 36% citing it as their top concern. Equities once again emerge as the favored asset class, with 33% of SFOs investing in developed and developing markets. Private equity continues to draw interest, capturing the investments of 24% of SFOs directly or via funds. Switzerland-based SFOs demonstrate a preference for investing in Western Europe, with only 28% directing their investments towards the USA.

In the Middle East and Africa, SFOs display a similar priority of global geopolitics over inflation, with 36% citing it as their top concern. Equities retain their prominence as the preferred asset class, with 26% of SFOs investing in developed and developing markets, while real estate gains traction with 22% of investments. USA emerges as the prime investment destination for most SFOs, with only 1% choosing to invest in Africa.

SFOs in Western Europe share a similar concern for rising inflation as their US counterparts, with 30% citing it as their top concern. Equities maintain their status as the preferred asset class, attracting investments from 35% of SFOs in developed and developing markets. Private equity enjoys popularity as well, with 17% of SFOs engaging directly or via funds. Interestingly, most SFOs choose to invest within Western Europe, with only 34% directing their investments towards the USA.

Finally, SFOs in the Asia-Pacific region diverge in their top concern from the other regions, with 23% citing valuation across asset classes as their main focus. Equities persist as the favored asset class, with 33% of SFOs investing in developed and developing markets. Private equity also enjoys substantial attention, as 19% of SFOs invest directly or via funds. The majority of SFOs opt for investments in the Asia-Pacific region, with 55% directing their investments there, while 35% choose the USA as their investment destination. Table 2.2. gives an overview of the key findings.

Table 2.2. Global family office report - UBS

USA	Western Europe
Top concern: Rising inflation - 35% **Top asset class:** Equities - 36% (developed markets 33% & developing markets 3%); Private Equity - 33% (24% direct investments & 9% via funds) **Asset allocation by region:** USA - 79%, Western Europe - 8% **Sustainable investments:** 39% invest in sustainable projects	**Top concern:** Rising inflation - 30% **Top asset class:** Equities - 35% (developed markets 27% & developing markets 8%); Private Equity - 17% (8% direct investments & 9% via funds) **Asset allocation by region:** Western Europe – 46%, USA – 34% **Sustainable investments:** 65% invest in sustainable projects
Asia-Pacific	**Middle East and Africa**
Top concern: Valuation across asset classes - 23% **Top asset class:** Equities - 33% (developed markets 18% & developing markets 15%); Private Equity - 19% (14% direct investments & 5% via funds) **Asset allocation by region:** Asia-Pacific - 55%, USA - 8% **Sustainable investments:** 53% invest in sustainable projects	**Top concern:** Global geopolitics - 36% **Top asset class:** Equities – 26 % (developed markets 19% & developing markets 7%); Real estate 22% **Asset allocation by region:** Middle East - 26%, Africa - 1% USA – 37% **Sustainable investments:** 70% invest in sustainable projects
Latin America	**Switzerland**
Top concern: Rising inflation - 50% **Top asset class:** Equities - 39% (developed markets 28% & developing markets 11%); Private Equity - 17% (10% direct investments & 7% via funds) **Asset allocation by region:** USA - 54%, Latin America - 18% **Sustainable investments:** 61% invest in sustainable projects	**Top concern:** Global geopolitics - 36% **Top asset class:** Equities – 33 % (developed markets 26% & developing markets 7%); Private equity – 24% (15% direct investments & 9% via funds) **Asset allocation by region:** Western Europe – 60%, USA – 28% **Sustainable investments:** 48% invest in sustainable projects

Notes: Own illustration based on (UBS – Global Family office report, 2022).

2.7 Conclusion

Family firms play a crucial role in many economies and their success is attributed to a combination of emotional and motivational factors as well as strategic management. However, they face challenges such as succession planning and conflicts between entrepreneurs and potential successors. Family offices have emerged as a solution for managing succession and holding and growing family wealth over several generations. They offer a range of services, including investment strategy activities, family-focused services, and administrative tasks. While SFOs have many benefits, they also have risks such as double-agency costs, making it essential to engage competent and trustworthy representatives. Overall, families should carefully consider the potential risks and costs of establishing a family office, establish a governance structure, and develop a clear set of investment guidelines to ensure alignment with their long-term goals. By doing so, they can maximize the benefits of a family office and preserve their legacy for future generations. The two surveys of Citi Private Bank (2022) and UBS (2022) confirm that direct investments are the most favored type of investment for SFOs. The following chapters of the present dissertation will investigate this investment pattern in detail.

Chapter 3

SFOs in the DACH region – an investigation of their characteristics, asset allocation and direct investments

While there is a rising number of ultra-wealthy business families, we know little about their asset management activities - especially if organized and operated in the form of an SFO. Based on a dataset of 216 SFOs from the DACH region, our study investigates the characteristics, governance structures, asset allocation and investments of SFOs. Our main findings are as follows: First, the family is still actively involved in many SFOs. More than 75% of SFOs have at least one family member in their management team. Second, SFOs are an established phenomenon. The mean age of the SFOs in our sample is 22 years and they employ on average 6.5 employees. Third, in their direct investments, SFOs prefer to invest as majority investor in established firms from their home country. Only 37.4 percent of SFOs invest in start-ups. Fourth, SFOs as a group are heterogeneous. Classifying SFOs into three groups based on their relationship to the business family and the original family business shows significant differences in their asset allocation and direct investments. An exploratory cluster analysis confirms this heterogeneity of SFOs. We discuss the results of our study in the light of research about business families and their wealth management and present an agenda for future empirical research about family offices.

This chapter is based on

Eroglu, O., Block, J., Betzer, A, Bazhutov, D. (2023). SFOs in the DACH region – an investigation of their characteristics, asset allocation and direct investments. *Working Paper.*

3.1 Introduction

The World Ultra Wealth Report from (2019) states that the ultra-wealthy population consists of approximately 353,500 individuals, with a combined net worth of $32.3 trillion. The rising number of ultra-high-net-worth individuals (UHNWI) possessing assets worth $30 million or more has led to an increased interest in family office structures for multi-generational wealth management (Rosplock & Hauser, 2014). "More and more UHNWIs and their families are choosing to cut out the middleman when it comes to their investment portfolios by setting up a dedicated family office: and property is no exception." (Knight Frank, 2019, p.40). In the literature, family offices are defined as "a separate legal entity placed between the family and its assets that is solely devoted to the management of the affairs of a single family" (Zellweger & Kammerlander, 2015). SFOs worldwide have emphasized the importance of transgenerational wealth management as an exclusive service for entrepreneurial families (Schickinger et al., 2021). However, despite the increasing demand for family office services and promising predictions regarding their growing importance for wealth management, "scholarly knowledge on SFOs is surprisingly scarce" (Schickinger et al., 2021).

The research focus of prior studies on family offices varies among scholars. The majority of prior research focuses on the structures of family offices and the services they provide (Decker & Lange, 2013; Liechtenstein et al., 2008; Rivo-López et al., 2017; Wessel et al., 2014; Zellweger & Kammerlander, 2015). Other scholars, such as Schickinger et al. (2021) and Wessel et al. (2014), conduct qualitative studies to investigate how the heterogeneity of family offices affects their goals and objectives. Previous studies also compared the investment behavior and activities of family offices to those of other private equity firms (Block et al., 2019).

The present study sheds light on the phenomenon with a strong focus on the following three research questions: What are the key components that categorize family office structures? Does heterogeneity exist between SFOs? How is the investment behavior of SFOs characterized? We answer these research questions by following a three-step approach. First, we identify and analyze general characteristics of family offices using empirical data as well as prior studies. The mean age of the SFOs in our sample is 22 years and they employ 6.5 employees on average. In general, SFOs prefer a family dominant governance structure, exhibit a relatively risk-averse investment behavior, and are heterogeneous as a group. This heterogeneity is caused by multiple characteristics, in particular ownership regarding family

business as well as the SFO and the legal structure as well as the responsibility of the SFO. In step two, we use these attributes as determinants in order to categorize our SFOs into three groups. The categorization is based on the legal structure and the responsibility of the SFO as well as whether the family still holds the initial family business (see p. 9). In our last step, we investigate the impact of such characteristics on the governance structure and the investment behavior of SFOs using data derived from 216 SFOs rooted in the German-speaking area. With our quantitative approach we contribute to existing literature on family offices and provide a more data-driven perspective to a field that was predominated by qualitative research in the recent past.

We find that some key characteristics of SFOs can significantly shape investment activities, in particular the ownership structure of the initial family business and the governance structure of the SFO. This is in line with the conclusions from prior studies in the field (Block et al., 2019; Schickinger et al., 2021; Wessel et al., 2014). More precisely, our data reveals that, in general, SFOs have family-dominant governance structure. However, SFOs that are a separate legal entity without any share in the initial family business are managed with less family involvement. Such discrepancies can also be observed in the investment behavior of the three SFO groups. In general, SFOs are relatively more risk-averse and prefer direct investments in established firms (avg. age 25.7 years) from the German-speaking area. However, SFOs that are a separate legal entity without any share in the initial family business prefer younger firms (avg. age 18.3 years). On the contrary, SFOs where the SFO still holds the initial family business prefer relatively older firms (avg. age 30.6 years). Furthermore, our results reveal that SFOs also invest in start-ups. However, the investment patterns vary among the three SFO groups. While 37.4% of the SFOs from our sample generally invest in start-ups, this number decreases significantly when only considering SFOs that still hold the initial family business (24.6%). In addition, we use cluster analysis and identify three different clusters of SFOs based on their investment patterns. The largest cluster of SFOs (50.5% of our sample) invests in all asset classes and holds a rather diversified portfolio. SFOs of the second-largest cluster (33.8% of our sample) invest only in established companies and real estate, while a smaller group of SFOs in the third cluster (15.7% of our sample) solely focuses on real estate investments.

Our research starts with laying the foundations of the SFO literature in chapter two. It begins with a literature review on the definition of SFOs, their functions, structures, and ends with a description of the state of research. Chapter three describes the data and our method and presents the descriptive statistics derived from our sample, which consists of 216 SFOs

from the German-speaking Area (DACH region). Results are presented in chapter four. Finally, our study concludes with a summary of the main findings and an outlook for the future research agenda.

3.2 Literature review

3.2.1 Definition of family offices

A family office as a service essentially denotes the management of private assets of a wealthy family. Financial resources "come from the entrepreneurial family's capital, which has often been built up over generations" (Rivo-López et al., 2017, p. 262). However, the definition of the term family office varies among academic studies. According to Wessel et al. (2014), a family office is characterized by the following components: (1) an investment advisory service that can exist in different organizational structures; (2) a wealthy family or individual who is demanding financial and non-financial services; (3) the primary goal is to manage and increase the wealth of the family or individual.

The latter of the three components mentioned above serves as a differentiator in the literature and is one of the major reasons why a precise definition of the term family office has proven to be elusive (Decker & Lange, 2013; Kenyon-Rouvinez & Park, 2020; Liechtenstein et al., 2008; Rivo-López et al., 2017; Schickinger et al., 2021; Wessel et al., 2014; Zellweger & Kammerlander, 2015).

In our study, we predominantly follow Zellweger and Kammerlander (2015), who define a family office as "a separate legal entity placed between the family and its assets that is solely devoted to the management of the affairs of a single family" (p. 1290). Considering the various definitions phrased in prior studies, it can be noted that the purposes of SFOs are not only financial-related. Besides Zellweger and Kammerlander (2015), further scholars, such as Liechtenstein et al. (2008) and Schickinger et al. (2021), emphasized that SFOs are also responsible for general family affairs, such as education and relationship management. Accordingly, we define SFOs as any structured administrative body that governs and manages financial (primarily) and non-financial (secondarily) affairs of a single family.

3.2.2 Functions of family offices

The primary purpose of a family office is "to centralize management of the family assets" and "to facilitate the transmission of wealth from one generation to another" (Rivo-López et al., 2017).

Family offices provide multiple services to ensure successful wealth management across multiple generations. These services are often categorized as asset management, administrative services, and personal affairs (Decker & Lange, 2013; Liechtenstein et al., 2008).

Asset management includes pursuing investment activities focusing on the generation of a steady income and asset preservation and reporting and financial accounting. Moreover, the socio-cultural environment is likely to be a key factor that affects the investment activities. In the US, the range of investment-related services probably differs from Europe or Asia. This is shown by the comparison between the US and Europe made by Liechtenstein et al. (2008). They state that American SFOs are relatively less risk-averse than European SFOs. They tend to invest more in equity and hedge funds, while European SFOs prefer to invest in real estate. In general, SFOs prefer low-risk investments and focus on the current profitability of portfolio companies rather than on potential future growth when making investments (Block et al., 2019; Schickinger et al., 2021).

Administrative services mainly consist of legal and tax services, but also include financial administration, client reporting, technology solutions, as well as trust and partnership accounting (Rivo-López et al., 2017).

The management of personal affairs consists of the coordination of philanthropic activities, wealth transition, and the education of the next generation. SFOs can also facilitate new relationships between their clients, other wealthy families, and organizations (Liechtenstein et al., 2008; Rivo-López et al., 2017; Salvato et al., 2010). Table 3.1. illustrates the range of services that family offices provide for their clients.

Table 3.1. Three categories of family office services

Asset management	Administrative services	Management of personal affairs
• Wealth Preservation • Generation of steady income • Asset Allocation • Portfolio Management	• Legal and Tax • Financial Administration • Client Reporting • Trust and Partnership • Accounting • Property Management • It-Services • Information Aggregation	• Counseling Services • Family Meetings • Conflict Management • Philanthropy and Social Entrepreneurship • Concierge Services

Notes: Own illustration based on (Liechtenstein et al. 2008; Rivo-Lopez et al. 2017). This table displays the services that an SFO provides structured as asset management, administrative services and management of personal affairs.

3.2.3 Structures of family offices

The structure of a family office is determined by its client base and management (Decker & Lange, 2013; Rivo-López et al., 2017; Wessel et al., 2014). Accordingly, a family office with a private structure will exclusively serve a single family or multiple families that own the office. An open structure provides additional services to external families that have no ownership in the family office. The latter is a multi-family office whose services are often provided by banks and asset management companies. Thus, a SFO is characterized by its private structure and solely manages the owner's assets (Decker & Lange, 2013).

Regarding the management of a family office, the literature distinguishes between a family-dominant and non-family dominant management. The former includes at least one family member in the management of the SFO, while the latter does not. (Rivo-López et al., 2017; Wessel et al., 2014). Schickinger et al. (2021) and Welsh et al. (2013) state that the ownership structure of the family business has a significant impact on the governance structure of SFOs. Accordingly, families that still hold the initial family business prefer stronger and stricter governance mechanisms than those where the family business has already been sold. In the case of the latter, families look for complete flexibility within the SFO as they associate a stricter governance structure with a relatively rigid and bureaucratic type of an organization structure.

Apart from the SFO as one possible structure for family offices, Zellweger and Kammerlander (2015) distinguish between three other structures for family offices: (1) uncoordinated family; (2) embedded family office; (3) family trust. Their distinguishing criterion is the degree of separation between family owners and family assets.

Elliott (2010) lists three criteria to measure and determine the success of the different types of governance structures: "(1) the performance and service the family has received as clients; (2) the continued stability and ability of the family office to ensure the proper management and control of its wealth and family legacy; and (3) financial success." (p.14). The structure of a family office has a great impact on the investment activities of SFOs.

3.2.4 Investment behavior

Investment activities of SFOs can vary a lot given specific circumstances. These circumstances can be related to the governance and ownership structure and the current generation that is leading the family business.

Regarding the latter, Welsh et al. (2013) identify a difference between the investment activities of the founder generation and the later generation of family members. Their survey

reveals that the first generation of family members perceive the family office as more entrepreneurial than the later generation family members. They possess a higher comfort level with risk-taking or potential loss of capital than the later generation, who feel a strong responsibility not to lose their predecessors' wealth. Hence, they operate with a fear of losing wealth, and are consequently focused on protecting their wealth rather than expanding it through (risky) business activities.

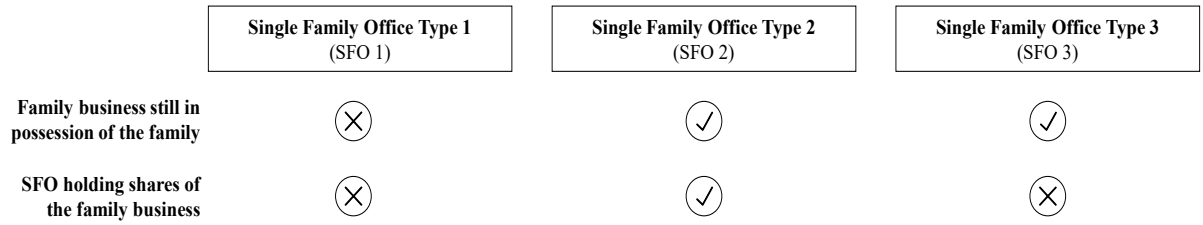
Besides the generation of family members, Schickinger et al. (2021) show that there are further factors that have an impact on the investment activities of family offices. The results of their explorative study indicate that the investment activities of family offices can differ based on the ownership structure of the initial family business. More precisely, asset preservation is the key financial goal for families who still own the initial family business. They are also relatively more risk-averse than those who have already sold their family firm. The latter are more adventurous regarding investment activities and are constantly striving to generate new income streams.

In general, family offices attribute greater importance to the current profitability of portfolio companies and less importance to their potential revenue growth. They are more concerned with preserving capital through investments in already profitable companies than potentially earning high returns through investments in companies with unsteady revenues (Block et al., 2019; Schickinger et al., 2022).

This chapter has outlined the key findings of prior studies (Block et al., 2019; Liechtenstein et al., 2008; Schickinger et al., 2022; Schickinger et al., 2021; Welsh et al., 2013) and lays the foundation for our empirical analysis.

Based on the findings from past studies and the descriptive statistics from our dataset, we determined that SFOs can be grouped into three categories. This categorization allows for more nuanced and differentiating analyses and motivated us to distinguish SFOs based on their legal structure and responsibility as well as whether the family still holds the initial family business (see Figure 3.1.). Therefore, we classified SFOs as group one (SFO 1) when the initial family business has already been sold and the SFO is only responsible for the management family wealth. SFOs classified as group two (SFO 2) are those where the family owns the SFO, whereby the SFO owns the family business and is responsible for both the management of the family business and family wealth. An SFO that belongs to category three (SFO 3) is a separate legal entity that is only responsible for the management of the family wealth whereby the family still holds and manages the family business.

Figure 3.1. Classification of single family offices



Notes: This figure shows the classification of SFOs based on the ownership structure of the family business. SFO Type 1: Family business was sold and the SFO is not holding any shares. SFO Type 2: SFO holds the initial family business as part of its portfolio. SFO Type 3: The SFO exists as a separate legal entity without any share in the initial family business.

In the current literature, there is a lack of quantitative studies dealing with the phenomenon of family offices. Our study aims to extend the SFO literature by examining the characteristics and investment behavior of SFOs using quantitative approaches.

3.3 Data, variables and method

3.3.1 Data collection

We started our search for German-speaking FOs by tracking newspaper and magazine articles related to family offices and set up "Google Alert" to get the latest news. Regarding magazines, our major source was the Private Banking Magazine[1], as it is particularly addressed to family offices. Additionally, we used social media channels such as LinkedIn and Xing to search for people employed at family offices, in order to obtain additional family offices. However, the search on social media was more challenging, as employees from SFOs are more likely to keep their employers' name secret. After the web and news search, we used the Preqin[2] database to retrieve more family offices. Since a lot of the identified family offices were already identified through our initial web and news search, we expanded our sample minorly. One challenge with Preqin was that it did not provide much information about the family offices besides the name, short history, and the origin. However, we were particularly interested in in the legal and governance structure of the family office. In addition, we expanded our search by Pitchbook[3], another database that provides information about family offices. Similarly to Preqin, Pitchbook only provided some background information about the family offices and thus, we were not able to determine whether the identified family offices were an SFO or MFO.

[1] The Private Banking Magazin is a German journal that reports on private banking, family offices and other institutional investors.
[2] Preqin is an online database that provides data focusing on alternative asset management.
[3] Pitchbook is an online database that provides data on private capital markets, venture capital, private equity, family offices and M&A transactions.

After the identification of a set of family offices, we classified those into two groups: SFOs and MFOs. Each individual family office was examined to determine whether it is a an SFO or MFO. First, we browsed through the homepage of the identified family offices. Second, we extracted data about the ownership structure from Amadeus database to ensure that the family office is an SFO. Amadeus is an online database that provides financial data about big companies located in Europe (see chapter 3.3 for a list of attributes obtained from Amadeus database).

To sum up, there is no central database for family offices that provides more than some basic background information about family offices. SFOs in particular tend to not release much information about their organization as well as activities. Consequently, the identification of family offices can become a real challenge. Even though the databases we used were able to provide initial insights into what an SFO might be, in some cases only the name of the family was mentioned. Hence, our data is hand collected. In total we identified 661 family offices in the DACH region. 151 family offices were identified through our initial web and news search, 90 were identified on Preqin, and 420 were provided by Pitchbook. 405 of those family offices were MFOs, which we did not consider in our study. We eliminated 40 SFOs, as we could not find any further information about their characteristics and activities. Hence, our final sample consists of 216 SFOs from the German-speaking area.

3.3.2 Sample of SFOs

In total, we identified 257 SFOs from the German-speaking area. We eliminated 41 SFOs, as we could not find any further information about their characteristics and activities. Hence, our final sample consists of 114 SFOs categorized as type one, 75 SFOs categorized as type two and 27 SFOs categorized as type three.

3.3.3 Variables

We extracted data for the direct investments of SFOs using Amadeus database. Hereby, we did not count investments made via an investment company, private equity fund, or venture capital fund as a direct investment. In turn, if a SFO held a stake in a listed company through shares, this counted as a direct investment as well.

From the Amadeus database, we extracted data for the following variables that describe the characteristics of the identified SFOs: year of foundation; origin; number of employees from 2010 – 2019; and family management or not.

In addition, we included variables that describe the asset classes in which the identified SFOs invest. We divided them into seven categories. (1) direct Investments in (1a)

established firms or (1b) start-ups, (2) real estate, (3) venture-capital-funds, (4) private-equity-funds, (5) investment firms, (6) land and forest, and (7) art.

In the next step we focused on direct investments which SFOs made in the past. We derived the following variables from the portfolio companies: firm age of the portfolio company; origin of the portfolio company; industry classification; and entry stake of the SFOs.

The portfolio companies were grouped into seven sectors: (1) manufacturing, (2) services, (3) retail, (4) healthcare, (5) it and software, (6) transportation and logistics, and (7) other. A detailed overview of all variables, including their definitions, is provided in Table 3.2.

Table 3.2. Variable definitions for SFOs in the DACH region

Variable	Description
SFO 1	The family sold the initial business and now has its own wealth management entity.
SFO 2	SFO holds the familybusiness in whole or in part.
SFO 3	In addition to the family business, there is an SFO as separate legal entity.
SFO Age	Age of the SFO entity in years. This variable was also used as passive variable in the cluster analysis and therefore divided into three groups: 1-10 years, 11-20 years, >20 years.
SFO Size	Number of employees within the SFO entity. This variable was also used as passive variable in the cluster analysis and therefore divided into three groups: 1-5; 6-10; >11.
Origin of SFOs	Geographic origin of the SFO entity. This dummy variable was also used as passive variable in the cluster analysis and was divided into three groups: Germany Austria, Switzerland.
Family Management	Dummy variable for whether an SFO's management includes a family member. This dummy variable was also used as passive variable in the cluster analysis.
Asset allocation	Dummy variables for each asset class. This dummy variable was also used as active variable in the cluster analysis and was divided into seven groups: Direct investments in established firms or Start-Ups, Real Estate, VC-Funds, PE-Funds, Investment Firm, Land & Forest and Art.
# of Firms in SFO-Portfolio	The number of portfolio companies held by an SFO.
Firm Age	Age of portfolio company in years.
Entry Stake	The percentage of shares that an SFO holds in a portfolio company.
Industry	Dummy variable for each industry: Manufacturing, Services, Retail, Healthcare, IT & Software, Transportation & Logistics, and Other Industries.
Origin of portfolio companies	Dummy variable for each region: DACH, Rest of Europe, Rest of World.

Notes: This table describes the variables used in the ANOVA and cluster analysis.

3.3.4 Methods

To identify differences in general characteristics and investment behaviors of our sample of SFOs, we used an ANOVA, indicating statistically significant differences across the SFO groups. In the next step, we executed a hierarchical cluster analysis to check for taxonomic heterogeneity in the investment activities of SFOs from the German-speaking area. For the cluster analysis, we categorized the identified variables into active and passive variables. We classified the seven asset classes mentioned above as active variables and used certain SFO characteristics as passive variables. Cluster analysis is a group of multivariate

methods with the determination to assort objects into groups based on specific variables (Moritz et al., 2016). We tested various hierarchical clustering methods, like single linkage, complete linkage, and Ward's method. Following Moritz et al. (2016) and Masiak et al. (2019) we applied Ward's method and squared Euclidean distance as a measure of proximity to execute the cluster analysis, as they allow homogeneous results.

