Component of continuous assessment: Forprosjekt, Thesis MSc

Lundby & Balog Preliminary thesis

<table>
<thead>
<tr>
<th>Navn:</th>
<th>Adam Balog, Eivind Berg Lundby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start:</td>
<td>01.01.2018 09.00</td>
</tr>
<tr>
<td>Finish:</td>
<td>15.01.2018 12.00</td>
</tr>
</tbody>
</table>
NORWEGIAN FAMILY FIRMS AND RISK TAKING

SUPERVISOR:
Leon Bogdan Stacescu

SUBMISSION DATE:
15.01.2018

CAMPUS:
Oslo

PROGRAMME:
Master of Science in Business, Major in Finance

Authors:
Adam Balog
Eivind Berg Lundby

This thesis is a part of the MSc program at BI Norwegian Business School. The school takes no responsibility for the methods used, results found and conclusions drawn.
CONTENTS

1 Abstract ......................................................................................... 3

2 Introduction ................................................................................... 4

3 Literature review ........................................................................... 5
  3.1 Family firms – definition and Importance ............................. 5
  3.2 Risk taking behavior in Family Firms .................................... 5
  3.3 CEO ......................................................................................... 7
  3.4 Financial Crisis and family firms ........................................... 9

4 Theory ............................................................................................ 11
  4.1 Pecking Order Theory ......................................................... 11
  4.2 Agency Theory ........................................................................ 11

5 Methodology .................................................................................. 13
  5.1 Hypothesis .............................................................................. 14
  5.1.1 Risk Taking ........................................................................ 14
  5.1.2 CEO ................................................................................... 14
  5.1.3 Family firms and financial crisis .................................... 14

6 Data .............................................................................................. 15

7 Time Schedule ................................................................................ 16

8 References ..................................................................................... 17
1 ABSTRACT

Previous research suggests that there could be differences between family firms and non-family firms in terms of risk taking. Most of the previous literature indicate that family firms are less risk willing (Hiebl. M.R., 2012). On the other hand, some research has shown that family firms perform worse during financial crisis (Lins, K. V., Volpin, P., & Wagner, H. F., 2013). Our goal in this thesis is to uncover whether there exists some difference in risk taking behavior between family firms and non-family firms and then test this up against the 2008-2009 financial crisis to see whether family firms’ investments are in fact less risky and lead to higher survival rates during a downturn in the economy. Finally, we will explore how the CEO of the family firm impacts their risk-taking behavior.
2 INTRODUCTION

The purpose of this paper is to examine the risk-taking behavior of Norwegian family firms in relation to non-family firms. The paper aims at uncovering whether there exists a distinct difference between the two groups with respect to their risk-taking behavior. Next, if our initial hypothesis that family firms take on less risk proves to be correct, we aim at uncovering the underlying conditions which might lead to the differences in the firms' relative risk taking. Our secondary hypothesis aims at analyzing whether the CEO of family firms influences the company's risk-taking behavior. Finally, we are going to identify whether family firms in Norway are better at handling financial distress during the 2008-2009 economical recession.

"It is wildly acknowledged that family firms form the backbone of most countries' economies" (Hiebl. M.R., 2012). Norway is no exception to this and hence, family firms become a very interesting and motivating topic for our Master Thesis. Our goal is to gain extensive knowledge about the dynamics present in family firms and identify the source of their risk-taking behavior, as well as, possible transferable strategies which might enable non-family firms to avoid some part of the financial distress costs associated with economic recessions. There has been an increasing focus on research related to family firms regarding their investment behavior on a global basis. However, previous literature on Norwegian family firms risk taking behavior seems to be missing or at the very best incomplete. Our thesis aims to give an empirical insight into the risk-taking behavior of Norwegian family firms regarding their financing, operations, CEO and their behavior during financial distress.