3.4 Results

3.4.1 SFO characteristics

Our sample includes only SFOs from the German-speaking area (DACH region). In our sample, 80,6% of the SFOs originate from Germany, while Austrian SFOs are in the minority with 6%. However, when we consider only a subsample including only SFOs from group three, where the SFO is a separate legal entity besides the family business, there is a noticeable change in the distribution. While German SFOs still present the majority, the proportion of Austrian SFOs increases from 6% in the total sample to 14.8%, indicating that Austrians prefer to separate their family business and SFO activities by maintaining two separate legal entities. There is no significant difference regarding the firm sizes between German, Austrian, and Swiss SFOs.

In terms of the average age, the SFOs from our list are 22.25 years old, although this varies significantly among the different SFO groups. For instance, SFOs that still hold the family business (SFO 2) have an average age of 26.54 years, making them the oldest among the three groups. The youngest SFOs are categorized as group three where the SFO is a separate legal entity besides the family business (15.5 years).

On average, the firm size of our sample of SFOs varies between five and six employees without any significant differences among the three groups of SFOs.

Regarding the impact of families on the management of SFOs, our results show that 77.8% of the SFOs are family-dominant meaning that there is at least one family member in the top management of the SFO. This number increases to 88% when we only consider SFOs that still hold the family business. This is in line with results from prior research, according to which SFOs which still own the family business, are more family-dominant (Schickinger et al., 2021). A reasonable explanation for this may be that a family who still owns the family business is more emotionally attached to the SFO and thus wishes to have more control over the activities and decisions of the SFO. Table 3.3. presents descriptive statistics about the general characteristics of our sample of SFOs. The general characteristics consist of the average age of SFOs, their origin, structure, and asset allocation.

Table 3.3. Characteristics of different SFO groups

Variable	Full Sample SFOs (*N*=216)	SFOs 1 (*N*=114)	SFOs 2 (*N*=75)	SFOs 3 (*N*=27)	ANOVA p values
	M (*SD*)	***M*** (*SD*)	***M*** (*SD*)	***M*** (*SD*)	
Origin of SFOs					
Germany	80.6%	79.8%	82.7%	77.8%	0.826
Austria	6%	3.5%	6.7%	14.8%	0.081*
Switzerland	13.4%	16.7%	10.7%	7.4%	0.309
Characteristics of SFOs					
SFO Age (years)	22.2 (22.3)	21.1 (23)	26.5 (23.6)	15.5 (11.4)	0.069*
Firm Size (# of Employees)	6.5 (13.1)	6.8 (16.1)	6.5 (9.1)	5.3 (6.1)	0.8621
Family Management	77.8%	73.7%	88%	66.7%	0.022**
Asset allocation[+]					
Direct Investments	79.2%	77.2%	81.3%	81.5%	0.754
in Established Firms	91.7%	88.6%	98.4%	81.8%	0.008***
in Start-Ups	37.4%	43.2%	24.6%	50.0%	0.019**
Real Estate	69%	74.6%	61.3%	66.7%	0.152
VC-Fund	20.4%	21.1%	16.0%	29.6%	0.313
PE-Fund	12.5%	17.5%	6.7%	7.41%	0.060*
Investment Firm	8.8%	7.9%	10.7%	7.4%	0.778
Land & Forest	5.1%	4.4%	6.7%	3.7%	0.739
Art	4.2%	4.4%	4%	3.7%	0.983
# of Firms in a SFO-Portfolio	5.6 (4.3)	5.7 (3.9)	4.9 (4)	6.9 (6.1)	0.162
# of Established Firms	4.8 (3.9)	4.8 (3.3)	4.4 (3.7)	5.9 (6.6)	0.354
# of Start-Ups	3.3 (2.7)	3.4 (3)	2.3 (1.9)	4.1 (2.6)	0.209

Notes: This table reports the descriptive statistics for the full sample and for different groups of SFOs separately. SFO1: The family firm was sold and now has its own wealth management. SFO2: SFO holds the familybusiness in whole or in part. SFO3: SFO is a separate legal entity besides the family business. The descriptive statistics refer to SFOs' origins, characteristics, asset allocation, and direct investments in established firms and start-ups. The final column outlines the significance level obtained from ANOVA, indicating statistical differences across groups. [+] The number of SFOs can vary here as multiple selections are possible. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

3.4.2 Asset allocation

Prior studies revealed that the investment activities of SFOs predominantly focus on direct investments and real estate (Block et al., 2019; Liechtenstein et al., 2008). Our results confirm these findings. In general, 79.2% of our sample of SFOs make direct investments, while 69% invest in real estate. Direct investment activities are separated into investments in established firms and start-ups, whereby the former dominates the portfolio. Precisely, 91,7% of our sample of SFOs invest in established firms, while only 37,4% invest in start-ups. With regard to differences among the three SFO groups, our results reveal that especially SFOs that still hold the family business invest significantly more in established firms (98,4%), while they tend to invest less in start-ups (24,6%). Another notable finding is that 50% of the SFOs that exist as a separate legal entity besides the family business invest in start-ups,

which is significantly higher than those classified as group one or two. On average, the SFOs from our sample invest in 4.8 established firms and 3.3 start-ups.

In addition, when comparing the three different groups of SFOs, our results reveal a notable difference regarding real estate investment activities. 74.6% of the SFOs, where the family has already sold the family business, invest in real estate, while only 66.7% of the SFOs of group three and 61.3% of the SFOs classified as group two invest in real estate.

Furthermore, we see that all SFOs from the three groups predominantly invest directly in established companies or start-ups. VC-Funds or PE-Funds, in turn, are less represented in their portfolios; however, we find that SFOs where the family business was sold are, on average, more invested in PE-Funds than SFOs of the other two groups (see Table 3.3).

3.4.3 Investment patterns

The average age of established firms in which the SFOs in our sample invest is 25.7 years. Comparing the three SFO groups to each other, our results show that SFOs that exist as a separate legal entity without any share in the initial family business prefer younger firms, with an average age of 18.3 years, while SFOs which still hold the initial family business prefer older firms (avg. age 30.6 years). A reasonable explanation for why the SFOs of group two prefer older firms is that those SFOs are also older, indicating that they may be led by the older generation, who may be more cautious and conservative when making investment decisions. There is no noticeable difference in the average age of the start-ups in which the three groups of SFOs invest. On average, these start-ups are approximately six years old.

By comparing the entry stakes of SFOs when investing in established firms and start-ups, our results emphasize that investments in established firms are strongly preferred over investments in start-ups. Accordingly, the entry stake of SFOs when investing in established firms is 57.4% on average, while it is 15.9% on average for investments in start-ups. There is no significant difference among the different groups of SFOs.

In addition, the SFOs from our sample focus on firms from the DACH region when they make direct investments. More precisely, 90% of the investment portfolio includes firms from the DACH region, 7% from rest of Europe, and 3% of the investments include firms from outside of Europe. SFOs that still hold the initial family business are less focused on firms from the DACH region (87.2%), while SFOs which exist as a separate legal entities without any share in the initial family business heavily focus on firms from the DACH region when making direct investments (94.8%). Such a significant difference is also noticeable for investments in firms from outside of Europe. SFOs, where the family business was already

sold, have a stronger focus on firms from outside of Europe (4.6%) in comparison to those classified as group two and three (1.6% and 0.7%).

Categorizing the direct investments into industries, the results indicate that SFOs from our sample clearly prefer investments in the manufacturing and service industries. 28.6% and 26.1% of the investment portfolio consist of firms from the two industries mentioned above. Other popular industries are retail (16.4%) and IT and Software (13.5%). There are noticeable differences among the different groups of SFOs. 21.1% of the investment portfolio of SFOs that still hold the initial family business consists of firms from the retail industry, which is significantly higher than SFOs from group one and three (14.1% and 15%). Furthermore, our findings show that in comparison to SFOs where the family business was already sold and to those that exist as a separate legal entity (16.3% and 13.7%), SFOs where the family still holds the family business seem to have a lower focus on firms from the IT and software industry (8.7%).

Furthermore, SFOs that still hold the family business invest significantly less in the healthcare industry (1.3% of the portfolio) than those classified as group one and three (9.9% and 12.4%). Table 3.4. presents statistics about the investment behavior of our sample of SFOs.

Table 3.4. Characteristics of direct investments

Variable	Full Sample SFOs		SFOs 1		SFOs 2		SFOs 3		ANOVA p values
	N	*M* (*SD*)	*N*	*M* (*SD*)	*N*	*M* (*SD*)	*N*	*M* (*SD*)	
Firm Age established (years)	669	25.7 (25.1)	331	24.3 (25.1)	241	30.6 (29.3)	97	18.3 (18.2)	0.000***
Firm Age Start-Ups (years)	203	6.2 (2.9)	126	6.3 (3.1)	32	5.7 (2.4)	45	5.9 (2.1)	0.452
Entry Stake Established Firms	356	57.4% (35.1)	197	56.2% (36)	102	57.3% (34.5)	57	61.8% (32.8)	0.572
Entry Stake Start-Ups	154	15.9% (22.2)	97	16.5% (22.4)	23	19.1% (26.4)	34	12.2% (18.5)	0.479
Industries	955		503		299		153		
Manufacturing		28.6%		27.6%		30.8%		26.8%	0.561
Services		26.1%		24.9%		26.1%		30.1%	0.438
Retail		16.4%		14.1%		21.1%		15%	0.032**
Healthcare		7.6%		9.9%		1.3%		12.4%	0.000***
IT & Software		13.5%		16.3%		8.7%		13.7%	0.009***
Transportation & Logistics		2.7%		1.4%		6%		0.7%	0.000***
Other Industries		5.1%		5.8%		6%		1.3%	0.064*
Region of Direct Investments	955		503		299		153		
DACH		90%		87.2%		92%		94.8%	0.009***
Rest of Europe		7%		8.2%		6.4%		4.5%	0.274
Rest of World		3%		4.6%		1.6%		0.7%	0.011**

Notes: This table reports the descriptive statistics of SFOs' direct investments for the full sample and for different groups of SFOs separately. SFO1: The family firm was sold and now has its own wealth management. SFO2: SFO holds the family business in whole or in part. SFO3: SFO is a separate legal entity besides the family business. The descriptive statistics refer to the firm age, entry stakes, regions, and industries of the portfolio companies. The final column outlines the significance level obtained from the ANOVA, indicating statistical differences across groups. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

3.4.4 Results of cluster analysis on asset allocation

To classify SFOs with similar investment patterns, we conducted a hierarchical cluster analysis using the different asset classes as active cluster variables. Our final sample for the cluster analysis consists of 216 SFOs. We find three different investment pattern clusters, which are statistically significant from each other concerning investing in different asset classes. These results are displayed in Table 3.5.

Table 3.5. Active cluster analyses

	Clusters			
Asset Classes	**A** **All Assets**	**B** **Established Firms & Real Estate**	**C** **Real Estate**	**Pearson Chi²**
Direct Investments in Established Firms	75.2%	100%	0%	115.8***
Direct Investments in Start-Ups	58.7%	0%	0%	89.3***
Real Estate	66.9%	60.3%	100%	18.3***
PE-Fund	26.6%	0%	0%	32.9***
VC-Fund	40.4%	0%	0%	54.2***
Investment Firm	18.3%	0%	0%	21.6***
Land & Forest	10.1%	0%	0%	11.3***
Art	8.3%	0%	0%	9.2***
N	109	73	34	
Percentage of firms	50.5%	33.8%	15.7%	

Notes: This table reports the results of the hierarchical cluster analyses utilizing the different asset classes as active cluster variables. It displays the percentage share of each cluster in the various asset classes. Cluster A represents SFOs that invest in all asset classes. Cluster B shows SFOs that invest in established firms and real estate. Cluster C describes SFOs that invest only in real estate. Pearson's chi-square test, indicating statistical differences across clusters. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Cluster A (SFOs invest in all asset classes): SFOs in this cluster have a diversified asset allocation. It is the largest cluster with 109 SFOs (50.5%). Many SFOs in this group (75.2%) directly invest in established firms. Furthermore, real estate is the second preferred asset class with (66.9%). Moreover, we can see that the SFOs in this cluster prefer to invest (58,7%) directly in start-ups. In addition, the SFOs in this cluster tend to invest more in VC-Funds (40.4%) than in PE-Funds (26.6%) or via investment firms (18.3%). Moreover, they invest in the asset class land and forest (10.1%) and art (8.3%).

Cluster B (SFO-Established Firms & Real Estate): The SFOs in this cluster are characterized by investing in two asset classes only. It is the second largest cluster with 73 SFOs (33.8%). All SFOs in this cluster make direct investments in established firms (100%). The second and last asset class in which they invest is real estate (60.3%).

Cluster 3 (SFO-Real Estate): This cluster constitutes the smallest group in our sample: 34 SFOs or 15.7% of our sample. SFOs in this cluster only invest in real estate (100%).

Additionally, we conducted a cluster analysis including passive variables, such as firm size, age, governance structure, and origin. Since the results were statistically insignificant, we did not consider them any further. Regarding the presence and distribution of our initial SFO groups (based on governance and legal structure) within the three clusters, we do not find statistical significance of over- or underrepresentation of specific SFO groups within any of the clusters resulted from the hierarchical cluster analysis. In other words, the distribution of the SFO groups is balanced across all three clusters (see appendix A.1. and A.2.).

3.5 Discussion

3.5.1 Main findings

Our results confirm that family offices are generally family-dominant with regard to their management structure. The lower presence of family members in the top management of the SFOs from group three (i.e., where the SFO and the family business are two separate legal entities) indicates that family members have less impact on the business activities of SFOs due to the existence of more professional and strict governance structures. It also makes sense that SFOs from group two (i.e., where the family still owns the family business) are more family-dominant than those from the other groups. This is in line with Schickinger et al. (2021), who argue that family control is essential to families that still own their family business.

In line with further research (Liechtenstein et al., 2008), our results show that SFOs are in general risk-averse and more conservative in their investment activities. This behavior results in a heavy focus on direct investments and real estate. This risk-averse investment behavior is also confirmed when comparing the investments in established firms and start-ups. SFOs clearly favor established firms, as start-ups tend to be more of risky investment activity. A reasonable explanation why established firms are preferred over start-ups is provided by Block et al. (2019) who argue that family offices attribute greater importance to the current profitability of their portfolio companies but less importance to the potential revenue growth.

We also found out that SFOs that still hold the initial family business are relatively more risk- averse. This is in line with Schickinger et al. (2021), who argue that risky investment activities are particularly important to SFOs that already sold the initial family business. The latter are constantly seeking to generate new sources of income, while SFOs that still hold the initial family business consider asset preservation as a "daily" investment activity.

Block et al. (2019) and Welsh et al. (2013) argued that the higher risk-aversion is due to current members of SFOs feeling a stronger responsibility not to lose the wealth that their predecessors created. Thus, they are more likely to focus on protecting their wealth rather than expanding it through risky investments. In line with these thoughts, we found that SFOs that exist as a separate legal entity invest significantly more in start-ups than other. Assuming that the initial family business primarily covers wealth protection, an SFO existing as a

separate legal entity might aim at more risky investments without jeopardizing the family heritage.

Our results also show that SFOs from the German-speaking area follow a more conservative investment strategy when it comes to investment regions. Almost 90% of the investments consist of firms from the German-speaking area. This makes sense considering that SFOs from the German-speaking area will likely have more information about local/regional firms and might thus invest in firms they trust and know well.

The firm size of a typical SFO is relatively tiny compared to other investment companies. The reason may be that despite being a separate legal entity, SFOs only concentrate on the interests of one family. Additionally, families prefer to only work with people they know very well and trust a lot, which may impede the availability of candidates who fulfill the criteria. Also, considering that the managed wealth is smaller than that managed by other investment companies, SFOs may not need many employees.

With the cluster analysis, we identified subgroups of SFOs that focus on different asset classes. A group of SFOs that diversifies into all asset classes, a group that only invests in established companies and real estate, and those investing only in real estate. However, the passive cluster variables show that the characteristics are not significantly attributable to specific clusters, as they all seem to be equally distributed. Thus, we can infer that SFOs show a heterogeneity based on their asset allocation. However, this difference does not transfer to statistically significant distinctions in terms of firm size, governance structure or age between the groups.

3.5.2 Limitations and future research

As one of the few studies that investigate SFOs our study has some limitations. First, there is not a single platform that provides information on the investment activities of SFOs. Therefore, our sample consists of data collected from various sources. In this context, collection of data proved to be a challenge because information about SFOs were hardly accessible. As a result of not having one comprehensive database, many of the identified SFOs had to be filtered out of our sample as there was no data on specific characteristics available. For instance, we couldn’t access information about investment activities and the governance structure. Most SFOs are from Germany and in general our sample consists of SFOs from the DACH region. Thus, our findings might not apply to SFOs from other regions. In addition, research on SFOs is relatively young and characterized by lack of quantitative studies. This leads to a lack of empirical results that

could be used to strengthen our main findings and draw conclusions. Despite this lack of quantitative studies, we believe that the relevance of research on SFOs will continue to increase due to the increasing popularity of SFOs and the growing number of families preferring SFOs to manage their wealth.

Future research could complement and extend the present study in different ways. First, our study already revealed some interesting differences among the different SFO groups when investing in specific industries. Thus, we propose that future research should investigate the potential reasons why certain groups of SFOs prefer to invest relatively more in a specific industry than other SFOs do. Second, we only considered the question whether a SFO invested in a specific industry or not; the capital structure and performance of their portfolio companies, however, are not included as further metrics in our study. Hence, we propose to consider these metrics in future research. Third, out data revealed that the vast of majority of SFOs from the German-speaking area prefer to invest in local companies, which they may know very well. A relatively higher degree of risk aversion was mentioned as a possible reason for such investment behavior. However, it may be interesting to analyze whether SFOs from other regions, such as the US and Asia, show similar investment patterns. Fourth, in line with previous research our study shows that SFOs exhibit a family-dominant governance structure. Less is known about the impact of SFOs and family members on the portfolio companies. Therefore, future research should analyze the active role that SFOs take in their portfolio companies as well as their degree of influence.

3.6 Conclusion and Implications

The current literature reveals three main factors that characterize a family office: (1) governance structure; (2) ownership structure, and (3) client base. The present study adds to the existing body of literature by providing a perspective on how to categorize SFOs and identify investment patterns based on their legal structure and responsibility as well as the ownership structure of the initial family business. Scholars have concluded that these factors shape a family office and significantly affect their respective investment activities and behaviors. Our results confirm this notion and deliver valuable insights into how the respective groups of SFOs differ in their investment behavior. We find significant differences regarding investment activities among the three groups of SFOs which we identified. Previous research revealed that family offices are significantly more conservative than other private equity investors. Our findings can confirm this notion as

well. The identified SFOs prefer to invest in real estate and regional established firms. Moreover, they are more focused on current profitability than on potential future growth, which is a potential reason why the analyzed SFOs invested relatively little in younger firms and start-ups. However, our results also imply that the level of risk-aversion may differ based on whether the SFO is a separate legal entity or not and whether the family still owns the family business or not. This new perspective is supposed to provide fruitful ground for both scholars and practitioners.

Chapter 4

SFOs as firm owners: Performance investigations

SFOs have become an important vehicle for transgenerational wealth management. They address succession issues in family-owned firms, act as an investment vehicle for the business-owning family, and provide administrative services. Yet, we know little about the role of SFOs as firm owners, particularly how they influence the performance of the firms they own. Our study addresses this research gap and investigates the performance of SFO-owned firms. Taking an agency theory and monitoring perspective as theoretical lens, we postulate that SFO-owned firms underperform family-owned firms. We further postulate that this underperformance is mitigated when members of the owner family are involved in the management or supervisory board of the SFO-owned firm and when the SFO-owned firm is stock market listed. Our results partially support our hypotheses and show that SFO-owned firms indeed exhibit a weaker financial performance than family-owned firms. This effect is reduced when a member of the family is directly involved in the management or supervisory board on the SFO-owned firm. No statistically significant performance differences were found between private and listed SFO-owned firms. Our study contributes to the corporate governance and family business literature on the performance effects of firm owners and blockholders. It also extends the small but growing literature on family offices. Practical implications exist for business owning families seeking to set up a family office as a vehicle for succession and transgenerational wealth management.

This chapter is based on

Block, J., Eroglu, O., Betzer, A., Bazhutov, D. (2023). SFOs as firm owners: Performance investigations. *Working Paper.*

4.1 Introduction

The number of SFOs has increased strongly in the last years as the number of ultra-high-net-worth individuals is growing (Wealth-X, 2019) and business-owning families increasingly use SFOs as a vehicle to bundle and manage their wealth (Bierl et al., 2018). An SFO is an administrative body that deals with the governance and management of the affairs and wealth of a single family (Zellweger & Kammerlander, 2015). An important reason for founding a SFO is transgenerational wealth management after selling a family firm to mitigate the potential conflicts among the generations (Liechtenstein et al., 2008; Rivo-López et al., 2017; Schickinger et al., 2021). A SFO acts as an investment vehicle for the respective family and often makes direct investments in firms taking a majority stake (Bierl et al., 2018). However, we know little about SFOs as owners of firms. In particular, we know little how they impact the performance of the firms they own. This is an important gap in the family business and corporate governance literature. A large literature exists that has investigated the performance effects of different types of blockholders such as private equity (Achleitner et al., 2011), venture capital (Rosenbusch et al., 2013), hedge funds (Brav et al., 2008), founding families (Andres, 2008; Miller et al., 2007), the government (Sun et al., 2002) and foundations (Achleitner et al., 2020; Block et al., 2020; Herrmann & Franke, 2002). The performance effects of SFOs have been overlooked so far, which is an important shortcoming because of the growing importance of SFOs as succession vehicles for business-owning families. Our study's two research questions are as follows: How does ownership by SFOs impact the financial performance of firms? To what extent does family involvement in management or supervisory boards and stock market listing mitigate this relationship?

Our study analyses these questions and compares the financial performance of SFO-owned firms against the performance of a carefully matched sample of firms with direct family ownership (hereafter: family-owned firms). Taking an agency and monitoring perspective as our theoretical lens (Jensen & Meckling, 1976), we argue that SFOs often lack the knowledge and experience of effectively monitoring the management of their portfolio firms creating agency costs and leading to weaker financial performance as compared to family-owned firms. Such monitoring deficits and agency costs are reduced when SFOs have implemented effective monitoring mechanisms. Accordingly, we hypothesize that the negative relationship between SFOs as owners and the financial performance of SFO-owned firms is reduced when the family as ultimate owners and residual claimant is involved in the management or supervisory board of the SFO-owned firm. A similar argument exists for

stock market listing and the coverage by financial analysts, which has been shown in prior research to compensate for monitoring deficits of blockholders.

Our empirical analysis is based on a sample of 173 SFO-owned and 684 family-owned firms from the DACH region. In line with our theoretical predictions, our results show that SFO-owned firms have a weaker financial performance than family-owned firms. This underperformance is reduced when a family member associated with the family behind the family office is directly involved in the SFO-owned firm as a member of the management or supervisory board. Stock market listing, however, does not reduce the underperformance of SFO-owned firms against family-owned firms.

With these results, we contribute to two literature streams. First, we contribute to the small but growing literature on family offices (Kenyon-Rouvinez & Park, 2020; Liechtenstein et al., 2008; Wessel et al., 2014; Zellweger & Kammerlander, 2015). So far, this literature has mostly focused on the characteristics and investment patterns of SFOs. Our study is the first one to investigate the role of family offices as firm owners by investigating the impact of SFOs on the performance of their portfolio firms. This way, our study also contributes to the broader corporate governance on the performance effects of different types of blockholders (Achleitner et al., 2011; Andres, 2008; Block et al., 2020; Boehmer, 2000; Brav et al., 2008; Renneboog et al., 2007), which has neglected the owner category of family offices so far.

Second, we contribute to the literature on family management (Miller et al., 2013; Wagner et al., 2015), particularly its performance implications (Anderson & Reeb, 2003; Lee, 2006; Maury, 2006). So far, family management has been associated with mixed (Miller & Le Breton-Miller, 2006) or even negative (Block et al., 2011; Miller et al., 2007; Villalonga & Amit, 2006) performance effects. The results of our study show that this result may not be true when the family is no longer directly owning the firm but through an intermediary such as a family office. We find a positive moderating effect of family involvement in the firm's management and supervisory board mitigating the negative performance effect of SFOs. The family involvement seems to compensate for the lack of motivation and/or skills of the family office to monitor the management of their portfolio firms. Members of the owner family may fill an important void as family offices may lack the knowledge and (industry) expertise to monitor the management of their owned firms effectively. In turn, the family offices will only involve those family members in the firm that have profound expertise and can bring a value added to the firm. A positive selection towards motivated and competent members of the owner family is likely. This result is in line with recent findings on the

positive performance implications of family management in foundation-owned firms (Block et al., 2020; Fleschutz, 2008)

From a practical perspective, our study helps business-owning families in their decision to evaluate the trade-offs that exist with family offices as a succession option. SFOs may have the advantage that the family and its inner family tensions and conflicts do not spill over to the firm. Our study, however, shows a clear disadvantage. SFOs seem to lack the knowledge to effectively monitor the management of their portfolio firms, which harms its financial performance.

The remainder of this study is structured as follows. In the following chapter, we provide background information on SFOs. Chapter three uses agency theory and the associated monitoring literature to derive hypotheses about the effects of SFOs on the financial performance of SFO-owned versus family-owned firms. In the subsequent chapters, we present our data and method followed by our empirical investigations. Our final chapter discusses our findings from a theoretical and practical perspective, presents limitations, and derives implications for future research.

4.2 Background on SFOs

4.2.1 Origin, growth and definition of SFOs

SFOs have been founded by ultra-high-net-worth individuals with the goal to provide transgenerational investment and advisory services for entrepreneurial families. In 2019, there were over 7,300 SFOs worldwide controlling at least $ 5.9 trillion in assets (Beech, 2019). The number of SFOs is expected to increase even further along with the rising number of ultra-high-net-worth individuals. Moreover a growing number of business-owning families consider SFOs as an investment vehicle (Rosplock & Hauser, 2014; Zellweger & Kammerlander, 2015). It is worth noting that the concept of SFOs was not explored by entrepreneurial families in German-speaking nations until the latter half of the 20th century, with only 25 known to exist in the region by 1985. However, the number of SFOs has since increased significantly, with estimates placing their total count in Germany alone at around 350 to 450. Notably, 70% of these SFOs were established after the turn of the millennium, reflecting a growing fascination among entrepreneurial families in creating SFOs as an investment vehicle. Business-owning families frequently transfer and pool their assets in an SFO after selling the family business or in the event of significant excess cash (Bierl et al., 2018; Jandt et al., 2021). While SFOs provide their services only to a single family, a multi-family office is a firm that provides financial and advisory services to multiple families who

may not necessarily have any shares in the office. Multi-family office services are typically provided by banks and asset management companies (Decker & Lange, 2013). The concept of a family office has been a subject of debate in academic circles, with varying definitions being proposed. Wessel et al. (2014) offer a definition that includes several key elements. Firstly, a family office typically involves an investment advisory service that may be structured in a variety of ways. Secondly, it serves a wealthy family or individual who seeks both financial and non-financial services. Finally, the primary objective of a family office is to manage and grow the wealth of the family or individual in question. The unique focus on serving the needs of a specific wealthy family or individual, as outlined in the third component mentioned above, has been identified as a key characteristic that distinguishes a family office from other types of investment advisory services. This characteristic has made it difficult to establish a clear and precise definition of the concept in academic literature (Decker & Lange, 2013; Kenyon-Rouvinez & Park, 2020; Liechtenstein et al., 2008; Rivo-López et al., 2017; Schickinger et al., 2021; Wessel et al., 2014; Zellweger & Kammerlander, 2015). In our research, we primarily adopt the definition of a family office offered by Zellweger and Kammerlander (2015), who define it as "a separate legal entity placed between the family and its assets that is solely devoted to the management of the affairs of a single family" (p. 1290).

4.2.2 Services offered by SFOs

An SFO offers tailored financial and non-financial related services to a family over generations. In terms of financial services, SFOs typically assist families in allocating their assets across a variety of asset classes, such as stocks, bonds, real estate, and direct investments (Decker & Lange, 2013; Liechtenstein et al., 2008). This process involves analyzing families' financial goals, risk tolerance, and investment horizon in order to create a customized portfolio that is well-suited to their needs. SFOs also focus on generating steady income and preserving wealth for their families, helping them to achieve long-term financial stability (Schickinger et al., 2021). In addition to portfolio management, SFOs also provide families with regular reports on the performance of their investments, enabling them to make informed decisions about their portfolio. These reports include performance data, updates on market conditions, and other relevant information. SFOs also assist clients with tax planning and compliance, ensuring that they remain in compliance with all relevant laws and regulations (Rivo-López et al., 2017; Wessel et al., 2014). Besides financial services, SFOs also offer a wide range of non-financial services to families over multiple generations. These

non-financial services are designed to help families manage their personal affairs and coordinate philanthropic activities, wealth transition, and the education of future generations. In addition to these services, SFOs can also act as financial intermediaries, fostering relationships among other wealthy families, and organizations (Rivo-López et al., 2017). Furthermore, an SFO can also offer advice on educational issues and provide concierge services to help clients with everyday tasks, such as booking travel or organizing events. Overall, SFOs provide families with a comprehensive range of financial and non-financial services that are designed to help them achieve their long-term financial goals and preserve their wealth for future generations (Liechtenstein et al., 2008).

4.2.3 SFOs as wealth managers and investors

The motivation for the establishment and growth of SFOs lies in the desire for consolidated family wealth management to ensure transgenerational wealth. Ideally, SFOs should serve to prepare future generations and sustain wealth. This is important as the ambitions and motivations of each generation of inheritors may vary. For instance, Welsh et al. (2013) show that the successor generation is more risk-averse than the founder generation. Schickinger et al. (2021) also indicate that SFOs in the first generation have a lesser focus on asset preservation and a greater focus on entrepreneurial activities than those in the subsequent generations. In addition, family offices are usually more experienced in leading and managing start-ups or small and medium sized enterprises (SMEs) than business angels, venture capital funds, growth equity funds and leveraged buyout funds. This is due to family offices being founded by entrepreneurial families who have decades of experience in founding and scaling SMEs (Block et al., 2019). In addition, the decision-making committee is supported by external experts with many years of experience in wealth management. Despite this, their higher risk aversion makes them prioritize investments in profitable companies rather than those that are scalable. They also have a relatively more diversified portfolio that contains a wide variety of asset classes to reduce risks. An explanatory reason for the higher degree of risk aversion is that the later generations feel a strong responsibility not to lose the wealth created by their predecessors. Consequently, they operate with a fear of losing their wealth, which leads to a more conservative entrepreneurial behavior, as the focus is on protecting the wealth rather than expanding it through (risky) entrepreneurial activities (Welsh et al., 2013).

4.2.4 SFOs as owners of firms

The capital SFOs should be judiciously managed in a manner that ensure optimal returns. One effective strategy for achieving this is through entrepreneurial direct investments, where SFOs acquire significant stakes in target firms and actively engage with them to share their entrepreneurial knowledge and expertise, as well as participate in strategic and operational decision-making (Bierl et al., 2018; Hagan, 2021). In addition to generating financial returns, this approach allows the transfer of business acumen to the next generation of family members. Furthermore, SFOs seek to differentiate themselves from private equity firms with regards to their investment goals. While private equity firms have faced criticism for imposing heavy debts on target companies and engaging in layoffs, SFOs draw on their own entrepreneurial backgrounds and pursue a long-term investment approach, aiming to preserve and enhance the value of their portfolio companies over time (Bierl et al., 2018).

4.3 Theory and hypotheses

4.3.1 Agency theory and monitoring of blockholders

As a theoretical lens for investigating the performance effects of SFOs as blockholders, we draw on arguments from agency theory (Jensen & Meckling, 1976). The separation of ownership and management creates agency costs. The firm owner (in our case: the SFO) hires an agent (the management of the SFO-owned firm) but this (agency) relationship is associated with agency problems. The manager may have an information advantage over the owner (information asymmetry) and the manager may not behave in the interest of the owner (moral hazard). To align interests and reduce agency costs, owners may incentivize the management to act in their interests and may engage in monitoring. Prior research argues that blockholders as owners may be particularly effective as monitors. Unlike small shareholders, they have both the power but also the motivation to enforce in effective monitoring. The convergence-of-interest hypothesis (Miguel et al., 2004; Morck et al., 1988) states that blockholder ownership of a firm has a positive impact on its financial performance. Such positive effects of blockholder ownership have been shown to exist for private equity firms as blockholders (Renneboog et al., 2007), family ownership (Andres, 2008) but also for hedge funds (Brav et al., 2008). Yet, blockholders may also create own agency costs. Morck et al. (1988) and others suggest that blockholders may also use their information advantage and strong power and position in the firm leading to so-called principal-principal agency conflicts. So far, we know little about the agency costs and monitoring capabilities associated with SFOs as blockholders. We compare SFOs as blockholders with families as blockholders

and argue that the two types of blockholders differ in their monitoring capabilities, which shall then lead to differences in agency costs and can explain performance differences.

4.3.2 Monitoring capabilities of SFOs and families as blockholders and effects on firm performance

Research suggests that effective monitoring of managers by firm owners requires an emotional bond with the firm and great knowledge about the market, in which the firm is active. SFOs as blockholders differ from families as blockholders in several important aspects. First, the SFO as a blockholder has a lower emotional connection to the firm which they own. The identity overlap between the family and the firm is reduced as the family is no longer directly involved as owner in the firm and has delegated the supervision of the firm's management to professionals operating the family office. Comparatively, founder families as owners have a strong attachment and bond with the firm and thus have a greater incentive to monitor the business closely, as they have invested a great deal of their fortune and future in the firm and consider it as the main financial support of the current and future generations (Anderson & Reeb, 2003; James, 1999; Miller et al., 2008). They have higher intrinsic motivation, as a successful business means protecting the family's financial as well as socioemotional wealth (Schickinger et al., 2021; Strike et al., 2015). Actions resulting from strong intrinsic motivation can have a positive influence on employees and stakeholders, making founder families a valuable presence within the firm (Davis et al., 2010; Miller & Le Breton-Miller, 2006). Furthermore, it is important to consider the potential impact that a firm's subpar performance may have on the family. Such poor performance can tarnish the family's reputation and elicit negative reactions from other family members, potentially harming the family's unity and cohesion (Arregle et al., 2007). Second, SFOs lack of knowledge and expertise about the industry in which their new portfolio company competes. Even though they possess professional and experienced personnel, it is quite a significant difference when comparing the level of expertise to that of founder families, who have literally founded the company from scratch and led it successfully over decades. The latter possess greater knowledge about competitors and the market due to their long attachment with the firm (Miller & Le Breton-Miller, 2005). A strong family bond enables the transfer of knowledge and expertise between generations, helping to preserve these valuable assets within the family over time (Jaskiewicz et al., 2013). In conclusion, SFOs are faced with lack of bond and intrinsic motivation as well as expertise about the market, which can have a negative impact on firm performance.

Therefore, we formulate the following hypothesis:

Hypothesis 1: *SFO-owned firms exhibit a lower financial performance than family-owned firms.*

4.3.3 Moderating factors

4.3.3.1 Representation of the owner family in the supervisory board of the SFO-owned firm

Research shows that agency relationships can cause information asymmetry that may significantly harm firm performance (Jensen & Meckling, 1976). Owners can mitigate this issue by implementing stringent monitoring. Representation on the supervisory board is one vehicle that allows family members associated with the family behind the family office to have more control over the SFO-owned firm (Anderson & Reeb, 2003). Furthermore, the primary responsibility of a supervisory board is to elect the board members and to evaluate and monitor their decisions. Moreover, Audretsch et al. (2013) also show that monitoring is a better predictor of financial performance than firm ownership and management. Similarly, having an independent board may not always be more effective for the financial performance of firms (García-Ramos et al., 2017). Thus, without board representation, the financial performance of family-owned firms may not be distinguishable from that of other types of firms (Andres, 2008). Studies also show that a higher degree of family monitoring and stewardship (percentage of family members on the supervisory board) is associated with a better financial performance (Andres, 2008; Audretsch et al., 2013). Hence, having members of the owner family on the board of SFO-owned firms may help mitigating some of the agency problems posed by SFOs as it increases the insight into information and enables better monitoring.

Hence, we formulate the following hypothesis:

Hypothesis 2a: *The negative performance effect associated with SFO-ownership reduces when a member of the owner family is part of the supervisory board of the SFO-owned firms.*

4.3.3.2 Representation of the owner family in the management board of the SFO-owned firm

Information asymmetry is not the only issue that may occur with regards to agency relationships. Furthermore, potential conflicts of interest may cause moral hazard by the management that pursues its own goals. SFOs can mitigate these potential issues by taking actions that ensure the alignment of interests between the manager and owner (Jensen & Meckling, 1976). Accordingly, prior studies have shown that families significantly influence

the organization's business strategy or strategic fit, which, in turn, affects the financial performance of their owned firms (Lindow et al., 2010). For instance, a higher degree of family influence is associated with a higher degree of centralized governance in the firm. Family monitoring and control also improve the relationship between family ownership and financial performance. Thus, SFOs can draw from these insights and must implement active monitoring measures to ensure that the family is close to the business operations, in order to reduce information asymetry (Cheng et al., 2012). This can, for instance, be achieved by having a family member as the CEO or by having multiple members of the owner family in the top management team for a broader stewardship of the SFO-owned firms (Miller & Le Breton-Miller, 2006). This argument is further supported by research showing that having a CEO from the family leads to better financial performance (Anderson & Reeb, 2003; Chu, 2009; Tosi & Gomez-Mejia, 1994). Furthermore, the presence of the SFO's family may also lead to strong image effects, which could provide incentives for other executives to improve the financial performance of the firm (Anderson et al., 2002).

In sum, SFOs can decrease agency costs and the likelihood of information asymmetry as well as moral hazard, when the interests of the owner family is aligned with those of the management of SFO-owned firms. Having a family member associated with the family behind the family office is on the management board of an SFO-owned firm does not only ensure that the family is close to business operations, but also allows them to influence the firm’s strategy and operation as well as to directly monitor and incentivize other executives, which can improve the overall firm performance.

Therefore, we suggest the following hypothesis:

Hypothesis 2b: *The negative performance effect associated with SFO-ownership reduces when a member of the owner family is part of the management board of the SFO-owned firm.*

4.3.3.3 Stock market listing

The same agency issues mentioned in previous sections can also occur at listed companies. However, listed companies are subject to more stringent requirements. A listing can increase the monitoring and discipline of company’s management by shareholders, i.e. by the market (Holmström & Tirole, 1993; Pagano & Roell, 1998). For instance, listed firms must publish their financial reports and they are controlled and evaluated by financial analysts, and thus they are subjected to significant scrutiny, which puts pressure on the management (Block et al., 2020). The involvement of financial analysts provides an

additional opportunity to extend monitoring activities by private information provided by stock analysts (Healy & Palepu, 2001; Lang et al., 2004). The increased transparency of financial analysts puts managers under more pressure, as their actions are under greater scrutiny (Dyck et al., 2010). Consequently, the disclosure of negative opinions and mismanagement by financial analysts can lead to the implementation of stricter governance measures to probe into the activities of the management (Jung et al., 2012). Hence, a manager's concern about uncovered mismanagement activities can cause a more efficient use of corporate resources (Jung et al., 2012). In conclusion, the contribution of external financial reports can mitigate information asymmetry between the firm and the SFO resulting in a potentially better firm performance. Furthermore, it creates a more balanced distribution of control among the shareholders and facilitates a greater monitoring of the goals (Duran & Ortiz, 2020). Chang et al. (2015) states that listed firms lead to greater corporate governance, eventually resulting in a better financial performance. In turn, this would be beneficial for SFOs as blockholders, who may not have sufficient expertise to effectively monitor the firm management. Through the monitoring by the market, this lack of expertise could be compensated, and a better financial performance of SFO-owned firms could be achieved. Thus, by investing in publicly listed firms – as compared to private firms – SFOs can benefit from the additional information and monitoring insights and thus, improve the performance.

Thus, we formulate the following hypothesis:

Hypothesis 2c: *The negative effect of SFO-ownership on the financial performance of SFO-owned firms is reduced for listed family-owned firms.*

4.4 Data and methods

4.4.1 Sample and data collection

In our study, we focus on firms which are mainly owned by SFOs. To classify these firms, we start with the identification of SFOs. Due to the lack of a single database for family offices, we followed a multi-step approach including several sources to develop our dataset. We started the data collection process by searching for family offices in the German-speaking area. We browsed through various web sources, including Google, LinkedIn, Xing, and dedicated databases such as Preqin and Pitchbook. The Private Banking Magazin was one of our main sources for news articles, as this magazine mainly centers on family office-related topics. Based on the search results, we created a first list of family offices from the German-speaking area. Given our research focus on SFOs, we thoroughly examined the identified family offices. We checked their websites as well as the Amadeus database provided by

Bureau Van Dijk to identify the owner family and see whether the family office is an SFO or any other type. In total, we identified 241 SFOs from the German-speaking area. We set the criterion that a firm is SFO-owned if an SFO owns at least 25%[4] equity of the firm. Given the fact that not every SFO has direct entrepreneurial investments[5] in firms and that for many firms accounting data were not available, our final dataset consists of 98 SFOs and 173 SFO-owned firms. Moreover, we used the Amadeus database to collect the accounting performance data of these firms for the period of 2011-2020. Our reference group consists of 684 family-owned firms. To categorize a firm as a family firm, the founding family had to own at least 25% of the firm.

4.4.2 Dependent variables

We use two dependent variables to measure the financial performance of SFO-owned firms. In line with previous research on firm accounting performance, we measure financial performance using the two accounting performance metrics ROA and ROS (Andres, 2008; Block et al., 2020; Villalonga & Amit, 2006). ROA is calculated by dividing earnings before tax (EBT) by total assets, whereas ROS is calculated as EBT divided by the operating revenue of the firm (Johann et al., 2021). Moreover, for our further analyses we use the operating revenue divided by total assets and operating revenue divided by employees – to measure firm productivity. To minimize the impact of outliers, we winsorized all dependent variables at 1 and 99% levels (Yale & Forsythe, 1976).

4.4.3 Independent and moderating variables

Our independent variable is SFO-owned firm. We measured SFO-owned firm using a dummy variable if the SFO holds at least 25% of the equity of a firm. In addition, we generated different moderating variables for our interactions. We measured supervisory board involvement using a dummy variable with a value of 1 if a firm is SFO-owned and when a family member associated with the family behind the family office is on the supervisory board, and 0 otherwise. We measured management board involvement as a binary variable with a value of 1 if a firm is SFO-owned and when a family member associated with the family behind the family office is on the management board, and 0 otherwise. Furthermore,

[4] We have set this threshold, because an equity stake of at least 25% is important in the German legal context (in many other countries especially in the EU) because this determines the minimum equity share (with voting rights) required to prevent decisions from being taken by qualified majority (§ 179 II 1, AktG)

[5] DEIs are acquisitions (majority or minority) of mature firms with a proven business model; these acquisitions are executed in a "direct" manner (i.e. not via funds) (Schickinger et al., 2021).

we measured stock exchange listing using a dummy variable with a value of 1 if a firm is mainly owned by an SFO and are listed on the stock exchange.

4.4.4 Control variables

We include several control variables that could have a potential impact on our target variables. We control for firm age (in years), firm size (number of employees), capital structure, intangible asset ratio, listed on a stock exchange, ROA volatility, years, and industries. Firm age was calculated with the logarithm of number of years since the firm was founded. We use the logarithm of the number of employees to measure the firm size. Capital structure was calculated as total debt divided by equity and intangible asset ratios were calculated as intangible assets divided by total assets. ROA volatility was measured of the last three years. These control variables are all lacked by 1 year. Listed is a dummy variable that indicates whether the firm is listed on a stock exchange. We also controlled for the fixed effect of the industry according the two-digit SIC levels and to control for year-fixed effects. All variables except the dummy variables were winsorized at 1 and 99% level to minimize the impact of outliers. A detailed overview of all variables, including their definitions, is provided in Table 4.1.

Table 4.1. Variable definitions for performance investigations

Variable	Definition	Source
Dependent Variables		
ROA (%)	ROA is calculated as EBT divided by Total Assets.	Amadeus - BvD
ROS (%)	ROS is calculated as EBT divided by Sales.	Amadeus - BvD
Sales-to-Total Assets (%)	Productivity 1 is calculated as Sales divided by Total Assets.	Amadeus - BvD
Sales-to-Employee's (%)	Productivity 2 is calculated as Sales divided by Employees.	Amadeus - BvD
Independent and Moderating Variables		
SFO-Owned Firm	Dummy variable that equals one if the firm is owned by an SFO.	Amadeus - BvD
Supervisory Board Involvement	Dummy variable that equals one if a member of the owner family of the SFO is involved in the supervisory board.	Amadeus – BvD /Own Research
Management Board Involvement	Dummy variable that equals one if a member of the owner family of the SFO is involved in the management board.	Amadeus – BvD /Own Research
Listed	Dummy variable that equals one if the firm is listed on the stock market.	Amadeus - BvD
Sample Split Independent Variables		
SFO-old	Dummy variable that equals one if the SFO is older than 20 years.	Amadeus - BvD
SFO-young	Dummy variable that equals one if the SFO is younger than 20 years.	Amadeus – BvD
Control variables		
Firm Age	Number of years since the firm was established (logarithmized).	Amadeus - BvD
Firm Size	Number of employees (logarithmized).	Amadeus - BvD
Debt-to-Equity (%)	Debt-to-Equity Ratio is calculated as Debt divided by Equity.	Amadeus - BvD
Listed	Dummy variable that equals one if the firm is listed on the stock market.	Amadeus - BvD
Intangible Assets (%)	Intangible asset ratio is calculated as Intangible Assets divided by Total Assets.	Amadeus - BvD
ROA volatility (%)	ROA volatility is calculated as the Standard deviation of the firms ROA from t-3, t-2, t-1.	Amadeus - BvD
Year (dummies)	Equals one for the respective year (2011 to 2020).	Amadeus - BvD
Industry (dummies)	Industry dummies are based on two-digit SIC codes.	Amadeus - BvD

Notes: This table describes the construction of the relevant variables used in this study.

4.4.5 Analysis

The main purpose of this study is to evaluate the accounting performance and productivity of SFO-owned firms by comparing them to family-owned firms. Our analysis is based on three steps. First, we perform descriptive analyses and compare the means and medians of SFO-owned firms and family-owned firms. Second, we conduct clustered ordinary least square (OLS) regressions to examine, whether SFOs exhibit a worse accounting performance than family-owned firms do. We use different clustered OLS regressions for ROA and ROS for the 10-year period of 2011 to 2020. Third, we run additional cross-sectional tests in our further analyses including alternative dependent variables.

4.5 Results

4.5.1 Descriptive statistics and correlation analysis

Table 4.2. presents the means, standard deviation, and differences in means between SFO-owned firms and family-owned firms. The results indicate that SFO-owned firms exhibit worse financial performances than family-owned firms based on ROA and ROS. Moreover, we observe that SFO-owned firms are less productive compared to family-owned firms based on sales-to-employees and sales-to-total assets. Additionally, we find that SFO-owned firms exhibit higher intangible assets in comparison to family-owned firms. Furthermore, our results show that SFO-owned firms are on average younger and have less employees than family-owned firms. Table 4.3. presents the correlations of the variables. A consideration of the variance inflation factors indicates that multicollinearity is not a concern.

Table 4.2. Descriptive statistics for performance investigations

	SFO-owned firms			Family-owned firms			(SFO-owned firms – Family-owned firms)	
Variable	**Obs.**	**Mean**	**S.D.**	**Obs.**	**Mean**	**S.D.**	**Difference in means**	**t-statistics**
Employees	652	3,944.03	10,189.74	2,576	4,327.60	9,347.70	-383.57*	-0.92
Firm Age (years)	652	35.46	36.68	2,576	56.94	44.12	-21.48***	-11.46
ROA (%)	652	3.92	16.78	2,576	7.58	7.77	-3.66***	-8.14
ROS (%)	652	0.50	23.38	2,576	5.30	7.15	-4.80***	-8.9
Debt-to-Equity (%)	652	267.36	624.77	2,576	238.13	434.19	29.23	1.39
Sales-to-Employees (%)	652	38.96	75.95	2,576	52.95	105.96	-13.99***	-3.17
Sales-to-Total Assets (%)	652	136.37	110.58	2,576	195.92	135.42	-59.55***	-10.39
Intangible Assets (%)	652	8.20	12.56	2,576	5.25	10.10	2.95***	6.24
ROA volatility (%)	652	3.96	4.67	2,576	2.81	3.57	0.39***	6.87
Listed	652	26.01	43.94	2,576	8.54	27.95	17.47***	12.56
Owner Family on Management Board	652	10.43	30.60	2,576	64.10	48.00	-53.67***	-27.17
Owner Family on Supervisory Board	652	23.16	42.22	2,576	23.18	42.20	-0.02	-0.01

Notes: This table reports the results of a t-test that compares the mean values of each variable across family-owned firms and SFO-owned firms. Variables are defined in Table 4.1. The final columns outline the difference in means, t-statistics and significance level obtained from the t-tests, indicating statistical differences across groups. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4.3. Correlation matrix for performance investigations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	VIF
(1) ROA													
(2) ROS	0.76***												1.07
(3) Sales-to-Employees	0.05***	0.03											1.68
(4) Sales-to-Total Assets	0.16***	-0.05***	0.51***										1.53
(5) SFO-Owned	-0.11***	-0.16***	-0.06***	-0.18***									1.58
(6) Listed	-0.05***	-0.00	-0.02	-0.21***	0.22***								1.41
(7) Owner Family on Management Board	0.08***	0.06***	0.10***	0.19***	-0.43***	-0.15***							1.35
(8) Owner Family on Supervisory Board	-0.01	0.08***	-0.08***	-0.18***	-0.00	0.28***	-0.23***						1.26
(9) Firm Age	0.06***	-0.12	-0.03	-0.02	-0.28***	0.05***	0.01	0.13***					1.20
(10) Employees	0.08**	0.12***	-0.40***	-0.19***	-0.22	0.18***	-0.05	0.31***	0.22***				1.62
(11) Debt-to-Equity	-0.05***	-0.07***	0.16***	0.19***	0.03	-0.06***	0.02	-0.07***	-0.08***	-0.12***			1.07
(12) Intangible Assets	-0.12***	-0.06***	-0.08***	-0.20***	0.11***	0.41***	-0.12***	0.15***	-0.14***	0.19***	-0.02		1.30
(13) ROA volatility	-0.03	-0.10***	-0.012	-0.00	0.09***	-0.04**	-0.04**	-0.05***	-0.12***	-0.21***	0.14***	-0.02	1.08
Mean VIF													1.35

Notes: This table reports correlation matrix. Variables are defined in Table 4.1. Industry and time dummy variables are not included in the table. Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10(*) levels.

4.5.2 Regression results

Table 4.4. and 4.5. report the results from the clustered OLS regressions of the relationship between SFO-owned firms and accounting performance (ROS; ROA). Model 1 only includes control variables. Model 2 is extended by the main independent variable SFO-owned to test our Hypothesis 1. In the results of model 2, we find that the variable SFO-owned has a negative impact on ROS ($\beta = -3.349$, $p < 0.05$) as well as on the ROA ($\beta = -2.769$, $p < 0.05$). These results support Hypothesis 1. Second, to assess our hypothesis 2a, we add the interaction of Owner Family in Supervisory Board to model 3. In the results of model 3 with a focus on the ROS, we notice that the coefficient of the interaction is positive and significant, ($\beta = 7.442$, $p < 0.01$), which supports our hypothesis 2a. Additionally, the positive coefficient of the interaction resulting from regarding model 3 ($\beta = 3.676$, $p < 0.10$), is also significant and supports our hypothesis 2a based on the ROA. Second, we test hypothesis 2b by adding the interaction of Owner Family in Management Board to model 4. The coefficient of the interaction in model 4 is positive and significant ($\beta = 10.126$, $p < 0.01$) based on ROS. Similarly, model 4 does also produce a positive and significant coefficient ($\beta = 4.134$, $p < 0.10$) based on ROA. These results confirm hypothesis 2b. Finally, we test hypothesis 2c adding the interaction of SFO-owned firms and listed on the stock exchange to model 5, we notice that coefficient is not significant. Hence, we find no support for Hypothesis 2c based on ROS and ROA.

Table 4.4. Main results for performance investigations (ROS)

	Dependent variable: ROS				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Variables	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**
Firm Age (ln)	1.000**	0.620	0.411	0.580	0.701*
	(0.456)	(0.430)	(0.431)	(0.431)	(0.413)
Firm Size (ln)	0.908**	0.728*	0.603	0.660	0.754*
	(0.451)	(0.416)	(0.406)	(0.423)	(0.435)
Debt-to-Equity (%)	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intangible Assets (%)	-0.051	-0.051	-0.033	-0.057	-0.061
	(0.067)	(0.065)	(0.064)	(0.065)	(0.075)
ROA volatility	-0.226	-0.208	-0.182	-0.192	-0.206
	(0.151)	(0.148)	(0.145)	(0.146)	(0.146)
Listed	-0.154	0.901	-0.342	1.188	
	(1.945)	(1.925)	(2.093)	(1.904)	
H1: SFO-Owned Firm		-3.349**	-5.179***	-4.949***	-2.567
		(1.435)	(1.815)	(1.597)	(1.839)
Owner Family on Supervisory Board			-0.053		
			(0.747)		
Owner Family on Management Board				-0.710	
				(0.707)	
Stock Market Listing					2.377
					(1.831)
Interactions					
H2a: Owner Family on Supervisory Board x SFO-Owned Firm			7.442***		
			(2.812)		
H2b: Owner Family on Management Board x SFO-Owned Firm				10.126***	
				(2.949)	
H2c: Stock Market Listing x SFO-Owned Firm					-3.582
					(5.641)
Constant	-6.856	-3.681	-1.948	-2.302	-4.231
	(11.081)	(10.319)	(10.050)	(10.396)	(10.385)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
R^2	0.066	0.075	0.086	0.086	0.077
Observations	3228	3228	3228	3228	3228

Notes: This table presents the coefficients with robust standard errors in parentheses using Clustered OLS regressions of productivity. Model 1 presents only control variables. Model 2 adds the independent variable SFO-owned firms. In model 3, the interaction term supervisory board involvement, in model 4 the interaction term management board involvement and in model 5 the interaction term listed. Variables are defined in Table 4.1. All regressions include dummy variables controlling for industry and year fixed effects (FE). Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10(*) levels.

Table 4.5. Main results for performance investigations (ROA)

	Dependent variable: ROA				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Variables	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**
Firm Age (ln)	0.452	0.138	0.058	0.157	0.176
	(0.412)	(0.374)	(0.373)	(0.377)	(0.364)
Firm Size (ln)	0.691**	0.542*	0.530*	0.537*	0.554*
	(0.308)	(0.289)	(0.288)	(0.296)	(0.295)
Debt-to-Equity (%)	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intangible Assets (%)	-0.100**	-0.099**	-0.090*	-0.100**	-0.104**
	(0.048)	(0.047)	(0.047)	(0.047)	(0.051)
ROA volatility	-0.036	-0.020	-0.006	-0.011	-0.019
	(0.108)	(0.105)	(0.104)	(0.105)	(0.105)
Listed	-0.475	0.397	-0.020	0.512	
	(1.229)	(1.271)	(1.304)	(1.270)	
H1: SFO-Owned Firm		-2.769**	-3.654**	-3.078**	-2.401*
		(1.163)	(1.444)	(1.339)	(1.446)
Owner Family on Supervisory Board			-0.730		
			(0.657)		
Owner Family on Management Board				0.288	
				(0.655)	
Stock Market Listing					1.092
					(1.352)
Interactions					
H2a: Owner Family on Supervisory Board x SFO-Owned Firm			3.676*		
			(1.943)		
H2b: Owner Family on Management Board x SFO-Owned Firm				4.134*	
				(2.338)	
H2c: Stock Market Listing x SFO-Owned Firm					-1.686
					(3.248)
Constant	5.988	8.613	9.243	8.503	8.354
	(6.136)	(5.766)	(5.696)	(5.881)	(5.753)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
R^2	0.041	0.050	0.054	0.054	0.051
Observations	3228	3228	3228	3228	3228

Notes: This table presents the coefficients with robust standard errors in parentheses using Clustered OLS regressions of productivity. Model 1 presents only control variables. Model 2 adds the independent variable SFO-owned firms. In model 3, the interaction term supervisory board involvement, in model 4 the interaction term management board involvement and in model 5 the interaction term listed. Variables are defined in Table 4.1. All regressions include dummy variables controlling for industry and year fixed effects (FE). Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10(*) levels.

4.5.3 Further analysis

Table 4.6. presents the results of the clustered OLS regressions that aim to assess the effects of an SFOs age on the performance (ROA; ROS; Sales to total assets; Sales to employees) of its owned firms. We categorize SFOs as young when they have existed for less than 20 years, whereas those older than 20 years are categorized as old. The results of model 1 show that the coefficient of SFO-young is negative and statistically significant (β = -5.093,

p < 0.01). In addition, model 2 also produces a negative and statistically significant coefficient of non-experienced SFOs (β = -7.488, p < 0.01). With regard to the independent variable SFO-old in the models 1 and 2, we find that the coefficient is not statistically significant for both dependent variables, the ROA and ROS. Furthermore, with model 3 we find that the coefficient of the variable SFO-old (β = -55.467, p < 0.01) is greater than that of SFO-young (β = -67.453, p < 0.01) indicating that the experience of an SFO has a positive impact on sales to total assets of the SFO-owned firm. Finally, model 4 produces a negative and statistically significant coefficient of the variable SFO-old (β = -39.314, p < 0.01). Additionally, the coefficient of SFO-young is also negative and statistically significant (β = -42.470 p < 0.01). In general, we notice that the age of SFOs has an impact on the performance of their owned firms. Furthermore, we tested our hypotheses with both Sales to total assets and Sales to employees as target variables. Our main hypothesis was supported in both cases (see Appendix Table A.3. and A.4.).

Table 4.6. Further analysis for performance investigations

	Dependent variable: ROA	**Dependent variable: ROS**	**Dependent variable: Sales to total assets**	**Dependent variable: Sales to employees**
	Model 1	**Model 2**	**Model 3**	**Model 4**
Variables	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**
Firm Age (ln)	0.022	0.414	-1.611	2.901
	(0.371)	(0.424)	(5.309)	(3.943)
Firm Size (ln)	0.557*	0.755*	-14.311***	-27.774***
	(0.289)	(0.412)	(4.123)	(5.009)
Debt-to-equity (%)	0.000	-0.000	0.044***	0.022
	(0.001)	(0.001)	(0.011)	(0.014)
Intangible assets (%)	-0.108**	-0.067	-1.442***	-0.169
	(0.047)	(0.065)	(0.331)	(0.250)
Listed	0.558	1.187	-28.510***	31.234***
	(1.243)	(1.852)	(9.555)	(10.917)
ROA volatility	-0.009	-0.187	-0.502	-1.618
	(0.107)	(0.146)	(1.090)	(1.029)
Sample Splits				
SFO-old	-0.031	1.527	-55.467***	-39.314***
	(1.380)	(1.317)	(18.679)	(11.596)
SFO-young	-5.093***	-7.488***	-67.453***	-42.470***
	(1.867)	(2.549)	(12.910)	(12.019)
Constant	9.541*	-2.028	268.482***	208.833***
	(5.648)	(9.895)	(47.869)	(38.122)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
R^2	0.062	0.100	0.224	0.251
Observations	3228	3228	3228	3228

Notes: This table presents the coefficients with robust standard errors in parentheses using Clustered OLS regressions of performance. Models 1 to 4 include a sample grouped by the age of SFOs. We categorize SFOs as young when they are existing since less than 20 years, whereas those older than 20 years are categorized as old. Variables are defined in Table 4.1. All regressions include dummy variables controlling for industry and year fixed effects (FE). Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10(*) levels.

4.6 Discussion

A plethora of previous studies has evaluated the impact of various kinds of blockholders on firm performance. For example, scholars have investigated the impact of blockholders such as families (Andres, 2008), private equity (Achleitner et al., 2011), venture capital firms (Rosenbusch et al., 2013) hedge funds (Brav et al., 2008), the government (Sun et al., 2002) and foundations (Achleitner et al., 2020; Block et al., 2020; Herrmann & Franke, 2002) on the financial performance of their owned firms. We extend this stream of research as the first study to examine the impact of SFOs as blockholders on the financial performance of their owned firms and thereby close this research gap.

Our results indicate that firms with an SFO as owner exhibit a weaker performance. We explain this phenomenon by applying the agency theory. We argue that SFOs may not always conduct effective monitoring. This may be due to a lack of expertise, competencies, and experience. We further notice that a separation of ownership and control increases agency costs, which can lead to weak financial performance. However, we find that when members of the owner family of the SFOs are represented on the management or the supervisory board of the SFO-owned firm, the financial performance improves. The latter finding supports our hypothesis that stronger monitoring measures can help to improve the financial performance. Despite our expectations, a stock market listing does not lead to an increase in performance; this may be due to stock markets being sceptical about the monitoring of SFOs. Furthermore, there could be a conflict of interest between the SFO and other shareholders. SFOs tend to act more risk-averse and prioritize the preservation of family wealth rather than forcing higher returns through riskier entrepreneurial activities, which is not in the interest of listed companies. Accordingly, SFOs follow long-term goals, while other institutional investors (hedge funds, pension funds, mutual funds) prioritize short-term gains. Furthermore, SFOs are considered as large blockholders and long-term investors, which may cause the blockholder effects of SFOs to outweigh the effects through the stock market.

Finally, we checked whether the age of an SFO has an impact on the performance of its owned firms. We assumed that older, respectively more experienced SFOs might have a more positive impact on the financial performance. Our results indicate that the age of an SFO can have an impact on the performance of its owned firms.

4.6.1 Implications for theory

This study contributes to the literature of family office, corporate governance, and financial performance. First, while prior studies have only been focussing on the characteristics of family offices such as ownership, governance mechanisms, and the services they provide (Liechtenstein et al., 2008; Wessel et al., 2014; Zellweger & Kammerlander, 2015), other scholars, such as Schickinger et al. (2021) and Wessel et al. (2014), conducted qualitative studies to investigate how the heterogeneity of family offices affects their goals and objectives. Previous studies also compare the investment behavior, activities and capital structure of family offices to those of other private equity firms (Block et al., 2019; Schickinger et al., 2022). We extend this pool of literature and show the financial performance of SFO-owned firms.

Second, our study also contributes to the literature on corporate governance. The results of our analyses show that firms owned by SFOs exhibit a weaker performance than firms owned by the original family. This implies that SFOs have less expertise and implement fewer monitoring measures, consequently resulting in worse financial performance of their owned firms. These results correspond with our theoretical arguments that families have emotional commitment, higher intrinsic motivation, and more experience and knowledge (Chua et al., 2012; James, 1999; Strike et al., 2015) to lead their family firm more successful than SFOs would do. However, for firms where family members associated with the family behind the family office are represented on the supervisory or management board of the SFO-owned firm, we find a positive effect on financial performance. Accordingly, the conclusion from this finding is that monitoring reduces agency costs and thus has a positive effect on the financial performance. Our study shows that family participation is a key driver of the financial performance of the SFO-owned firm. The positive contribution of family involvement, on the one hand, contrasts with the results of prior research (e.g., Bennedsen et al., 2007; Block et al., 2011; Miller et al., 2007; Villalonga & Amit, 2006). On the other hand, however, it is in line with the results of Anderson and Reeb (2003), Andres (2008) as well as Miller et al. (2013).

Finally, we also contribute to the literature on family business succession (e.g., Porfírio et al., 2020; Steier & Miller, 2010). SFOs can be regarded as a succession tool for family-owned firms to settle succession concerns. Accordingly, family-owned firms prefer to transfer their surplus cash or the proceeds after the sale of the family firm to an SFO to mitigate potential conflicts of interest among the family members (Massis et al., 2008;

Zellweger & Kammerlander, 2015). Additionally, an SFO can be considered as an investment vehicle for the family. Furthermore, our study also adds to the literature on foundations, as foundations can also be seen as a succession instrument for family businesses (Achleitner et al., 2020; Block et al., 2020; Herrmann & Franke, 2002).

4.6.2 Implications for practice

Our results indicate that firms where the initial founder family still holds the firm, perform better. Furthermore, we find that when a family member associated with the family behind the family office is part of the management or supervisory board of the SFO-owned firm, the financial performance can improve significantly. Hence, we note that families play an important role and that strong monitoring measures can pay off. However, we do not observe a positive effect for listed firms where an SFO is a blockholder. An SFO can act as a succession vehicle for family-owned firms, in which all their wealth is transferred. However, families should consider the structure, tasks, and goals of an SFO in a very careful way, as they can have an impact on the performance of an SFO. It would be important to educate family members and subsequent generations on financial management matters so that positions in both an SFO and its owned firms can be filled with competent family members who can represent and endorse the family's interests. We find that SFOs are not able to monitor effectively as blockholders. Thus, they should actively monitor through representatives in the management or supervisory board. However, our findings should be treated with caution because this is the first study that examines the performance of SFO-owned and there need to be more studies and results to endorse our findings. Furthermore, it is also essential to establish more transparency among family offices to better understand and explore the phenomenon of family offices.

4.6.3 Limitations and future research

Our study has some limitations, and therefore our findings should be interpreted with caution. First, our dataset is limited to SFOs from the German speaking (DACH) region. Consequently, our results may not be applicable for SFOs from other European countries, the U.S. or Asia. However, to overcome this limitation, researchers could replicate our study and apply it to SFOs from other regions. Second, our dataset consists of a comparatively small number of firms where an SFO is a blockholder. This is partly because SFOs act discreetly, and many SFO-owned firms do not publish accounting data. Future researchers may try to expand the dataset. Third, the literature categorizes SFOs into different types and generations.

It would be interesting to see how the various SFOs and the different generations contribute to the performance of firms. Fourth, future research could adopt a study design that estimates a treatment effect, in particular the effect of an SFO on the financial performance by comparing the performance of a firm before and after it is owned by an SFO.

Our study provides an initial insight into the performance of firms owned by SFOs. Since the phenomenon of SFOs is young and not fully explored, we expect the relevance of research on SFOs to grow further as families use SFOs to manage, increase, and invest their wealth. Furthermore, it would be interesting to study the agency problems within an SFO. That is, the family owns the SFO but is not represented by a family member in the management. Additionally, it might be interesting to consider and examine the non-financial goals of an SFO as well. An SFO can be considered as a succession vehicle for a wealthy family to preserve and grow the family's wealth over generations. With regard to this, a foundation does take a similar role. Hence, it would be very interesting to compare the performance of firms that are fully owned by an SFO or by a foundation. Furthermore, since SFOs typically invest family equity, it would be quite interesting to compare firms that are mainly owned by SFOs to firms that are mainly owned by private equity funds. Besides financial performance, it might be interesting to analyze other dependent variables such as growth or innovation. In summary, there are still many aspects of SFOs to explore and even more about firms owned by SFOs. With this study, we would like to encourage researchers to further explore this exciting, relevant, and interesting topic.

Chapter 5

SFOs as firm owners: Cash holding investigations

SFOs have become crucial for transgenerational wealth management. They address succession issues in family-owned firms, act as an investment vehicle for wealthy business-owning families, and provide administrative services. Despite the growing importance of SFOs, the body of research exploring this field remains nascent and underdeveloped. Little is known about the role of SFOs as firm owners, mainly how they influence the cash holdings of the firms they own. Taking an agency theory perspective as a theoretical lens, we postulate that SFO-owned firms hold more cash than family-owned firms. We investigate a hand-collected sample of 173 SFO-owned firms in the DACH region; we compare the cash holdings with matched family-owned firms. Our results support our hypotheses and show that SFO-owned firms hold more cash than family-owned firms. Moreover, our findings demonstrate that this effect is significantly stronger in cases where the SFO has sold its initial family firm(s). Our study contributes to the small but growing literature on family offices. It also extends the cash holdings literature. Practical implications exist for business-owning families seeking to set up a family office as an investment vehicle and transgenerational wealth management.

This chapter is based on

Eroglu, O., Block, J. (2023). SFOs as firm owners: Cash holding investigations. *Working Paper.*

5.1 Introduction

As the fortunes of business-owning families continue to grow, an increasing number are turning to the establishment of SFOs as a means to consolidate and oversee their wealth (Liechtenstein et al., 2008; Rivo-López et al., 2017). Essentially, an SFO serves as an administrative entity that is responsible for the governance and management of the financial and personal affairs of a single, wealthy family (Wessel et al., 2014). One of the key motivations behind creating an SFO is the preservation and enhancement of wealth across multiple generations, particularly in the wake of the sale of a family-owned firm (Schickinger et al., 2021). The creation of an SFO allows for the mitigation of potential conflicts among family members and the formation of a cohesive investment strategy (Zellweger & Kammerlander, 2015). Despite the growing relevance and importance of SFOs, research on this phenomenon is still in its infancy, with much yet to be discovered about the dynamics and intricacies of these unique entities, particularly regarding their impact on the firms they own. Prior investigations in this area have primarily focused on analyzing the structural elements of SFOs, such as patterns of ownership, governance structures, and the services they offer (Decker & Lange, 2013; Rivo-López et al., 2017; Welsh et al., 2013; Wessel et al., 2014). Given this knowledge gap, it is of particular interest to study the cash holdings of firms owned by SFOs.

A body of recent empirical literature has highlighted the trend of firms maintaining a significant and growing proportion of their assets in cash (Dittmar et al., 2003; Ferreira & Vilela, 2004; Opler, 1999). While cash holdings can provide capital for investment opportunities that have the potential to increase the value of the company, they also pose risks, such as facilitating wasteful expenditure by entrenched management (Jensen, 1986; Kalcheva & Lins, 2007). Previous literature on cash holdings has revealed that a significant presence of families as majority shareholders is frequently correlated with an accumulation of cash (Kuan et al., 2011; Ozkan & Ozkan, 2004).

Our research endeavors to address a gap in the existing literature by conducting an examination of the cash holdings of firms owned by SFOs, given the lack of comprehensive exploration in this area. Our study aims to address the following research question: To what extent does ownership by SFOs influence firms' cash holdings?

While both family-owned firms and firms owned by SFOs are guided by entrepreneurial families, there are notable differences between the two in terms of their portfolio of investments and governance structures. Family-owned firms tend to focus on the

original family firm, whereas SFO-owned firms may have a more diverse portfolio of investments (Bierl & Kammerlander, 2019). Additionally, the governance structures of family-owned firms are typically a united group of family owners, whereas SFOs serve as an intermediary structure (Zellweger & Kammerlander, 2015).

Our theoretical framework, rooted in the agency model (Jensen & Meckling, 1976), suggests that managers of SFO-owned firms may accumulate cash to the detriment of shareholders, resulting in agency costs. This is based on the idea that managers may act in their self-interests, potentially engaging in wasteful expenditure and neglecting the interests of shareholders (Jensen, 1986). Our study aims to investigate this potential relationship between SFO ownership and cash holdings.

To address our research question, we conduct an empirical analysis using Ordinary Least Squares (OLS) linear regression with clustered standard errors on a panel data set of 173 SFO-owned and 684 matched family-owned firms in the DACH region, which is collected manually. Our findings suggest that firms owned by SFOs tend to hold higher levels of cash than their family-owned counterparts in the DACH region. Furthermore, additional analyses indicate a stronger effect for SFOs that have sold their original family firm(s).

Our findings make a significant contribution to two distinct areas of literature. Firstly, our study contributes to the emerging body of literature on SFOs (Block et al., 2019; Liechtenstein et al., 2008; Schickinger et al., 2022; Wessel et al., 2014) by delving into the role of SFOs as owners of firms. Specifically, by examining the cash holdings of portfolio firms owned by SFOs. Secondly, our study also contributes to the literature on corporate cash holdings. Specifically, our results suggest that SFO-owned firms tend to hold higher cash balances than family-owned firms. This contradicts previous research, which suggests that family-owned firms tend to hold more cash (Kuan et al., 2011; Ozkan & Ozkan, 2004).

However, our findings align with the study by Lau and Block (2012) which suggests that family firms tend to hold lower cash balances. Additionally, our results are consistent with the argument put forth by Ferreira and Vilela (2004) that firms with higher levels of ownership concentration tend to hold lower cash balances. Furthermore, our results also support the empirical evidence that family-owned firms tend to face lower agency costs, as noted by Anderson and Reeb (2003) and Villalonga and Amit (2006).

From a practical standpoint, our study can assist business-owning families in evaluating the potential advantages and disadvantages of utilizing SFOs as a means of succession planning. While SFOs may benefit from separating family dynamics and internal conflicts in the firm, our study highlights a clear drawback: a lack of effective monitoring of

portfolio firms by SFOs may lead to detrimental effects on cash holdings. This knowledge can aid families in decision-making and weigh the trade-offs of using SFOs.

The present study is organized as follows. We begin by providing an overview of SFOs, a review of the literature on cash holdings, and the theoretical frameworks used to examine cash holdings in the next chapter. In the following section, we employ agency theory to formulate a hypothesis on the impact of SFO ownership on the cash holdings of firms when compared to those of family-owned firms. We then present our data and methodology, followed by our empirical investigations. The final chapter provides an interpretation of our results, addresses limitations, and suggests directions for future research.

5.2 Theoretical framework and literature review

5.2.1 Characteristics of SFOs as firm owners

SFOs are specialized financial institutions that provide investment and advisory services to entrepreneurial families on a transgenerational basis (Schickinger et al., 2021). These firms are typically established by ultra-high-net-worth individuals and offer their clients a range of financial and non-financial services (Rivo-López et al., 2017). Business-owning families often utilize SFOs as a desirable investment vehicle, transferring and pooling their assets in the SFO after selling the family business or when they have a significant amount of excess cash (Decker & Lange, 2013; Liechtenstein et al., 2008). The services offered by SFOs may include asset allocation, portfolio management, income generation, personal affairs management, philanthropy coordination, wealth transition facilitation, and intergenerational education (Decker & Lange, 2013; Liechtenstein et al., 2008; Rivo-López et al., 2017). SFOs may also act as intermediaries, building relationships with other wealthy families and organizations and providing advice on various matters. The ultimate goal of SFOs is to help families achieve their financial objectives and preserve their wealth for future generations (Welsh et al., 2013). In order to optimize returns and sustain wealth for future generations, SFOs engage in entrepreneurial activities, such as making direct investments, taking a majority stake in target firms, and actively participating in strategic and operational decision-making (Schickinger et al., 2021). In contrast, multi-family offices offer financial and advisory services to multiple families and are often run by banks and asset management companies (Decker & Lange, 2013).

5.2.2 Literature review on cash holdings

Cash reserves are a crucial aspect of corporate financial management. Holding cash is a common way for companies to ensure sufficient liquidity. In recent decades, corporations around the globe have significantly increased their cash holdings, as it provides them with the flexibility to respond to unexpected changes in cash flow, manage risk, support daily financial operations, and finance long-term investments (Almeida et al., 2013; Opler, 1999). Research on the relationship between cash holdings and corporate governance, ownership structure, and determinants has yielded a plethora of conclusions.

Dittmar and Mahrt-Smith (2007) found that firms with inadequate corporate governance tend to hold less cash, perform poorly operationally, and invest excess cash in less profitable projects. Similarly, Harford et al. (2008) observed that companies with weaker corporate governance structures tend to have lower cash reserves and prioritize using them for acquisitions instead of retaining them. However, Dittmar et al. (2003) found that in countries with weak shareholder protection, managers may hoard cash to the detriment of shareholders.

The connection between ownership structure and cash holdings has also been widely examined in the literature. Ferreira and Vilela (2004) have identified a negative correlation between ownership concentration and cash holdings among companies in twelve countries from the European Union. They posit that a higher degree of ownership concentration prevents managers from accumulating excessive amounts of cash. Ozkan and Ozkan (2004) discovered that controlling family shareholders are often associated with higher levels of cash holdings, which may be a way for them to maintain control over the company. Kuan et al. (2011) also found that family-owned firms tend to hold more larger stocks of cash compared to non-family-controlled firms, potentially in order to avoid the higher cost of debt financing.

Furthermore, the literature on cash holdings has investigated the factors influencing firm's decision to hold or disburse cash. It has been found that higher cash holdings are often associated with lower levels of leverage and bank debt (Ozkan & Ozkan, 2004). In contrast, when bank debt and interest rates are elevated, firms tend to reduce their cash holdings (García-Teruel & Martínez-Solano, 2008). The size, risk profile, and age of a firm have also been found to influence cash holdings. Smaller, riskier, and younger firms tend to hold higher cash reserves compared to other firms (Bigelli & Sánchez-Vidal, 2012). This finding is supported by Opler (1999), who also found that smaller companies generally hold more cash than larger ones. Conversely, large firms with strong credit ratings tend to hold lower cash

levels due to greater access to capital markets (Opler, 1999). Gao et al. (2013) found that listed companies hold approximately twice as much cash as private companies, which may be due to agency costs in listed firms. Companies with short-term loans also tend to hold more cash to mitigate the risk of refinancing and associated costs (Harford et al., 2014). Firms engaging in risky activities, characterized by high levels of uncertainty, may also maintain higher cash holdings (Ozkan & Ozkan, 2004). On the other hand, high cash holdings can benefit growth opportunities (Ozkan & Ozkan, 2004), and firms with strong growth potential tend to hold more cash (Opler, 1999). High cash holdings may also be used to fund research and development spending, a measure of growth, in cases where firms face funding constraints (Bigelli & Sánchez-Vidal, 2012; García-Teruel & Martínez-Solano, 2008).

5.2.3 Cash holding theories

Cash financing can be an effective strategy for managers seeking to invest in initiatives that enhance the value of the company, such as capital expenditures, acquisitions, and research and development. This aligns with the goals of shareholders, who typically aim to increase the value of their investment. However, it is essential to note that cash investments may offer relatively low returns and may be subject to manipulation by management, potentially conflicting with the interests of shareholders (Lau & Block, 2012).

5.2.3.1 Trade-off theory

Trade-off theory suggests that corporate cash holdings result from a decision-making process in which managers weigh the costs and benefits of holding cash. The main cost of holding cash is the opportunity cost or the potential returns that could be gained from alternative investments. The decision to hold cash may be influenced by two main factors: transaction costs and precautionary considerations (Dittmar et al., 2003; Weidemann, 2018). The transaction cost motive may lead managers to hold more cash to avoid the expense of external financing, particularly when the opportunity cost of forgoing investment is high. The precautionary motive for holding cash involves managing financial risk, with the primary goal being to mitigate the potential for financial distress. As part of this process, the cost of external financing and future financing needs may be considered to determine the optimal level of cash to hold (Dittmar et al., 2003; Opler, 1999).

5.2.3.2 Financing hierarchy theory

In contrast to the trade-off theory, the financing hierarchy theory posits that a firm does not have an optimal level of cash and that the holdings result from investment and

financing decisions made by managers (Dittmar et al., 2003). According to this perspective, cash holdings are not an end in themselves, and managers do not prefer holding cash over debt. Instead, a firm's cash holdings result from its financial circumstances. When a firm has high cash flow and is able to finance new investments internally, it may choose to pay dividends, pay off debt, and accumulate cash (Ferreira & Vilela, 2004). However, when a firm cannot utilize internal resources to fund new investments, it may turn to external financing methods such as debt and utilize existing cash reserves. While issuing equity is a potential option, it is often avoided due to its high cost (Dittmar et al., 2003; S. Yu & Guo, 2019).

5.2.3.3 Agency theory

The agency theory is a framework for understanding the relationship between principals and agents within organizations. In this context, the principal is the firm's owner, while the agent is the individual hired by the principal to act on their behalf. This dynamic can give rise to agency costs, which occur when the agent prioritizes their interests over those of the principal. This may occur due to information asymmetry, where the agent has access to information that the principal does not, or moral hazard, where the agent does not act in the principal's best interests (Jensen & Meckling, 1976). The agency theory is often used to examine the impact of cash holdings on organizations, as it highlights the potential for conflicts of interest between owners and managers over the use of financial resources.

5.2.4 Hypothesis development

We employ agency theory as a theoretical foundation for analyzing the cash holdings of SFOs as principals. This theory posits that conflicts may emerge between SFOs as owners and the management of SFO-owned firms as agents due to the potential for the latter to prioritize their interests above those of the former (Jensen, 1986). The agents, in this case, the managers of the SFO-owned company, are often afforded significant discretion in their use of the readily available cash (Weidemann, 2018). They may be inclined to retain or overinvest the cash in projects that do not provide value to the shareholders (Kalcheva & Lins, 2007) but do offer personal benefits to the managers, such as enhanced job security and increased power (Claessens et al., 2002; Nikolov & Whited, 2014). This behavior may increase the firm's size but not necessarily its value, as the overinvestment may generate negative capital value (Easterbrook, 1984; Jensen, 1986).

In comparing SFO-owned firms and family-owned firms, there are several factors that may contribute to the latter being less prone to engage in wasteful spending. One potential reason is that family members often have a significant stake in their businesses and therefore have strong incentives to monitor management to protect their economic interests (Anderson & Reeb, 2003). Additionally, families are often deeply committed to their companies' success, increasing their wealth and enhancing their reputation (Arregle et al., 2007). This commitment and concentrated ownership (Villalonga & Amit, 2006) can motivate to curb wasteful spending and mitigate agency costs related to cash holdings. Moreover, the incentive for family firms to pursue wasteful opportunities for personal gain may be relatively lower compared to that of professional managers (Davis et al., 2010; Miller & Le Breton-Miller, 2006). Furthermore, families may have a stronger emotional attachment to their businesses, as they have invested a significant portion of their wealth and future in the company and view it as a critical source of financial support for current and future generations (James, 1999; Miller et al., 2008) As a result, they may be more likely to prioritize the goals of the business above their own personal interests compared to professional managers. Additionally, families may have a more thorough understanding of their businesses, including the structure and strategy, which allows them to make effective strategic decisions and capitalize on business opportunities for the company (Miller & Le Breton-Miller, 2005). Based on the above considerations, we formulate the following hypotheses:

Hypothesis 1a: *SFO-owned firms will have a higher cash holding than family-owned firms.*

Hypothesis 1b: *The higher cash holding in SFO-owned firms is stronger for SFOs which sold their initial family firm.*

5.3 Methodology

5.3.1 Sample and data

In this study, we aim to examine firms that are owned by SFOs. To categorize these firms, we first identify the SFOs themselves. As there is a lack of a central database for family offices, we adopt a multi-step manual approach to identify SFOs and their portfolio firms due to the scarcity of transparency and the difficulties in obtaining reliable information on SFOs (Liechtenstein et al., 2008; Schickinger et al., 2021). Generally, SFOs are privately held entities that are not legally obligated to disclose information, and they often maintain a

low public presence to preserve their confidential nature (Decker & Lange, 2013; Schickinger et al., 2021).

To begin the data collection process, we searched for family offices in the German-speaking region using various online sources such as Google, LinkedIn, and Xing and databases such as Preqin, Pitchbook, and the Private Banking Magazin. The latter was a precious data source, focusing on family office-related topics. In this study, we are interested in the involvement of SFOs at the portfolio firm level, so we only consider SFOs that make direct entrepreneurial investments (DEIs). In our research, we identified a sample of 93 SFOs operating in the German-speaking region and 173 SFO-owned firms. To classify a company as "SFO-owned," we required that an SFO hold at least a 25% equity stake in the firm. We obtained accounting and ownership data for these firms from the Amadeus database provided by Bureau Van Dijk for 2011 to 2020, supplemented by accounting data from the German Federal Gazette (Bundesanzeiger). Our control group consists of 684 family-owned firms, defined as firms in which the founding family holds at least a 25% ownership stake. To ascertain comparable family firms, we utilize a five-to-one matching approach (the nearest neighbor), which takes into account industry classification and firm size (Rosenbaum, 2010). To classify firms according to industry, we employ two-digit SIC codes. In assessing firm size, we rely on the total revenues in 2011, or alternatively, total assets if the data on total revenue is not available. It is important to acknowledge that not all SFO-owned firms have a set of five comparable family firms available for matching. Consequently, the total count of 684 comparable firms falls below the potential maximum of 865 comparable firms (calculated as 173 SFO-owned firms multiplied by 5). The majority of firms in our panel dataset (43%) were in the manufacturing sector, followed by the services sector (28%), retail (21%), and other industries (8%). As only a minority of the firms in our sample (19%) were listed on a stock exchange, we did not include stock market data in our analysis.

5.3.2 Variables

5.3.2.1 Dependent variable: cash holdings

In this study, we measured cash holdings, which are measured as the ratio of cash and cash equivalents to total assets. This approach is consistent with prior studies (Bellovary et al., 2007; Ozkan & Ozkan, 2004) that recognize the importance of considering cash holdings separately as the most liquid resources.

5.3.2.2 Independent variable: SFO dummy and SFO dummy 2

The independent binary variable "SFO dummy" was determined by examining the presence of an SFO holding an equity stake of at least 25% in a firm (coded as "1") or the founding family holding this equity stake (coded as "0"). According to German law (and also in many other countries, particularly in the EU), a minimum equity share (with voting rights) of at least 25% is required to prevent decisions from being made by qualified majority (§ 179 II 1, AktG). This threshold is necessary because it determines the level of influence that shareholders can have on decision-making within a firm. To distinguish between SFOs that have retained their "original" family firms and those that have sold them, we introduced a variable termed "SFO dummy 2." Under this variable, if a firm is owned by an SFO that has sold its initial family firm, it is assigned a code of "1"; otherwise, it is assigned a code of "0."

5.3.2.3 Control variables

To control for various factors in our regressions, we included several variables. One of these was firm size, which we measured as the natural logarithm of the number of employees at the year-end (Block & Fathollahi, 2022). We also included a variable for firm age, calculated as the natural logarithm of the number of years since the firm's incorporation. In addition, we included a dummy variable called "listed" to indicate whether the firm was listed on a stock exchange. To differentiate between firms experiencing financial difficulties and those performing well, we also controlled for firm performance in our regressions. We used ROA, the ratio of net income to total assets, to measure performance (Andres, 2008). In addition, we included a measure of firm growth, specifically sales growth, a common indicator of growth in the literature (Delmar, 2019). Sales growth is a helpful metric for comparing growth across industries because it is not affected by differences in the number of employees across industries (Weinzimmer, 1998). Net sales growth is determined by calculating the yearly percentage change in net sales from one year to the next (t-1 to t). Board involvement is represented by a dummy variable that takes a value of "1" if an owner family member is present on the firm's supervisory or management board, and "0" otherwise. To examine potential alternative explanations for liquidity decisions, we included controls for alternative ownership structures that may influence the firm's liquidity choices, including the percentage of ownership held by the SFO and the presence of family owners. To account for industry-specific factors that may significantly influence a company's liquidity strategy, we controlled for fixed effects of the industry by dividing it into four macro-categories: manufacturing, retail, services, and other (Block et al., 2020). In addition, we included a fixed

effect for time in our analyses to control for temporal dependencies. A summary of the variables used in this study can be found in Table 5.1.

Table 5.1. Variable definitions for cash holding investigations

Variables	Definition
Dependent Variables	
Cash holdings	Cash and cash equivalents/total assets
Independent Variables	
SFO dummy	Indicates whether a firm is owned by a single family office (1) or by a family (0)
SFO dummy 2	Indicates firms as either owned by an SFO that sold its initial family firm (1) or by a family (0)
Control Variables	
Ownership in %	Ownership of SFO or family in the firm in percent
Listed	Dummy whether firm is listed (1) or not (0)
ROA	(Net income/total assets) * 100
Firm size	Natural logarithm of the year-end number of employees
Firm age	Natural logarithm of the firm age
Firm growth	Yearly percentage increase/decrease of net sales (total assets) between t and t-1
Debt ratio	(Total debt/total assets) * 100
Board involvement	Indicates whether an owner family member is in the supervisory or management board of the firm (1) or not (0)
Year (2011-2020)	Year-dummy (fixed effects included) (are not reported)
Industry (1-4) *	Industry-dummy (fixed effects included) (are not reported)

Notes: This table describes the construction of the relevant variables used in this study. * Industry categories includes (1) Retail, (2) Manufacturing, (3) Services and (4) Other.

5.4. Analyses and results

5.4.1 Descriptive statistics and correlations

Table 5.2. presents the descriptive statistics for our sample. The summary statistics (mean, median, first and third quartiles) for the SFO-owned firms are shown in Panel A, while Panel B displays the statistics for the family-owned firms.

Table 5.2. Descriptive statistics for cash holding investigations

Variable	N	Mean	P25	P50	P75
Panel A: SFO-owned firms					
Sales (€m)	879	1,754.83	45.40	148.68	653.38
Number of employees (#)	879	4,408.43	139.00	752.00	2,366.00
Cash holdings	879	0.15	0.04	0.10	0.21
Debt ratio (%)	879	59.25	39.94	57.81	72.15
ROA (%)	879	2.61	0.57	4.14	8.61
Firm age (years)	879	35.18	12.00	21.00	38.00
Firm growth (%)	879	12.62	-2.89	4.58	12.83
Panel B: family-owned firms					
Sales (€m)	3844	1,067.58	217.36	397.22	750.90
Number of employees (#)	3844	5,071.80	671.00	1,523.50	3,320.50
Cash holdings	3844	0.12	0.03	0.08	0.17
Debt ratio (%)	3844	58.48	45.16	59.17	72.93
ROA (%)	3844	7.82	3.60	6.96	11.04
Firm age (years)	3844	43.10	22.00	40.00	80.00
Firm growth (%)	3844	4.71	-0.96	3.75	8.92

Notes: This table shows the mean, median, 25% quartile and 50% quartile of selected variables of the study.

Our results indicate that, on average, SFO-owned firms have higher cash holdings than family-owned firms. The debt ratio of SFO-owned firms is similar to that of family-owned firms. Regarding firm performance, our results show that SFO-owned firms have a lower average ROA compared to family-owned firms. However, in terms of firm growth, SFO-owned firms show stronger sales growth on average. Additionally, our results indicate that SFO-owned firms tend to be younger and have fewer employees than family-owned firms, on average.

Table 5.3. presents the correlations of the variables. A consideration of the variance inflation factors indicates that multicollinearity is not a concern (Kutner et al., 2004). The average variance inflation factor (VIF) is 1.21; the maximum VIF is 1.74.

Table 5.3. Correlation matrix for cash holding investigations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	VIF
(1) Cash holdings										
(2) SFO dummy	0.10***									1.74
(3) Debt ratio	-0.23***	0.03*								1.02
(4) Firm growth	0.09***	0.10***	0.01							1.02
(5) ROA	0.12***	-0.15***	-0.08***	0.02						1.03
(6) Listed	0.02	0.21***	-0.07***	0.03**	-0.07***					1.22
(7) Firm size	-0.08***	-0.21***	-0.08***	-0.06***	0.03**	0.18***				1.13
(8) Firm age	0.02	0.05***	-0.03**	0.03*	-0.01	-0.03**	-0.05***			1.01
(9) Board involvement	-0.06***	-0.38***	-0.02	-0.06***	0.07***	0.01	0.15***	-0.01		1.19
(10) Ownership in %	-0.06***	-0.60***	-0.03**	-0.06***	0.09***	-0.33***	0.12***	-0.01	0.17***	1.58
Mean VIF										1.21

Notes: This table reports the correlations for the dependent and independent variables and the respective variance inflation factors. VIF=variance inflation factor * indicates $p < 0.1$, ** indicates $p < 0.05$, *** indicates $p < 0.01$.

5.4.2 Regression results

To determine the impact of SFO ownership on cash holdings, we conducted OLS linear regressions with clustered standard errors. The results of these analyses are presented in Table 5.4. Hypothesis 1a posits that SFO-owned firms exhibit greater cash holdings compared to family-owned firms. By employing cash holdings as the dependent variable in Model 1, our analysis reveals a significant and positive coefficient ($\beta = 0.026^{**}$; $p < 0.05$), providing support for our first hypothesis.

Hypothesis 1b proposes that the relationship between cash holdings and SFO-owned firms is more pronounced for SFOs that have sold their initial family firm in comparison to those that still retain their family firm. Consequently, in Model 2, we conducted identical regression analyses using SFO dummy 2 as the independent variable. Under this coding scheme, a firm owned by an SFO that sold its initial family business is assigned a value of "1," while a firm owned by a family is assigned a value of "0." The findings reveal that the direction of the effect remains consistent, but the strength of the relationship becomes notably stronger. The coefficient for cash holdings ($\beta = 0.039^{**}$; $p < 0.05$) remains positive and statistically significant. Hence, our results provide compelling evidence in support of hypothesis 1b.

Table 5.4. Main results for cash holding investigations

	Model 1 **Linear regression**	**Model 2** **Linear regression**
Variables	**DV** **Cash holdings**	**DV** **Cash holdings**
SFO dummy	0.026**	
	(0.012)	
SFO dummy 2		0.039**
		(0.016)
Firm age	0.002	0.001
	(0.036)	(0.036)
Firm size	-0.007**	-0.007**
	(0.003)	(0.003)
Firm growth	0.000**	0.000**
	(0.000)	(0.000)
ROA	0.001***	0.001***
	(0.000)	(0.000)
Debt ratio	-0.001***	-0.001***
	(0.000)	(0.000)
Listed	-0.001	-0.005
	(0.016)	(0.016)
Board involvement	-0.010	-0.008
	(0.01)	(0.010)
Ownership in %	-0.000	-0.000
	(0.000)	(0.000)
N	4,723	4,723
Controls	YES	YES
Industry FE	YES	YES
Year FE	YES	YES

Notes: * indicates $p < 0.05$, ** indicates $p < 0.01$, *** indicates $p < 0.001$.

5.5 Conclusion and discussion

5.5.1 Summary and interpretation of regression results

SFOs provide a distinct avenue for facilitating the transfer of family wealth, functioning as an investment vehicle tailored to the needs of the family (Rivo-López et al., 2017). Despite being operated by an entrepreneurial family, family-owned firms and SFOs exhibit substantial variations in their governance frameworks, entrepreneurial mindset, and attitudes (Rivo-López et al., 2017; Schickinger et al., 2022). Thus, the present study aimed to examine the cash reserves held by SFO-owned firms compared to those of family-owned firms. The empirical analysis reveals that SFO-owned firms exhibit significantly higher levels of cash holdings compared to family-owned firms. Furthermore, we demonstrate that this effect is amplified when SFOs have divested their original family firm.

Upon the establishment of an SFO, it is not uncommon for families to disengage from the firm's day-to-day management, resulting in a separation of ownership and control. This separation increases agency costs and creates a significant misalignment of interests due to informational asymmetries and moral hazards between management and ownership. The

agency theory posits that in situations characterized by high information asymmetries and moral hazards, managers tend to accumulate more extensive cash reserves and engage in wasteful expenditures that do not create value for shareholders but rather provide personal benefits for the managers. Additionally, the observed effects are more pronounced among SFOs that have divested their initial family firm.

In contrast to SFO-owned firms, family-owned firms tend to have a deep sense of commitment to the success of the firm. This commitment not only increases wealth but also enhances reputation, which can serve as a motivator to limit wasteful spending and mitigate agency costs associated with cash holdings. Family members often possess a stronger emotional attachment to their firm as they have invested a significant portion of their wealth and future in the firm, viewing it as a crucial source of financial support for current and future generations. This emotional investment may incline them to prioritize the firm's goals over their interests, in contrast to professional managers. Furthermore, family members may have a lower incentive to engage in activities that offer personal gain at the expense of the firm compared to those of professional managers. In cases where the initial family firm of an SFO is sold, the aforementioned arguments no longer hold. As a result, we observe higher cash holdings in such situations.

5.5.2 Implications for theory

The current study contributes significantly to the academic literature on SFOs and their impact on the cash holdings of owned firms in comparison to family-owned firms. Previous research in this field has primarily emphasized the structural characteristics of family offices, such as ownership patterns, governance frameworks, and the services they offer (e.g., Liechtenstein et al., 2008; Rivo-López et al., 2017; Wessel et al., 2014). While studies such as Schickinger et al. (2022) have examined the capital structure of SFOs in comparison to private equity firms, and Block et al. (2019) have explored the investment behavior and activities of family offices in relation to other investment firms, our study extends the existing literature by specifically investigating the role of SFOs as owners of firms.

Furthermore, our study extends the existing literature on cash holdings (e.g., Dittmar & Mahrt-Smith, 2007; Dittmar et al., 2003; Kalcheva & Lins, 2007; Lau & Block, 2012; Opler, 1999; Ozkan & Ozkan, 2004). The findings from our analysis reveal that SFO-owned firms maintain higher cash levels compared to family-owned firms. This observation is

consistent with our theoretical arguments, which suggest that SFOs may encounter agency costs and that firms with weaker governance structures tend to hold more cash.

These results support previous research indicating that managers may extract personal benefits from cash holdings to the detriment of shareholders (Dittmar et al., 2003; Kalcheva & Lins, 2007). Our study aligns with the conclusions of Lau and Block (2012), who demonstrate that family-owned firms generally exhibit lower cash holdings. It is also in line with the findings of Ferreira and Vilela (2004), suggesting that higher ownership concentration discourages excessive cash holdings by managers. However, our findings diverge from studies such as Kuan et al. (2011) and Ozkan and Ozkan (2004), which propose that family-owned firms tend to hold more cash. Nonetheless, our results align with the empirical evidence presented by Anderson and Reeb (2003) and Villalonga and Amit (2006), indicating that family-owned firms experience lower agency costs.

5.5.3 Implications for practice

Our study offers valuable insights for families considering establishing an SFO to manage their wealth and business interests. Our research illuminates how ownership dynamics may impact cash management strategies by comparing the cash holdings of companies owned by SFOs and traditional family-owned firms. Our findings indicate that when using an SFO as an investment vehicle, families must be aware of the potential agency costs associated with managing their portfolio firms. It is also essential to ensure that competent family members hold leadership positions within the SFO and the firms it owns to safeguard the family's interests. Furthermore, families should carefully consider the office's structure, goals, and operations to mitigate agency costs and enhance their wealth management capabilities.

5.5.4 Limitations and future research

Our study provides new perspectives on the cash holdings of firms owned by SFOs and family-owned firms. However, it is crucial to acknowledge the study’s limitations, mainly because it is based on a sample of firms in the DACH region and the limited sample size of firms in which an SFO serves as the majority owner. This is partly due to the sensitive nature of SFOs and the lack of publicly available financial data. Therefore, the findings should be interpreted with caution and considered a starting point for understanding the impact of SFO ownership on cash holdings. Future research should aim to replicate the study in other regions, expand the sample size, and investigate the effect of SFO ownership on

other dependent variables such as growth, innovation, or dividend policy. Additionally, it would be valuable to examine the relative importance of different cash-holding theories and identify situations in which the relative importance changes based on different cash determinants. In summary, there are still many aspects of SFOs that warrant further investigation, and this study serves as an invitation for researchers to continue exploring this exciting, relevant, and interesting topic.

Chapter 6

Capital structure of single family office-owned firms

SFOs currently manage trillions of dollars worldwide. The enormous value of assets under management highlights their key role as a cohesive wealth management tool globally. Despite the increasing relevance of SFOs, research on SFOs is still in its early stages. Particularly, little is known about the capital structure of the firms owned by SFOs. By drawing on a hand-collected sample of 173 SFO-owned firms in the DACH (Germany, Austria, Switzerland) region, we compare the capital structure of SFO-owned firms with the capital structure of family-owned firms. Our empirical results show that SFO-owned firms display a higher long-term debt ratio than family-owned firms, indicating that SFO-owned firms follow trade-off theory, similar to private equity-owned firms. Additionally, we show that this effect is stronger if the SFOs that sold their original family firms. In contrast, family-owned firms tend to be more conservative in their financial decision-making and seem to follow the logic of the pecking order theory.

This chapter is based on

Block, J., Fathollahi, R., Eroglu, O. (2023). Capital structure of single family office-owned firms. Accepted in: *Journal of Family Business Strategy.*

6.1 Introduction

An SFO is a legal and organizational entity owned by a single owner family that manages, among other things, the wealth of one family on a long-term basis (Zellweger & Kammerlander, 2015). In addition to wealth management, SFOs can provide tax and legal advisory, family counselling or support in the pursuit of philanthropic goals (Hagan, 2021). To date, SFOs are managing trillions of dollars worldwide (Beech, 2019), with an increasing relevance as the number and size of high-net-worth families is expected to rise (Hagan, 2021). Although SFOs are becoming more relevant, research on SFOs is still in its infancy (Schickinger et al., 2022; Welsh et al., 2013).

The identity of large firm owners, such as institutional investors (Crane et al., 2016; Wright et al., 1996), (family) foundations (Block & Fathollahi, 2022; Draheim & Franke, 2018), or owner families (Anderson & Reeb, 2003; Poutziouris, 2001; Zellweger et al., 2012), has been shown to impact firm-level outcomes. Past studies have focused, amongst others, on capital structure decisions, which is important for firm survival (Jansen et al., 2022; Koropp et al., 2014), as capital structure directly influences a firms´ financial stability (e.g., Gertler & Hubbard, 1990), growth potential (e.g., Billett et al., 2007; Hackbarth & Mauer, 2012), bankruptcy risk (e.g., Castanias, 1983; Ayres & Dolvin, 2019) and cost of capital (e.g., Chua et al., 2011; Molly et al., 2012).

Prior research has examined the capital structure choices of private equity-owned (Brown et al., 2021) and family-owned firms (for a meta-analysis, see Hansen & Block, 2021), highlighting the contrasting factors that guide their decisions. Although prior studies have shown that owner families may differ in their willingness to use debt, there is generally a preference for internal over external financing options and a hierarchical approach in line with the pecking order theory (Jansen et al. 2023; Schickinger et al., 2022) The desire to retain corporate control as well as the fear of bankruptcy explanations for this phenomenon (Gallo & Vilaseca, 1996; Mishra & McConaughly, 1999). In contrast, prior studies show that private equity firms mostly follow the trade-off theory with their portfolio firms and raise as much debt as they can (Gompers et al., 2016), in order to take the advantage of the leverage effect and boost their investors' return. While these studies have provided valuable insights into capital structure choices of these two owners, a critical gap remains in our understanding of the determinants and decision-making processes in SFO-owned firms which represent a unique ownership structure that combines elements of both private equity-owned and family-

owned firms. In our study, a firm is identified as "SFO-owned" when a SFO holds equity stake of at least 25% in the firm.

Although both family-owned and SFO-owned firms are connected to owner families, the two firm types or owners have been argued to differ from each other in important ways, e.g. with regard to their investment portfolios (Bierl & Kammerlander, 2019), governance structures (Zellweger & Kammerlander, 2015), entrepreneurial behaviour across generations (Schickinger et al., 2021), and preferences related to financing (Schickinger et al., 2022). We shall argue that SFOs as owners no longer have such a strong emotional and social bond to their portfolio firms as compared to entrepreneurial families owning a family firm, which shall have an impact on the capital structure and financing decisions of SFO-owned firms versus family-owned firms. We pose the following research questions: "How do SFO-owned and family-owned firms differ in terms of capital structure, particularly debt financing? To what extent does the maturity of debt matter (long-term versus short-term debt? Is there a difference between SFOs who sold their original family firm and those that still own them?"

To investigate our research questions, we analyse a manually collected panel data set of 173 SFO-owned and 684 matched family-owned firms in the DACH (Germany, Austria, Switzerland) region. Our results indicate that SFO-owned firms have a higher long-term debt ratio than family-owned firms. Additionally, further analyses show that this effect is stronger for SFOs that sold their original family firm.

Our study contributes to two literature streams. The first stream is the literature on family offices (Block et al., 2019; Decker & Lange, 2013; Schickinger et al., 2021, 2022; Welsh et al., 2013; Wessel et al., 2014; Zellweger & Kammerlander, 2015). Our study shows that SFOs as owners have a distinct impact on their portfolio firms and therefore should be considered as a separate owner category next to other types of firm owners such as private equity firms or owner families with direct ownership. Our study also shows that SFOs are a heterogeneous group (Schickinger et al., 2021). The second literature stream is research on the capital structure and financing (decisions) of family-owned firms (Bacci et al., 2018; Gottardo & Moisello, 2014; Koropp et al., 2013; Molly et al., 2012; 2019; Pacheco, 2022; for a meta-analysis see Hansen & Block, 2021). We provide empirical evidence that SFO-owned firms differ from family-owned firms regarding (long-term) debt. Furter, we show that short- and long-term debt should be considered as distinct categories when evaluating the capital structure of family firms. On a more general level, our study contributes to the corporate finance literature about the relationship between firm ownership and capital structure (e.g.,

Brailsford et al., 2002; Chaganti & Damanpour, 1991; Ampenberger et al., 2013; Schmid, 2013).

An investigation of how SFOs affect the capital structure of their portfolio firms is not only important for research but also matters for practice as some of the largest public and private companies in the DACH region are (partly) owned by SFOs, including BMW, BionTech SE, Knorr-Bremse AG. Through transferring their ownership into a SFO, owner families can avoid family conflicts and transfer their wealth into the next generation. Our analysis shows that this transfer of ownership is associated with a higher long-term debt ratio. The results of our study are also of interest for banks and other debt providers, which have to continuously evaluate their relationships with SFOs and SFO-owned firms.

6.2 Theoretical framework

6.2.1 The concept of SFOs: Growth and development, definition, and attributes

SFOs have emerged as an attractive establishment for ultra-high-net-worth individuals seeking to provide transgenerational investment and advisory solutions to owner families, ensuring the enduring prosperity and harmonious management of wealth across successive generations (Schickinger et al., 2021; Wessel et al., 2014). This strategic pursuit is driven by the imperative of managing assets across generations, aiming to mitigate potential conflicts of interest that may arise among different generational cohorts within the family (Liechtenstein et al., 2008; Rivo-López et al., 2017). SFOs have gained prominence as a favoured mechanism for consolidating assets, particularly in the aftermath of family business divestments or the accumulation of substantial cash reserves (Bierl et al., 2018; Schickinger et al., 2022).

The concept of SFOs was relatively unfamiliar among owner families in German-speaking regions until the second half of the 20th century. By 1985, only about 25 SFOs existed in the region (Jandt et al., 2021). However, since then, there has been a significant increase in the number of SFOs. Estimates are that there are now around 350 to 450 SFOs in Germany alone (Jandt et al., 2021). Interestingly, the majority of these SFOs, approximately 70%, were established after 2000, indicating a growing interest among owner families in utilizing SFOs as an investment and/or succession vehicle (Bierl et al., 2018) for their wealth and family firms. While SFOs serve a singular family, multi-family offices (MFOs) operate as firms offering financial and advisory services to multiple families. Typically, MFOs are run by banks and/or asset management companies (Decker & Lange, 2013).

Definitions of family offices vary among authors in the literature. Rivo-López et al. (2017) define a family office as follows: A family office, rooted in tradition, represents a business meticulously managed by and for a specific family. Its principal objective revolves around centralizing the oversight of the family's assets, with financial resources typically originating from the family's own capital, which often accumulates across generations. Decker and Lange (2013) portray a family office as an administrative entity entrusted with the management of intricate financial and personal affairs for one or more families spanning multiple generations. The primary role of the family office is to provide these families with invaluable advice and guidance. While definitions of family offices may vary, they all agree on the common understanding that these establishments are created to effectively handle the complex business affairs of entrepreneurial families. In our research, we follow the definition of a family office proposed by Zellweger and Kammerlander (2015), wherein they characterize it as "a separate legal entity placed between the family and its assets that is solely devoted to the management of the affairs of a single family" (p. 1290).

6.2.2 Comprehensive services provided by SFOs

SFOs provide a unique wealth management approach that caters specifically to the individual requirements and objectives of a single family (Kenyon-Rouvinez & Park, 2020). This personalized strategy in delivering financial and non-financial services distinguishes SFOs from other forms of wealth management. In the realm of financial services, SFOs play a crucial role in assisting families with asset allocation across a diverse range of investment classes, including equities, fixed income securities, real estate, and direct investments (Decker & Lange, 2013; Liechtenstein et al., 2008). This process involves a comprehensive analysis of families' financial goals, risk tolerance, and investment time horizon, resulting in the creation of a bespoke portfolio tailored to their specific needs. Moreover, SFOs prioritize generating consistent income and safeguarding wealth for their clients, facilitating long-term financial stability (Schickinger et al., 2022).

Beyond portfolio management, SFOs provide families with regular performance reports, equipping them with the necessary information to make well-informed decisions about their investments. These reports encompass performance data, updates on market conditions, and other pertinent information. SFOs also extend their expertise to tax planning and compliance, ensuring families' adherence to applicable laws and regulations (Rivo-López et al., 2017; Wessel et al., 2014).

In addition to their core financial services, SFOs encompass a diverse spectrum of non-financial offerings tailored to the needs of multi-generational families. These specialized services play a pivotal role in assisting families in the management of personal affairs, facilitation of philanthropic endeavours, transitioning of wealth, and fostering connections among affluent families and organizations (Rivo-López et al., 2017). Moreover, SFOs extend their expertise to encompass educational guidance, offering valuable insights and support in matters pertaining to the educational development of future generations. Additionally, SFOs may provide concierge services to address the practical day-to-day needs of their clients, including travel arrangements and event coordination. In essence, SFOs deliver a comprehensive suite of both financial and non-financial services meticulously crafted to empower families in realizing their long-term financial objectives while safeguarding and perpetuating their wealth for future generations (Liechtenstein et al., 2008).

6.2.3 Entrepreneurial mindsets in SFOs

Unlike traditional firms, which primarily focus on maximizing shareholders' value, SFOs have a distinct objective of ensuring the long-term well-being and success of a single family over generations (Liechtenstein et al., 2008). An essential aspect of SFOs is their commitment to nurturing future generations and equipping them with the necessary skills and knowledge to effectively manage and sustain their inherited wealth. This becomes crucial considering the varying goals and motivations among different generations of inheritors. Research indicates that successor generations tend to exhibit a higher degree of risk aversion compared to the entrepreneurial mindset of the founding generation (Welsh et al., 2013). Furthermore, Schickinger et al. (2022) found that SFOs established in the first generation often prioritize entrepreneurial activities over asset preservation, while subsequent generations tend to emphasize wealth preservation and exhibit more risk-averse behaviour. Consequently, successors may lean towards investing in established and profitable companies rather than in ventures with uncertain revenue streams (Block et al., 2019; Schickinger et al., 2022). The preservation of inherited wealth becomes a central concern for later generations, influenced by a fear of losing the accumulated assets created by their predecessors. Family offices typically place greater emphasis on the current profitability of portfolio companies rather than the potential for future revenue growth.

While previous studies on SFOs have primarily focused on their characteristics and investment patterns (e.g., Decker & Lange, 2013; Liechtenstein et al., 2008; Welsh et al.,

2013; Schickinger et al., 2021, 2022; Zellweger & Kammerlander, 2015), little is known about their portfolio firms, in particular regarding capital structure.

6.2.4 Capital structure theories (in family business research)

Researchers have been extensively studying the capital structure of different firm types, investigating, amongst others, the factors that underly the respective decision-making process (Gompers et al., 2016; Schickinger et al., 2022). With regard to family firms, Hansen and Block (2021) show in a meta-analysis that family firms have slightly lower debt ratios than non-family firms. Yet, they also show that a large heterogeneity exists within the group of family firms. Before we develop our hypotheses about the differences between family-owned and SFO-owned firms regarding capital structure, we briefly review relevant theories that have been used in prior research on (family) firm's capital structures.

6.2.4.1 Pecking order theory

One of the traditional finance theories to understand financial decisions is the pecking order theory (Myers, 1984). This theory concentrates on a hierarchical order in which financing sources are chosen to finance investments. This theory suggests that companies prefer to finance their operations internally rather than through external sources. In case internal funds are not sufficient, the firm will utilize (bank) debt before considering equity funding as a last resort. Therefore, the theory posits that there is no optimal capital structure or target debt level (Degryse et al., 2012; Jansen et al., 2022). The pecking order theory is rooted in the issues that arise from the existence of asymmetric information (Myers, 1984). Generally, managers have more information about the firms´ prospects, risks and value than external investors. This asymmetric information may favour the issue of debt over equity, as the issuance of debt indicates the board´s belief that an investment will be profitable (Brealy et al., 2008). Empirical research has yielded mixed results regarding the existence of a pecking order. While some family firm scholars find that families follow a pecking order hierarchy and prefer external debt over external equity when additional financing is needed (Blanco-Mazagatos et al., 2007; Poutziouris, 2001; Schickinger et al., 2022), others have found a negative relation between family ownership and debt financing in both private and public family firms (Gallo & Vilaseca, 1996; Mishra & McConaughy, 1999). The desire to retain corporate control, as well as the fear of bankruptcy, can explain the latter (Gallo & Vilaseca, 1996; Mishra & McConaughy, 1999). Although research has shown that owner families may have varying levels of willingness to use debt, there is generally a preference

for internal over external financing options and a hierarchical approach in line with pecking order theory (Schickinger et al., 2022).

6.2.4.2 Trade-off theory

Trade-off theory is an alternative theory that can explain financial decisions. In contrast to pecking order theory, it assumes that an optimal capital structure exists. According to this model, the optimal capital structure arises from the ideal balance between the costs and benefits of using debt (Harris & Raviv, 1991; Myers, 1977). One of the most important benefits of using debt is the tax-deductibility of interest payments (also called "tax shield", Kemsley & Nissim, 2002). Another benefit is the leverage effect where the returns for equity holders are increased by the utilization of (cheap) debt. Achleitner et al. (2010) estimate the leverage effect to account for one third of value creation in private equity buyouts. Nevertheless, a high debt level also increases the costs of financial distress, the bankruptcy risk (Kraus & Litzenberger, 1973), and the costs of information asymmetry between equity and debt holders (Jensen & Meckling, 1976). Therefore, the optimal capital structure varies among companies, depending on the firms' business model or characteristics (Myers, 1984). Empirical evidence shows, for example, that private equity firms mostly follow the trade-off theory and raise as much debt as possible (Gompers et al., 2016).

6.2.4.3 Family firm pecking order

Jansen et al. (2023) combine the SEW perspective with the pecking order theory to develop a family firm pecking order. The y show that family-owned firms first prefer internal financing, next debt financing, followed by family capital, and last external capital. The argue that financing choices in family firms can also be influenced by managers´ preferences and non-rational elements (Romano et al., 2021; Koropp et al., 2014). The financing decisions are impacted by non-economic considerations such as emotions, family goals and risk-taking propensity (Romano et al., 2001). While family-owned firms may be aware of the economic impacts (e.g., lower firm growth) of their financing decisions, the owners may prioritize non-economic over economic goals (Motylska-Kuzma, 2017; Jansen et al., 2023). Particularly loss aversion and family control are vital in understanding financing decisions made by family firms (Burgstaller & Wagner, 2015; Schickinger et al., 2022). It has been noted that family firms often face a trade-off between maintaining control (preference for debt) and risk aversion (preference for equity) (Burgstaller & Wagner, 2015; Jansen et al., 2023). On the one hand, family owners may be reluctant to use financing sources that could dilute their

control over the firm (Jansen et al., 2023). However, on the other hand, using more debt can increase the risk of default, thus requiring a more cautious approach to debt financing (Jansen et al., 2023). This highlights the complexity of financing decisions within family firms. These two components, loss aversion and family control, are central concepts of the SEW perspective (Gómez-Mejía et al., 2007).

While previous research has examined the capital structure of family-owned firms (for a summary, see Hansen & Block, 2021), we know little about the capital structure of SFO-owned firms. Although both family-owned and SFO-owned firms are connected to owner families, the two firm types or owners have been argued to differ from each other in important ways, e.g. with regard to their investment portfolios (Bierl & Kammerlander, 2019), governance structures (Zellweger & Kammerlander, 2015), entrepreneurial behaviour across generations (Schickinger et al., 2021), and preferences related to financing (Schickinger et al., 2022). We shall argue that SFOs as owners no longer have such a strong emotional and social bond to their portfolio firms as compared to entrepreneurial families owning a family firm, which shall have an impact on the capital structure and financing decisions of SFO-owned firms versus family-owned firms.

6.3 Hypotheses

Our first argument concerns the relationship between the firm owner and the firm, respectively the management of the firm. Typically, after establishing an SFO, the founding families exhibit a tendency to disengage from the business, resulting in reduced participation in day-to-day operations. Moreover, the emotional and social connection to the original family business id reduced. From a principal-agent perspective this could lead to an increase in information asymmetries between the (management of the) firm and its owners. In line with the pecking order theory, higher information asymmetries prompt managers to rely more on debt financing. This is because the increased debt serves as a signal to the SFO that the managers of the SFO-owned firm are convinced of the profitability of their firm. Indeed, taking up (risky) debt can serve as a credible signal to the SFO owner (Flannery, 1986).

Additionally, SFOs are described as professional institutional investors that prioritize wealth management for the SFO owner (Hagan, 2021). This wealth management includes risk diversification achieved through investments in various asset classes (e.g., real estate, bonds, art) and through direct entrepreneurial investments (DEIs) in other firms (Rivo-López et al., 2017). In order to fully benefit from the leverage effect as professional investor, a significant portion of debt is used to finance such investments. The leverage effect describes

the situation that under certain circumstances equity returns can be increased by the utilization of (cheap) debt. Based on these two lines of arguments, we formulate the following hypothesis:

H1: *SFO-owned firms have a higher debt ratio than family-owned firms.*

Debt can be divided into short-term and long-term debt (e.g., Croci et al., 2011; Haider et al., 2021). Whereas short-term debt includes a debt maturity of up to a year, long-term debt comprises debt positions with a maturity of more than a year (Hall et al., 2000). Prior empirical evidence shows that particularly short-term debt may increase the bankruptcy risk of a firm (e.g., Della Seta et al., 2020; Stohs & Mauer, 1996). This is because short-term debt requires refinancing due to their relatively quick maturity and variable interest rates. A significant rise in interest rates can escalate the costs associated with servicing short-term debts, further straining a company's financial position (Garcia-Teruel & Martinez-Solano, 2007). Firms that are unable to refinance their short-term debt or manage the increased interest expenses resulting from deteriorating financial conditions face liquidity problems that could lead to financial distress and bankruptcy (Garcia-Teruel & Martinez-Solano, 2007). Compared to short-term debt, long-term debt requires less frequent refinancing, thereby reducing the risk of unexpected changes in credit conditions (Stohs & Mauer, 1996). In addition, long-term debt exploits tax benefits to a better extent than short-term debt (Leland & Toft, 1996). Since SFOs are long-term investors that engage in strategic capital allocation and asset management (Schickinger et al., 2022; Bierl et al., 2018), but still avoid significant (bankruptcy) risks, we posit the following hypothesis:

H2: *The effect of a higher debt ratio for SFO-owned versus family-owned firms is particularly strong for long-term debt.*

Moreover, we expect that the higher (long-term) debt ratio in SFO-owned firms is stronger for SFOs that sold their original family firm. Such SFOs have a lower emotional and social connection to their portfolio firms and therefore care less about losing control resulting from increased debt levels. Such SFOs act more like private equity rather than like family investors aiming to find the optimal capital structure based on trade-off theory (see Section 2.4.2 above). In turn, SFOs that are invested in their original family firm share many similarities with owner families that are direct owners of their family firms. The emotional and social connection is still present and the SFOs (and the owner families behind them) may regard their investments not only from a financial perspective. Loss aversion and a fear of

losing control (Gómez-Mejía et al., 2007) due to high debt levels may impact capital structure decisions avoiding overly high debt levels. The following hypothesis should hold:

> **H3:** The effect of a higher debt ratio for SFO-owned versus family-owned firms is particularly strong for SFOs that sold their original family firm.

6.4 Methodology

6.4.1 Sample and data

We investigate our research question with a sample of SFO-owned and family-owned firms that are located in German speaking countries where entrepreneurial families and Mittelstand firms represent the backbone of the economy (Pahnke & Welter, 2019) and have a long-standing tradition (De Massis et al., 2018). We performed a multi-step manual approach to identify SFOs and their portfolio firms given the lack of transparency and difficulty in obtaining reliable information on SFOs from established databases (Liechtenstein et al., 2008; Cumming & Groh, 2018; Schickinger et al., 2022). Generally, SFOs are privately held, have no legal constraint to disclose information, and often minimize public presence to maintain their confidential nature (Decker & Lange, 2013; Schickinger et al., 2022).

Our data collection approach includes browsing through various web sources such as Google, Linkedin, Xing and databases such as Preqin, Pitchbook and the Private Banking Magazine. The latter served as one of the most important data sources, as this magazine mainly centres on family office-related topics. Since our study analyses the phenomenon of SFOs on portfolio firm-level, we only consider SFOs that make DEIs. In total, we identified 93 German speaking SFOs and 173 SFO-owned firms. A firm is identified as "SFO-owned" when a SFO holds an equity stake (of at least 25%) in the firm. For these companies, we retrieved accounting and ownership data from the Amadeus database provided by Bureau Van Dijk for the period 2011 to 2020. Moreover, supplementary accounting data were collected from the German Federal Gazette (Bundesanzeiger).

Our control group comprises of 684 family-owned firms. To identify comparable family firms, we follow a five-to-one matching approach (the nearest neighbor) based on industry and firm size (Rosenbaum, 2010). For industry classification, we used the two-digit SIC codes and for firm size we used the total revenues in 2011 (or total assets if total revenue was not available). It should be noted that not for every single SFO-owned firm five

comparable family firms were found. Therefore, the actual number of 684 comparable firms is lower than the maximum of 865 comparable firms (173 SFO-owned firms multiplied by 5). To categorize a firm as a family-owned firm, the founding family had to own at least 25% of the equity.

43% of the firms in our dataset operate in the manufacturing sector, followed by services (28%), retail (21%), and other industries (8%). Since only 19% of the firms are listed on a stock exchange, we do not include stock market data.

6.4.2 Variables

6.4.2.1 Dependent variables: debt ratio and long-term debt ratio

In line with Burgstaller & Wagner (2015), Fernando et al. (2013), and Ampenberger et al. (2013), we measure this variable as the ratio of total debt to total assets. In order to consider the debt maturity, we also calculated the long-term debt ratio which is defined as total debt minus current liabilities divided by total assets (Ampenberger et al., 2013).

6.4.2.2 Independent variables: SFO-owned firm (all SFOs) and SFO-owned firm (only SFOs that sold their original family firm)

We measured the independent binary variable SFO-owned firm (all SFOs) by assessing whether an SFO holds an equity stake of at least 25% (coded as "1") or whether the family holds a direct equity stake of 25% (coded as "0"). This threshold is important in the German legal context (and also in many other countries especially in the EU) because it determines the minimum equity share (with voting rights) required to prevent decisions from being taken by a qualified majority (§ 179 II 1, AktG). It should be noted that despite the threshold is set at 25%, the SFOs in our sample hold on average 51% of the equity of the respective portfolio company. To differentiate between SFOs that still own their original family firm and those that have sold it, we also calculated the variable SFO-owned firm (only SFOs that sold their original family firm). A firm that is owned by an SFO that sold its original family firm is coded as "1", otherwise as "0".

6.4.2.3 Control variables

We included several variables as controls in all the regressions. Firm size is measured as the natural logarithm of the year-end number of employees (Block & Fathollahi, 2022). Firm age was calculated as the natural logarithm of the number of years that passed since the firm's incorporation. Listed is a dummy variable that indicates whether the firm is listed on a

stock exchange. To distinguish firms facing financial difficulties from better performing firms, we also controlled for firm performance, which was measured as ROA. This is the ratio between net income and total assets (Andres, 2008; Block et al., 2020). We measure firm growth through sales growth, which is the most common indicator of firm growth in literature (Delmar, 2019). Sales growth is a better measure to compare growth across industries because it is not influenced by differences in employee intensity across industries (Block & Fathollahi, 2022; Weinzimmer, 1998). It is calculated as the yearly percentage increase/decrease of net sales between time t and t-1. Cash holdings was calculated as the ratio of cash and cash equivalents to total assets. Board involvement is a dummy variable that indicates whether a SFO or family member is in the supervisory or management board of the firm (coded as "1") or not (coded as "0"). In addition, to address potential alternative reasons for capital structure decisions, we control for alternative ownership structures that might influence the firm´s capital structure decisions, such as the percentage of ownership controlled by the SFO or the presence of family owners. To determine bankruptcy risk, we calculated Altman-Z (Altman, 1983). This model represents one of the most widespread models in literature and it is calculated as the following function of $Z' = 0.7177 * x_1 + 0.847 * x_2 + 3.107 * x_3 + 0.42 * x_4 + 0.998 * x_5$, where $x_1 = \frac{\text{current assets – current liabilities}}{\text{total capital}}$; $x_2 = \frac{\text{retained earnings}}{\text{total capital}}$; $x_3 = \frac{\text{EBIT}}{\text{total capital}}$; $x_4 = \frac{\text{equity}}{\text{debt capital}}$; $x_5 = \frac{\text{sales}}{\text{total capital}}$. A lower Altman-Z indicates a higher probability of insolvency. Furthermore, by considering the generation of the firm (Comino-Jurado et al., 2021), we control for a further family related factor (beside to magnitude of ownership and board involvement) indicator. We use firm age as proxy for the family generation (Zellweger et al., 2012), where each 20-year period represents a new generation (Twenge et al., 2010). Finally, given that industry-specific factors may impact the financial strategy of a company, we also controlled for industry effects by differentiating between (1) manufacturing, (2) retail, (3) services and (4) other (Block et al., 2020). In addition, to control for time dependency, time dummies were also incorporated into the analyses. Table 6.1. summarizes the variables used in this study.

Table 6.1. Variable definitions for capital structure investigations

Variables	Definition
Dependent Variables	
Debt ratio	(Total debt/total assets) * 100
Long-term debt ratio	((Total debt – current liabilities)/total assets) * 100
Independent Variables	
SFO-owned firm (all SFOs)	Indicates whether a firm is owned by a single family office (1) or by a family (0)
SFO-owned firm (only SFOs that sold their original family firm)	Indicates whether a firm is owned by a SFO which sold its initial family business (1) or by a family (0)
Control Variables	
Ownership in %	Ownership of SFO or family in the firm in percent
Listed	Dummy whether firm is listed (1) or not (0)
ROA	(Net income/total assets) * 100
Firm size	Natural logarithm of the year-end number of employees
Firm age	Natural logarithm of the firm age
Firm growth	Yearly percentage increase/decrease of net sales (total assets) between t and t-1
Cash holdings	Cash and cash equivalents/total assets
Board involvement	Indicates whether a SFO or family member is in the supervisory or management board of the firm (1) or not (0)
Generation	Firm age as a proxy for generation, where each 20-year period represents a new generation
Altman-Z	$Z' = 0.7177 * x_1 + 0.847 * x_2 + 3.107 * x_3 + 0.42 * x_4 + 0.998 * x_5$ where $x_1 = \frac{current\ assets - current\ liabilities}{total\ capital}$; $x_2 = \frac{retained\ earnings}{total\ capital}$; $x_3 = \frac{EBIT}{total\ capital}$; $x_4 = \frac{equity}{debt\ capital}$; $x_5 = \frac{sales}{total\ capital}$
Year (2011-2020)	Year-dummy (fixed effects included) (are not reported)
Industry (1-4)*	Industry-dummy (fixed effects included) (are not reported)

Notes: This table describes the construction of the relevant variables used in this study. * Industry categories includes (1) Retail, (2) Manufacturing, (3) Services and (4) Other.

6.5 Analyses and results

6.5.1 Descriptive statistics and correlations

Table 6.2. reports the descriptive statistics for our sample. Panel A provides the main summary statistics (mean, median, first and third quartiles) for the sample of SFO-owned firms. Panel B shows the statistics for the family-owned firms' sample.

Table 6.2. Descriptive statistics for capital structure investigations

Variable	N	Mean	P25	P50	P75
Panel A: SFO-owned firms					
Sales (€m)	948	1,699.57	40.29	142.12	666.77
Number of employees (#)	948	4,316.10	125.50	718.00	2,406.50
Debt ratio (%)	948	59.11	39.83	57.90	72.13
Long-term debt ratio (%)	948	32.67	14.62	27.35	42.53
Cash holdings	948	0.15	0.04	0.10	0.20
ROA (%)	948	1.45	0.49	4.11	8.57
Firm age (years)	948	35.55	12.00	21.00	40.00
Firm growth (%)	948	5.25	-3.32	3.89	11.89
Altman-Z	948	2.51	1.49	2.10	2.80
Generation	948	2.24	1.00	2.00	2.00
Panel B: family-owned firms					
Sales (€m)	3,439	1,090.47	214.01	391.26	749.86
Number of employees (#)	3,439	5,211.03	653.00	1,515.00	3,328.00
Debt ratio (%)	3,439	58.26	45.05	59.04	72.71
Long-term debt ratio (%)	3,439	27.32	15.49	25.59	36.82
Cash holdings	3,439	0.12	0.03	0.08	0.17
ROA (%)	3,439	7.93	3.66	7.04	11.17
Firm age (years)	3,439	56.33	22.00	40.00	80.00
Firm growth (%)	3,439	4.10	-0.84	3.87	8.93
Altman-Z	3,439	3.63	2.06	2.75	3.96
Generation	3,439	3.27	2.00	2.00	4.00

Notes: This table shows the mean, median, 25% quartile and 50% quartile of selected variables of the study.

Not surprisingly and supporting the quality of our matching approach, the SFO-owned and the family-owned firms are similar regarding basic firm characteristics (e.g., firm size, firm age and (analogously) family generation). Concerning the dependent variable of this study, SFO-owned firms have a debt ratio of 59.11%, which is similar to family-owned firms. The long-term debt ratio, however, shows that SFO-owned firms are financed with significantly more long-term debt. Regarding firm growth, the results show that, on average, SFO-owned firms grow substantially more in terms of sales. Cash holdings are in SFO-owned firms higher than in the control group (15% versus 12%). These percentages are on the same level with a set of European listed firms (Mortal et al., 2020) and very similar to the 10% level for Italian private firms (Bigelli & Sanchez-Vidal, 2012). Concerning firm performance, the results show that family-owned firms generate a 6.5 percentage points higher ROA than SFO-owned firms. Furthermore, the lower Altman-Z score of SFO-owned firms versus family-owned firms indicates that the bankruptcy risk is higher for SFO-owned firms.

As shown in Table 3, the correlations of debt ratio and long-term debt ratio with ROA, firm size, firm age, and cash holdings are negative and significant. Firm growth is positively correlated with SFO-owned firms and cash holdings. SFO-owned firms is negatively correlated with firm size, board involvement, ownership in %, family generation,

and Altman-Z. We do not detect any strong correlations among variables that could cause multicollinearity concerns except for the variables family generation and firm age which are by their construction strongly related (Kutner et al., 2004). All variance inflation factors (VIFs) range between 1.06 and 1.85 except for family generation (VIF=27.4) and firm age (VIF=27.3). We also calculated the main regressions once without considering firm age. The results remained stable.

Table 6.3. Correlation matrix for capital structure investigations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	VIF
(1) Debt ratio													
(2) Long-term debt ratio	**0.67**												1.06
(3) SFO dummy	0.01	**0.10**											1.85
(4) Firm growth	-0.01	-0.01	**0.12**										1.03
(5) ROA	**-0.08**	**-0.04**	**-0.21**	0.01									1.09
(6) Listed	**-0.08**	-0.02	**0.22**	**0.04**	**-0.07**								1.22
(7) Fim size	**-0.08**	0.03	**-0.22**	**-0.06**	**0.09**	**0.18**							1.19
(8) Firm age	0.03	-0.02	**0.20**	**0.08**	**-0.04**	**-0.05**	**-0.18**						27.30
(9) Board involvement	**-0.03**	**-0.05**	**-0.39**	**-0.08**	**0.11**	0.02	**0.15**	**-0.13**					1.20
(10) Ownership in %	-0.02	**-0.06**	**-0.57**	**-0.06**	**0.12**	**-0.33**	**0.12**	**-0.12**	**0.18**				1.59
(11) Cash holdings	**-0.23**	**-0.12**	**0.11**	**0.09**	**0.11**	0.02	**-0.09**	0.02	**-0.07**	**-0.09**			1.06
(12) Generation	-0.03	0.01	**-0.21**	**-0.08**	**0.03**	**0.05**	**0.18**	**-0.98**	**0.14**	**0.13**	-0.02		27.40
(13) Altman-Z	-0.03	**-0.16**	**-0.13**	-0.00	**0.14**	**-0.13**	**-0.19**	**0.08**	**0.04**	**0.09**	**0.03**	**-0.08**	1.12
Mean VIF													5.59

Notes: Statistically significant coefficients ($p < 0.1$) are marked bold.

6.5.2 Regression results

We calculated OLS linear regressions with clustered standard errors to test the effect of the two binary SFO-variables on the capital structure of the firms they own. Table 4 presents the results of the analyses. Hypothesis 1 posits that SFO-owned firms display an overall higher *debt ratio* than family-owned firms. By using overall *debt ratio* as the dependent variable in Model 1, we show that the coefficient is positive but not statistically significant (coeff. = 1.15; $p>0.1$), not supporting our first hypothesis.

Hypothesis 2 suggests that the effect of a higher debt ratio for SFO-owned firms versus family-owned firms is particularly present for *long-term debt.* The results of Model 3 demonstrate that the coefficient is positive and statistically significant (coeff. = 6.85; $p<0.05$), showing that SFO-owned firms indeed display a 6.85 percentage points higher *long-term debt ratio* compared to family-owned firms, supporting our second hypothesis. At the same time, Model 5 reveals that SFO-owned firms have a significant lower *short-term debt ratio*.

Finally, hypothesis 3 states that the higher (long-term) *debt ratio* in SFO-owned firms is stronger for SFO-owned firms that sold their original family firm. To explore this hypothesis, we run the same regressions in Model 2, 4 and 6 with *SFO-owned firm (only SFOs that sold their original family firm)* as independent variable. The results show that the direction of the effects remains the same, but the effect sizes are stronger. The coefficient of the *long-term debt ratio* (coeff. = 8.55; $p<0.05$) is again positive and significant. Therefore, we find supportive evidence for hypothesis 3.

Table 6.4. Main results for capital structure investigations

Variables	Model 1 Linear regression DV Debt ratio	Model 2 Linear regression DV Debt ratio	Model 3 Linear regression DV Long-term Debt ratio	Model 4 Linear regression DV Long-term Debt ratio	Model 5 Linear regression DV Short-term Debt ratio	Model 6 Linear regression DV Short-term Debt ratio
SFO-owned firm (all SFOs)	1.151		6.850**		-5.698***	
	(3.210)		(2.768)		(1.942)	
SFO-owned firms (only SFOs that sold their original family firm)		3.772		8.261**		-4.489**
		(4.101)		(3.676)		(2.196)
Ownership in %	-0.046	-0.038	-0.033	-0.042	-0.014	0.003
	(0.043)	(0.042)	(0.038)	(0.036)	(0.024)	(0.023)
Firm age	57.876	51.300	-57.020	-69.500	114.900	120.800
	(168.665)	(167.100)	(135.121)	(133.200)	(91.100)	(90.560)
Firm size	-1.220	-1.074	0.164	0.351	-1.385***	-1.425***
	(0.875)	(0.809)	(0.793)	(0.737)	(0.469)	(0.475)
Firm growth	-0.000	-0.000	-0.000	0.000	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Listed	-5.650**	-6.104**	-3.940	-4.484**	-1.708	-1.620
	(2.450)	(2.570)	(2.144)	(2.222)	(1.839)	(1.880)
ROA	0.180	0.182	0.190	0.187	-0.009	-0.004
	(0.394)	(0.395)	(0.367)	(0.368)	(0.058)	(0.058)
Board involvement	-2.110	-1.57	-0.894	-0.586	-1.216	-0.921
	(2.000)	(1.868)	(1.664)	(1.553)	(1.416)	(1.474)
Cash holdings	-44.530***	-44.920***	-22.080***	-22.510***	-22.450***	-22.410***
	(7.790)	(7.914)	(6.550)	(6.693)	(4.917)	(4.941)
Generation	0.815	0.774	-0.210	-0.361	1.024	1.135
	(1.800)	(1.783)	(1.464)	(1.442)	(1.016)	(1.010)
Altman-Z	-0.060	-0.050	0.040	0.047	-0.099	-0.097
	(0.090)	(0.086)	(0.110)	(0.108)	(0.051)	(0.052)
N	4,498	4,498	4,498	4,498	4,498	4,498
Controls	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Notes: * indicates p < 0.1, ** indicates p < 0.05, *** indicates p < 0.01.

6.6 Discussion

6.6.1 Summary and interpretation of main results

Prior research suggests that SFOs (being intermediaries) differ from owner families being direct owners of their family firm (Schickinger et al., 2022; Zellweger & Kammerlander, 2015; Bierl & Kammerlander, 2019). So far, however, we know little about the impact that SFOs have on their portfolio firms. Our study reduces this gap and looks at the capital structure of SFO-owned firms. Our empirical results show that SFO-owned firms have a higher long-term debt ratio compared to 'traditional' family-owned firms. In addition, we show that this effect is higher for those SFOs that sold their original family firm.

To explain our findings, we use pecking order (Myers, 1984) and trade-off theory (Harris & Raviv 1991; Myers, 1977). We argue that trade-off theory (pecking-order theory) can be used to describe the financing and capital structure decisions of SFO-owned firms (family-owned firms). SFOs (being intermediaries) are less emotionally and socially connected to their portfolio firms as compared to owner families that are direct owners of their family firms. Having private equity like goals and involving investment professionals lead them to optimize the capital structure of their portfolio. They aim to take advantage of the leverage effect, that is, they aim to increase the returns for equity holders through (cheap) debt.

Our results also show that SFO ownership increases the *long*-term debt of their portfolio firms (and not the *short*-term debt). How can this finding be explained? We argue that although SFOs act like professional institutional investors and resemble private equity firms in many aspects, they are still afraid of the risks associated with short-term debt. Hence, they particularly avoid short-term debt, which is shown to increase the bankruptcy risk of a firm (e.g., Della Seta et al., 2020; Stohs & Mauer, 1996) (e.g., through refinancing or interest rate risks). In addition, short-term debt does not fully exploit the tax benefits associated with debt (tax shield) Leland & Toft, 1996), reducing the attractiveness of high levels of short-term debt. Overall, our results suggest that regarding capital structure decisions, SFOs are somewhere in between private equity investors and entrepreneurial families that are direct owners of their firms. This conclusion is in line with the study of Schickinger et al. (2022), who study debt financing choices on the SFO-level and compare them to those of private equity firms. Their main findings are that SFOs are less likely than private equity firms to use debt and that this effect becomes stronger with older SFOs and increased owner involvement in the management of the SFO. Our result that SFOs tend to avoid *short*-term debt is in line with their finding as it shows that SFOs do not pursue a short-term leveraged private equity investment approach.

How can our results be interpreted from an SEW perspective? Our first main finding that SFO-owned firms have higher levels of long-term debt compared to family-owned firms is a sign that SEW plays a less important role for SFOs as compared to entrepreneurial families with direct equity ownership. Still, the fact that they seem to avoid *short*-term debt is a sign that SEW considerations still play a role. Unlike private equity investors, SFOs seem to avoid situations where high levels of short-term increase the insolvency risks of their portfolio firms. In this regard, SFOs as firm owners resemble entrepreneurial families that are directly invested in their family firms. Recent research by Bertschi-Michel et al. (2023)

shows that in a situation of a survival-threatening crisis, family owners are more likely to "sacrifice normative SEW dimensions and to protect instrumental SEW dimensions" (Bertschi-Michel et al., 2023, p. 1132) reducing the odds of insolvency. Avoiding short-term debt can certainly be considered as instrumental for avoiding a situation of insolvency. Our second main finding that SFOs which sold their original family firm differ from SFOs which still own their original family firm can also be interpreted from an SEW perspective. While the former group has little emotional and social connection to their portfolio firms, the latter group has an emotional and (most likely also) social connection to their portfolio firms. Prior family business research shows that such emotional and social bonds created through tradition and legacy (Erdogan et al., 2020; Sharma & Manikutty, 2005) influence strategic decision making. Our results suggest that this argument (to some extent) can also be applied to SFOs which still own their original family firms. Our findings are therefore in line with Schickinger et al. (2021) who develop a two-dimensional taxonomy of SFOs and suggest that SFOs differ according to whether the family still owns the original family or not.

Next to this SEW interpretation, our results can also be interpreted from a wealth diversification and portfolio theory perspective (Markowitz, 1952). SFOs and the entrepreneurial families behind them typically have their wealth well diversified over different investments and asset classes. Most likely, the level of diversification is higher than with entrepreneurial families that are directly invested in their family firms. For the latter group, the family firm and its assets constitute their main financial asset, which they aim to preserve and do not want to put into danger by overly high levels of debt. The utilization of external debt financing can potentially jeopardize their control over the firm. Banks frequently impose specific obligations, including the provision of information, collateral, and adherence to fixed interest payments, in the context of debt financing (Boot & Thakor, 2000), thereby augmenting the risk of insolvency. In countries such as Germany, creditor-friendly bankruptcy laws increase this threat to the control of the firm in the event of financial distress (Davydenko & Franks, 2008). The situation is different for SFOs and the entrepreneurial families behind them. Being more diversified in their wealth and asset allocation, they can accept higher levels of debt in their portfolio firms and benefit from the leverage effect associated with higher debt usage.

Finally, our results can also be interpreted from an agency and signalling perspective. The relationship between SFOs and their portfolio firms can be considered a principal-agent relationship, where the level of information asymmetry varies depending on the type of SFO. Prior research suggests that managers may use (risky) debt as a signal to their shareholders to

signal high quality and profitability of their firms (Flannery, 1986). Yet, the value and need of this signal is reduced with lower information asymmetries. Our result that the debt levels are particularly high with SFOs that have sold the original family business is in line with this agency logic. Such SFOs know their portfolio firms less than SFOs that are invested in their former family business.

6.6.2 Implications for theory

Our study contributes to the small but growing literature on SFOs (e.g., Decker & Lange, 2013; Liechtenstein et al., 2008; Welsh et al., 2013; Wessel et al., 2014; Schickinger et al., 2021, 2022; Zellweger & Kammerlander, 2015), which is part of family business research. By showing that SFO ownership has an impact on the capital structure of firms, we extend the research by Schickinger et al. (2022) looking at the capital structure decisions of the SFOs themselves. We show that by increasing (long-term) debt SFOs are willing to accept a loss of control with their portfolio firms for an increased ROE, but they seem to do avoid increasing the company's bankruptcy risk.

Our study also contributes to broader corporate governance research on the firm-level effects of blockholder ownership (Edmans & Holderness, 2017). It appears that SFOs constitute a separate owner category somewhere in between private equity firms and business families as direct owners. So far, SFOs as firm owners have been overlooked in research on the consequences of firm and blockholder ownership. Our research also highlights the heterogeneity that exists *within* the group of SFOs (Schickinger et al., 2021) by showing that SFOs which sold their original family firm differ from SFOs which still own their original family firm. The latter type of SFO may have similarities with family foundations as intermediaries, which have recently gained visibility in family business research and practice (Block et al., 2020; Uhl, 2022).

Next to these contributions to family business and corporate governance research, our study also contributes to corporate finance and family business research on capital structure decisions. The results of our study show that capital structure and firm ownership interrelate with each other (e.g., Brailsford et al., 2002; Chaganti & Damanpour, 1991; Ampenberger et al., 2013; Schmid, 2013) and that trade-off theory (pecking-order theory) can explain the capital structure decisions of SFO-owned firms (family-owned firms). This way, our study also connects to prior research on the debt financing and capital structure decisions in family firms (Bacci et al., 2018; Koropp et al., 2013; Hansen & Block, 2021; Pacheco, 2022), where pecking order theory combined with an SEW perspective has become the prevailing

explanation. Furthermore, our study shows that debt maturity matters in the relationship between family/SFO ownership and capital structure and that family business research needs to distinguish between short- and long-term debt.

6.6.3 Implications for practice

The findings of our study have practical implications for a range of internal and external stakeholders, including owners, CFOs/managers as well as external debt and service providers. Our findings provide insights into the debt ratios of SFO-owned versus family-owned firms and reveal how capital structure (decisions) may change when family-owned firms turn into an SFO-owned firms. Banks and other debt providers need to consider this in their relationship with the firm and the evaluation of their creditworthiness. Employees may not like the fact that SFOs as firm owners seem to prefer higher (long-term) debt levels than owner families that have direct ownership in the firm. Higher debt levels make firms more vulnerable and likely to become bankrupt in (unforeseen) crisis situations. The good news in this regard is that SFOs seem to avoid high-risk short-term debt. On another side, a more positive attitude towards debt that comes along with SFOs as firm owners allows firms to undertake important investments into the transformation of their business processes and business models. Prior research shows that family-owned firms (for reasons of not losing control) are often hesitant to use external debt to finance such investments and pursue a zero leverage policy (Fardnia et al., in press). Yet, such investments may, in fact, be necessary to stay competitive when new technologies become available or regulatory changes occur. Only relying on internal financing can be a dangerous strategy in such a situation.

6.6.4 Limitations and future research

Our study has limitations that serve as a basis for future research. For example, the geographical focus of our study is limited to the DACH region. The findings of our study may not be generalizable to other regions, such as the United States, Asia, or other European countries. The phenomenon of SFOs may not be so relevant in countries such as China where family firms are young and are currently experiencing the transition from first to second generation. Future research using samples from countries outside the DACH region is needed to explore the institutional, historical and cultural boundary conditions of our findings. Another limitation is the overall small sample size of firms owned by SFOs. This is due to the recency of the SFO-phenomenon but also due to the hidden nature of SFOs. Joint efforts of the family business (research) community is needed to construct a database of SFOs and

their portfolio firms. Another direction of future research concerns a longitudinal research design. One could, for example, focus on firms acquired by an SFO and compare the capital structure before and after the acquisition. This would allow for a more precise evaluation of the impact of SFO ownership on capital structure. Additionally, a comparative analysis of the capital structure decisions of SFOs and other types of firm owners (e.g., private equity, venture capital and/or government funds) could yield valuable insights helping to put the results of our study into a broader perspective. Finally, future research endeavours may also delve deeper into the impact of SFO ownership on other firm-level outcome variables, e.g., financial performance, innovation, and (social and/or environmental) sustainability. To conclude, research on SFOs is in its infancy and there is much to learn about SFOs as firm owners. Our study provides a first step in this direction and explores the phenomenon of SFO ownership on the portfolio firm level.

Conclusion

Chapter 7

The concluding chapter of this thesis presents a succinct summary of the central conclusions derived from each preceding chapter. Section 7.1 provides a brief answer to the research questions by summarizing the main findings of each chapter. In addition, section 7.2 explores the practical and theoretical implications of the findings, while section 7.3 acknowledges the study's limitations and proposes avenues for future research.

7.1 Findings per chapter

7.1.1 Chapter 3: SFOs in the DACH region – an investigation of their characteristics, asset allocation and direct investments

RQ1: *What are the key components that characterize SFOs? Does heterogeneity exist between SFOs? How is the investment behavior of SFOs characterized?*

Chapter 3 presents the results of the descriptive analysis. With limited previous research on SFOs, this chapter aims to provide a comprehensive understanding of the SFO landscape in the DACH region. To answer the research questions and provide an in-depth look into SFOs in the DACH region, the present chapter examines the key features, asset distribution, investment pattern, and differences among SFOs.

By analyzing 216 SFOs from the German-speaking area, it is revealed that family members exert a significant impact on the management of the SFO. The average age of an SFO is 22 years, with an average of 6.5 employees. The results also imply that SFOs adopt a risk-averse approach, preferring to invest in established companies from their home country and in real estate. Only a third of the SFOs invest in start-ups, which supports the risk-averse investment behavior. Furthermore, the results indicate that SFOs are heterogeneous and can be classified into three groups based on their relationship to the entrepreneurial family and the original family firm. These three groups reveal substantial differences in their wealth distribution and direct investment patterns.

7.1.2 Chapter 4: SFOs as firm owners: Performance investigations

RQ2: *How do SFO-owned firms compare to family-owned firms with regards to their financial performance? To what extent do management or supervisory involvement and stock market listing influence the relationship between SFOs and the financial performance of their owned firms?*

The literature on blockholders financial performance impact has been well established (e.g., Achleitner et al., 2020; Andres, 2008; Block et al., 2020; Brav et al., 2008; Herrmann & Franke, 2002; Renneboog et al., 2007), but the examination of SFOs as blockholders has remained untapped. Chapter 3 has examined the characteristics and investment behavior of SFOs, and in the current chapter, an additional gap in the literature is addressed by investigating the influence of SFO ownership on the financial performance of firms. The study utilizes a sample of 173 SFO-owned firms from the DACH region and a carefully selected comparison group of 684 family-owned firms from the same region. The financial

performance of the firms is measured using two commonly used accounting metrics, ROA and ROS.

The findings indicate that SFO-owned firms exhibit a worse financial performance compared with family-owned firms. Although the representation of the SFO-owning family on the supervisory board or the executive board of the firm can improve its financial performance significantly, however, it still performs worse than family-owned firms. Furthermore, the results obtained do not reveal any significant difference in performance between privately held and public SFO-owned firms. The conclusions drawn align with the agency theory and monitoring perspective, suggesting that closer monitoring can effectively reduce agency costs and consequently lead to improved financial performance.

7.1.3 Chapter 5: SFOs as firm owners: Cash holding investigations

RQ3: *How do single family office-owned and family-owned firms differ in terms of cash holdings?*

In Chapter 5, an examination is conducted to assess the disparities in cash holdings between SFO-owned and family-owned firms. While previous research has extensively studied the cash holdings of family-owned firms (e.g., Kuan et al., 2011; Lau & Block, 2012; Ozkan & Ozkan, 2004), the cash holdings of firms managed by SFOs have not been explored. This study contributes to the existing literature on SFOs as owners of firms. The sample from Chapter 4 is utilized to compare the cash holdings of SFO-owned and family-owned firms.

The cash holdings of the firms are measured as the ratio of cash and cash equivalents to total assets, which is consistent with previous studies (Bellovary et al., 2007; Ozkan & Ozkan, 2004). From the obtained results, it is evident that SFO-owned firms exhibit a higher cash holding ratio compared to family-owned firms. Moreover, it is discovered that this effect is significantly magnified when the SFO has divested its original family firm. These results lend support to the theoretical arguments put forth, suggesting that SFO-owned firms are subject to higher agency costs in comparison to family-owned firms.

7.1.4 Chapter 6: Capital structure of single family office-owned firms

RQ 4: *How do SFO-owned and family-owned firms differ in terms of debt financing?*

Chapter 6 delves into the capital structure of SFOs as firm owners, an area that has received less attention in the literature so far. Previous studies have argued that family businesses tend to have lower leverage ratios compared with non-family firms (Ampenberger et al., 2013; Schmid, 2013), however, the capital structure of SFO-owned firms remains largely uncharted territory.

By examining the same sample from Chapter 4, this study sheds light on the capital structure decisions of SFOs as firm owners. The findings provide evidence for the alignment of SFO-owned firms, similar to private equity firms, with the trade-off theory, as they exhibit a higher (long-term) debt ratio in comparison to family-owned firms. Additionally, it is observed that this effect is notably heightened when the SFO has sold its initial family firm.

7.1.5 Summary of the main findings in the dissertation

Family firms play a significant role in the economic landscape of the DACH region, yet they also pose unique challenges, particularly in the realm of succession planning. Consequently, an increasing number of entrepreneurial families are opting to establish SFOs as a means to effectively manage and safeguard their wealth for future generations. SFOs not only assist in succession planning but also contribute to the preservation of family wealth, ensuring a seamless transition of leadership to the next generation. However, research about SFOs in this domain is still in its early stages, with limited exploration of the specific role of SFOs as firm owners. This dissertation aims to deepen our understanding of SFOs by focusing on their impact as owners on the financial performance, cash holdings, and capital structure of their portfolio companies through four quantitative empirical studies. By shedding light on these aspects, the findings of this research will provide entrepreneurial families with a practical guide for the effective management and utilization of SFOs as a strategic long-term instrument for succession and investment planning. Table 7.1. below provides a summary of the main findings presented in this dissertation.

Table 7.1. Summary of the main findings in the dissertation

Research question	Summarized answers
RQ 1	• Average number of employees is 6.5, average age of an SFO in DACH region is 22 years • SFOs are very risk-averse and prefer to invest in established companies from their home country and in real estate, only one third invest in Start-ups • SFOs can be classified into three groups based on their relationship to the entrepreneurial family and the original family firm
RQ 2	• SFO-owned firms exhibit a worse financial performance than family-owned firms • The representation of the SFO-owning family on the supervisory board or the executive board of the firm can improve its financial performance significantly • There is no significant difference in performance between privately held and public SFO-owned firms
RQ 3	• SFO-owned firms demonstrate a higher cash holding ratio compared to family-owned firms • Moreover, these effects are amplified when the SFO has divested its initial family firm
RQ 4	• SFO-owned firms exhibit a higher long-term debt ratio than family-owned firms • Furthermore, these effects are stronger when the SFO has sold its initial family firm

7.2 Implications

7.2.1 Implications for theory

The present dissertation, with its quantitative-empirical approach and results, makes an important contribution to filling the identified research gaps and thus provides several theoretical contributions to various streams of literature, particularly the literature on family firms, entrepreneurial families, the emerging field of SFOs, and SFOs as owners.

7.2.1.1 Family firm literature:

The increasing prominence of SFOs as intermediaries in the realm of family firms has gained significant attention in recent years. In an effort to shed light on the motivation behind the creation of these entities and highlight their advantages, this research adopts a data-driven approach to examine the ways in which SFOs can be categorized and their differences in terms of objectives, entrepreneurial investment strategies, and governance. The goal is to provide a more nuanced understanding of the topic.

It is crucial to comprehend the impact that owners have on the firms they control in order to gain a comprehensive understanding of the world of business-owning families. The present study focuses on the influence of SFOs as owners on the financial performance, capital structure, and cash holdings of the firms they own, and makes a comparison with family-owned firms.

Through this study, a meaningful contribution is sought to be made to the literature on intermediaries in family firms (e.g., Aronoff & Ward, 2011; Zellweger & Kammerlander, 2015) and the emerging field of family business succession (e.g., Chua et al., 2003; Shepherd

& Zacharakis, 2000). The findings aim to provide valuable insights and clarity into the opaque world of SFOs, fostering fair and transparent conditions for all stakeholders involved in the transition to an SFO for a family business.

7.2.1.2 SFO literature:

This dissertation also makes a significant contribution to the existing literature on SFOs by adopting a quantitative approach to investigate the influence of various characteristics, governance structures, and heterogeneity on the investment behavior of SFOs. By addressing gaps in the current literature, which has primarily relied on a conceptual and qualitative approach with a stronger focus on studying the structure and services of SFOs (e.g., Decker & Lange, 2013; Liechtenstein et al., 2008; Rivo-López et al., 2017; Welsh et al., 2013; Wessel et al., 2014), this study adds valuable insights and advances the understanding of SFOs and their investment practices. The results of this research demonstrate that SFO-owning families behave heterogeneously, and that entrepreneurial investment and governance are contingent upon the ownership structure of the original family firm.

Additionally, this dissertation makes a noteworthy contribution to the existing literature by specifically focusing on the role of SFOs as firm owners or blockholders. Prior studies have analyzed the impact of various blockholders on financial performance (e.g., Achleitner et al., 2020; Andres, 2008; Block et al., 2020; Brav et al., 2008; Renneboog et al., 2007), cash holdings (e.g., Dittmar & Mahrt-Smith, 2007; Kuan et al., 2011; Ozkan & Ozkan, 2004), and capital structure (e.g., Bacci et al., 2018; Gottardo & Maria Moisello, 2014; Koropp et al., 2013) of the firms they own. However, the influence of SFOs in this capacity has yet to be thoroughly investigated. By exploring the behavior of SFOs as owners of firms, insights are sought to be gained regarding their impact on the financial performance, cash holdings, and capital structure, in comparison to family-owned firms.

The research findings reveal that SFO-owned firms exhibit lower financial performance in comparison with family-owned firms. Through an examination of the agency theory and monitoring perspective, it is determined that SFOs as firm owners exhibit a lesser degree of effectiveness in monitoring their portfolio companies compared to family-owned firms. Nonetheless, it is observed that the financial performance of SFO-owned firms can be improved through closer monitoring measures such as through representing the SFO's owner family by a family member on the executive or supervisory board of the portfolio firm. The analysis of the cash holdings of SFO-owned firms reveals that these firms possess a higher level of cash holdings as compared to family-owned firms. Furthermore, this disparity in cash

holdings is particularly pronounced for SFOs that have divested their original family firm. This result is in line with our arguments based on the agency theory and supports the conclusion that SFO-owned firms face higher agency costs in comparison with family firms. Consequently, the findings suggest that the establishment of an SFO introduces agency problems between the SFO and their portfolio firms as well as highlight that SFOs are not effective monitors. In addition, the results of previous studies (e.g., Anderson & Reeb, 2003; Villalonga & Amit, 2006) support the assertion that agency costs are lower in family-owned firms.

In addition, an in-depth analysis was conducted on the capital structure decisions made by firms under the ownership of SFOs. While previous studies have focused on the capital structure decisions within the SFOs themselves (e.g., Schickinger et al., 2022) (Schickinger et al., 2022) or in family-owned firms (e.g., Bacci et al., 2018; Koropp et al., 2013), this dissertation expands this area by presenting empirical evidence on capital structure decisions within firms owned by SFOs. The findings of the study demonstrate that SFO-owned firms tend to prefer the trade-off approach, akin to private equity firms (Harris & Raviv, 1991; Myers, 1977), while family-owned firms adopt the pecking-order theory (Myers & Majluf, 1984). Moreover, these effects are more pronounced when the SFO has divested its original family firm. These results highlight a significant deviation in the capital structure decisions of SFO-owned firms compared relative to family-owned firms.

7.2.2 Implications for practice

The empirical and exploratory analyses of the present dissertation not only provide an important foundation for academic research on the SFO phenomenon, but also provide practical guidance for business families considering the establishment of a SFO, SFO-owner families, SFO managers as well as external stakeholders.

Entrepreneurial families could solve the succession problem by establishing an SFO. Hereby, families should consider the structure, tasks, and goals of an SFO in a very careful way, as illustrated in chapter three, these can have an impact on the investment behavior of the SFO. The primary focus of an SFO is on wealth management and asset growth; in addition solutions for family concerns, such as education, advisory services, tax services, or relationship management are also offered.

Although the establishment of an SFO can resolve potential succession conflicts within the family, the professionalization and separation of family and assets also creates new conflicts in their asset classes such as their direct investments in companies. It would be

important to educate family members and subsequent generations on financial management matters so that positions in both an SFO and its owned firms can be filled with competent family members who can represent and endorse the family's interests. Furthermore, SFO-owning families should implement better monitoring mechanisms in their portfolio companies and consider a better training for family members to expand their skills and knowledge, as skilled family members occupying certain higher positions in the portfolio companies can help to reduce agency costs. The findings indicate that SFOs are unable to effectively monitor as blockholders. Thus, they should actively monitor through representatives in the management or supervisory board. Furthermore, it is found that closer monitoring leads to better results.

To conclude, the present dissertation serves to better understand the factors and stakeholders involved in and impacting an SFO, such as SFO-owners, CFOs/managers, and external parties such as debt providers, service providers, and consultants. For instance, financial institutions may change their customer acquisition strategy in the context of loans. The empirical results of paper six show that SFO-owned firms in particular are more likely to use debt. Further, it recommends that these results should be acknowledged to enhance knowledge and facilitate communication to ensure satisfactory and successful collaboration. In addition, this work helps to better understand the needs of SFO-owning families and entrepreneurial families in general.

7.3 Limitations and avenues for future research

First and foremost, it is essential to acknowledge the limitations of this dissertation and the need for further research to enhance our understanding of family offices beyond solely focusing on SFOs. While this study delves into the characteristics and impacts of SFOs, it is important to recognize that there exist other types of family offices such as MFOs, VFOs, and EFOs, that also could play a crucial role in transferring family wealth. Consequently, future investigations should explore these various family office types (e.g., Decker & Lange, 2013; Kenyon-Rouvinez & Park, 2020; Welsh et al., 2013) to gain a comprehensive understanding of their unique characteristics, effectiveness, and the specific benefits they offer. By delving deeper into the different types of family offices, researchers can shed light on critical questions such as which family office types are most effective in achieving the financial and non-financial objectives of entrepreneurial families and at what stage in the family's entrepreneurial journey should they consider establishing a specific family office type. Such insights would provide valuable guidance for entrepreneurial

families seeking to optimize their wealth management strategies. Moreover, extending the focus beyond SFOs and considering alternative wealth transfer mechanisms, such as foundations or professional asset managers (e.g., Block et al., 2019; Block et al., 2020), would also enrich our understanding of the field. By addressing these research gaps, scholars can enhance the generalizability of their findings and provide practical insights to entrepreneurial families seeking to optimize their wealth management approaches.

Second, it is important to acknowledge that the current study does not explicitly address the potential conflicts that may arise within an SFO, commonly referred to as principal-principal conflicts. Further investigation into this area is warranted to provide a more comprehensive understanding of the complexities within SFOs (e.g., Zellweger & Kammerlander, 2015). Additionally, it is worth noting that the examination conducted in chapters four, five, and six treats SFOs as a homogenous population, without distinguishing between different types and generations of SFOs as blockholders. Furthermore, family firms are utilized as comparison groups in these chapters, but it would be insightful to consider other financial investor blockholders, such as private equity firms (e.g., Achleitner et al., 2011; Renneboog et al., 2007) , venture capital firms (e.g., Rosenbusch et al., 2013), and hedge funds (e.g., Brav et al., 2008) , as potential comparison groups in future research. Additionally, the chapters primarily focused on utilizing financial metrics as dependent variables. Future research could explore other dependent variables such as innovation (e.g., Block et al., 2013; Carnes & Ireland, 2013; Massis et al., 2018), sustainability (e.g., Baù et al., 2021; Le Breton-Miller & Miller, 2016), or human resources (e.g., Sorenson, 2000 Huang et al., 2015) to gain a more holistic understanding of how SFO ownership affects their portfolio firms.

Next, it is crucial to acknowledge the limitations inherent in the dataset employed in this study, which focuses exclusively on SFOs operating within the DACH region. This geographic constraint raises concerns regarding the generalizability of the findings to other cultural or economic contexts. Notably, variations in legal frameworks and cultural norms can significantly impact the functioning and dynamics of SFOs. Presently, the body of SFO research primarily consists of conceptual insights derived from small sample sizes within a singular cultural area. Therefore, there is a compelling need for future research endeavors aimed at exploring the transferability of the findings to diverse countries and regions (e.g., Liechtenstein et al., 2008). Moreover, the restricted sample size resulting from the relatively small populations under investigation necessitates the conduction of replication studies within similar and dissimilar cultural settings. By addressing these methodological limitations

and expanding the research scope, scholars can enhance the robustness and applicability of the findings, thus contributing to a more comprehensive understanding of SFOs in a broader global context.

Furthermore, it is essential to recognize that the study's reliance on cross-sectional analyses limits the establishment of causal relationships between SFOs and the firms they own. A longitudinal study that examines the before-and-after effects (Hilton & Patrick, 1970) of SFO involvement in firms could provide valuable insights into the true impact of SFOs over time. It is important to acknowledge that, similar to any study, this dissertation does not cover all possible relevant issues. Consequently, scholars can utilize this research as a foundation to develop theories, formulate specific hypotheses, and conduct further empirical testing to expand our knowledge and understanding of SFOs and their impact on their owned firms.

Lastly, in conclusion, this dissertation serves as an initial exploration of the distinct context of SFOs, particularly as firm owners laying the groundwork for future research to expand upon. It is hoped that the findings inspire scholars from various fields to delve deeper into the world of SFOs and acquire a more comprehensive understanding of entrepreneurial families in general. By addressing the research gaps identified and adopting a broader perspective on family offices, knowledge can be collectively advanced and significant contributions can be made to the field of family office research.

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Appendix

Table A.1. Cluster comparison: SFO specific characteristics

Variable	Categories	Full Sample SFOs (N=216)	A All Assets	B Established Firms and Real-Estate	C Real Estate	ANOVA p values	Cramer's V
	SFOs per Cluster		50.5%	33.8%	15.7%		
SFO Characteristics							
Firm Size (# of Employees)	1 – 5 employees	71.3%	75%	66.7%	68.8%	0.354	0.119
	6 – 10 employees	10.1%	10.9%	13%	3.1%		
	>11 employees	18.6%	14.1%	20.3%	28.1%		
SFO Age (years)	1 – 10 years	24.5%	26.6%	16.5%	35.3%	0.273	0.110
	11 - 20 years	34.7%	33.9%	39.7%	26.5%		
	>20 years	40.8%	39.5%	43.8%	38.2%		
Family Management	Yes	77.7%	75.2%	78.1%	85.3%	0.273	0.084
	No	22.3%	24.8%	21.9%	14.7%		
Origin of SFOs	Germany	80.6%	83.5%	75.3%	85.3%	0.309	0.104
	Austria	6%	6.4%	4.1%	8.9%	0.617	0.067
	Switzerland	13.4%	10.1%	20.6%	5.8%	0.049**	0.167

Notes: This table displays the characteristics of each cluster resulted from the hierarchical cluster analysis. The characteristics, such as firm size, age, governance structure, and origin are used as passive variables and have been categorized to compare the clusters to each other. The table should be read by comparing the share of SFOs per cluster and the share of SFOs in each category of passive cluster variables. ANOVA and Cramer's V for categorical variables, indicating statistical differences across cluster. ***p < 0.01, **p < 0.05, *p < 0.1.

Table A.2. Cluster comparison: SFO groups

SFO Groups	A All Assets	B Established Firms & Real Estate	C Real Estate	Pearson Chi²	Cramer's V
SFO Group 1	53.5%	29.8%	16.7%	3.013	0.083
SFO Group 2	45.3%	41.4%	13.3%		
SFO Group 3	51.9%	29.6%	18.5%		
N	109	73	34		
Percentage of firms	50.5%	33.8%	15.7%		

Notes: This table illustrates the presence and distribution of the SFO groups classified by the governance and legal structure within the three clusters resulted from the hierarchical cluster analysis. SFO1: The family firm was sold and now has its own wealth management. SFO2: SFO holds the family business in whole or in part. SFO3: SFO is a separate legal entity besides the family business. Pearson's chi-square test and Cramer's V, indicating statistical differences across clusters ***p < 0.01, **p < 0.05, *p < 0.1.

Table A.3. Results of clustered OLS regressions for sales to employees

	Dependent variable: Sales to employees				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Variables	**Coeff.** **(SE)**	**Coeff.** **(SE)**	**Coeff.** **(SE)**	**Coeff.** **(SE)**	**Coeff.** **(SE)**
Firm Age (ln)	7.633* (4.022)	2.973 (3.909)	1.858 (3.967)	3.161 (4.022)	2.705 (3.880)
Firm Size (ln)	-25.575*** (4.737)	-27.784*** (5.011)	-28.540*** (5.129)	-27.686*** (4.992)	-27.872*** (5.037)
Debt-to-Equity (%)	0.022 (0.015)	0.022 (0.014)	0.022 (0.014)	0.021 (0.014)	0.022 (0.014)
Intangible Assets (%)	-0.168 (0.259)	-0.163 (0.249)	-0.072 (0.257)	-0.157 (0.252)	-0.128 (0.257)
ROA volatility	-1.854* (1.056)	-1.625 (1.037)	-1.499 (1.032)	-1.599 (1.036)	-1.631 (1.043)
Listed	18.214* (9.725)	31.134*** (10.927)	24.357** (10.880)	31.294*** (11.088)	
H1: SFO-Owned Firm		-41.021*** (9.942)	-50.314*** (11.185)	-39.942*** (11.199)	-43.604*** (11.330)
Owner Family on Supervisory Board			1.511 (6.404)		
Owner Family on Management Board				2.994 (6.411)	
Stock Market Listing					26.257* (13.875)
Interactions					
H2a: Owner Family on Supervisory Board x SFO-Owned Firm			37.603** (17.330)		
H2b: Owner Family on Management Board x SFO-Owned Firm				6.071 (12.882)	
H2c: Stock Market Listing x SFO-Owned Firm					11.834 (19.015)
Constant	169.364*** (32.628)	208.255*** (37.799)	217.583*** (39.020)	205.097*** (38.147)	210.074*** (38.392)
Industry FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
R^2	0.230	0.251	0.256	0.252	0.252
Observations	3228	3228	3228	3228	3228

Notes: This table presents the coefficients with robust standard errors in parentheses using Clustered OLS regressions of productivity. Model 1 presents only control variables. Model 2 adds the independent variable SFO-owned firms. In model 3, the interaction term supervisory board involvement, in model 4 the interaction term management board involvement and in model 5 the interaction term listed. Variables are defined in Table 4.1. All regressions include dummy variables controlling for industry and year fixed effects (FE). Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10(*) levels.

Table A.4. Results of clustered OLS regressions for sales to total assets

	Dependent variable: Sales to total assets				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Variables	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**	**Coeff. (SE)**
Firm Age (ln)	5.701	-1.337	-1.540	0.052	-1.204
	(5.412)	(5.237)	(5.282)	(5.278)	(5.291)
Firm Size (ln)	-11.013***	-14.348***	-13.048***	-13.236***	-14.304***
	(3.890)	(4.116)	(4.142)	(4.094)	(4.162)
Debt-to-Equity (%)	0.044***	0.044***	0.043***	0.043***	0.044***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Intangible Assets (%)	-1.428***	-1.420***	-1.310***	-1.339***	-1.437***
	(0.350)	(0.320)	(0.325)	(0.322)	(0.335)
ROA volatility	-0.875	-0.530	-0.346	-0.514	-0.527
	(1.082)	(1.096)	(1.075)	(1.085)	(1.096)
Listed	-48.403***	-28.890***	-27.835**	-30.370***	
	(9.877)	(9.681)	(10.835)	(9.727)	
H1: SFO-Owned Firm		-61.950***	-71.324***	-42.649***	-60.671***
		(12.146)	(13.832)	(13.822)	(14.972)
Owner Family on Supervisory Board			-28.653***		
			(7.874)		
Owner Family on Management Board				22.728**	
				(9.445)	
Stock Market Listing					-26.475**
					(10.674)
Interactions					
H2a: Owner Family on Supervisory Board x SFO-Owned Firm			41.201*		
			(24.988)		
H2b: Owner Family on Management Board x SFO-Owned Firm				-49.541**	(20.786)
				(19.396)	
H2c: Stock Market Listing x SFO-Owned Firm					-5.859
					(20.786)
Constant	207.551***	266.284***	266.774***	237.096***	265.383***
	(44.807)	(47.876)	(48.988)	(46.631)	(48.748)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
R^2	0.195	0.224	0.230	0.229	0.224
Observations	3228	3228	3228	3228	3228

Notes: This table presents the coefficients with robust standard errors in parentheses using Clustered OLS regressions of productivity. Model 1 presents only control variables. Model 2 adds the independent variable SFO-owned firms. In model 3, the interaction term supervisory board involvement, in model 4 the interaction term management board involvement and in model 5 the interaction term listed. Variables are defined in Table 4.1. All regressions include dummy variables controlling for industry and year fixed effects (FE). Asterisks denote statistical significance at the 0.01(***), 0.05 (**) and 0.10 (*) levels.