In the following section, we are going to review previous literature with emphasis on risk-taking behavior, CEO choice and the firms' ability to withstand financial distress in case of a downturn in the economy. Next, we are going to review different financial and economic theories that are of relevance for our topic. Finally, we will discuss relevant methodology for this thesis and present our variables which will be the basis for our analysis.
3 LITERATURE REVIEW

3.1 FAMILY FIRMS – DEFINITION AND IMPORTANCE

It is widely acknowledged that family firms are the backbone of most countries’ economy accounting for roughly 90 percent if all firms worldwide (Hiebl. M.R., 2012). Norway is no expectation, depending on how one defines family firms, they accounted for between 50 percent and 65 percent of all small and medium sized enterprises (SME) in Norway in 2011 (Berzins, J., & Bøhren, Ø., 2013). Because of the high significance for the different countries’ economies, there has been an increasing focus and research on this topic in the past decades (Hiebl. M.R., 2012).

There is no official definition of what a family firm is, but a commonly acknowledged definition can be formulated as: the situation when the family holds a simple majority, thus owns more than 50 percent of the firm (Berzins, J., & Bøhren, Ø., 2013). In our thesis, we will follow the above-mentioned definition, which in turn will give the family controlling power in the general assembly. Controlling power in the general assembly gives the family the authority to choose the composition of the board and the CEO (Berzins, J., & Bøhren, Ø., 2013).

3.2 RISK TAKING BEHAVIOR IN FAMILY FIRMS

The clear majority of papers published on the topic of family firms and risk-taking finds that family firms engage in less risky behavior compared to non-family firms. Family firms invest in less risky projects and aim for lower debt levels. This in turn leads to lower overall risk level as higher debt could increase the likelihood and cost related to financial distress (Hiebl. M.R., 2012). Anderson, R. C., Duru, A., & Reeb, D. M. (2012) argues that the controlling family mitigate risk by influencing the level and type of long-term, corporate investments (Anderson, R. C., Duru, A., & Reeb, D. M., 2012). They further argue that families avoid risk by allocating fewer resources to long-term and risky R&D projects in comparison to non-family firm, and instead allocate more resources to capital projects (Anderson, R. C., Duru, A., & Reeb, D. M., 2012).

Leverage is a commonly mentioned in the literature as a measure of risk. Young family firms tend to have lower levels of debt than non-family firms.
which displays their risk aversion (González, M., Guzmán, A., Pombo, C., & Trujillo, M. A., 2013). González, M., Guzmán, A., Pombo, C., & Trujillo, M. A. (2013) argue that there are opposing concerns regarding leverage. Family firms are in general more risk averse, which indicates lower debt levels. On the other hand, the controlling family may be afraid of losing control of their company and therefore prefer to finance new investments with debt instead of issuing new forms of equity. As family firm ages, the level of debt increases and the capital structure becomes more like non-family firms (González, M., Guzmán, A., Pombo, C., & Trujillo, M. A., 2013). Anderson R.C., Mansi S.A & Reeb D.M. (2003) found that, when compared to non-family firms, the corporate yield spread on family firms is consistently 30–40 basis points lower. Their argumentation behind these findings is that family firms tend to be long-term shareholders. They commit more easily to long term investments, which reduces the probability of default. This in turn reduces the risk premiums on their loans.

The literature offers multiple explanations for why family firms are less risk willing than non-family firms. Family-owners’ wealth is highly exposed to firm specific risk because of their relatively lower levels of diversification. The family’s wealth is often concentrated only in one single firm, which makes the family dependent and vulnerable to the performance and survival of that firm (Anderson, R. C., & Reeb, D. M., 2004). The risk aversion hypothesis argues that concentrated-undiversified shareholders such as a family, have strong incentives to distribute most of their capital investments in low risk projects and thus less capital to investments high risk projects (Anderson, R. C., Duru, A., & Reeb, D. M. (2012). Anderson, R. C., Duru, A., & Reeb, D. M. (2012) further argue that R&D projects expose firms for more unsystematic risk, which family firms tries to minimize. Family firms therefore devote less resources on average to R&D compared to non-family firms. This however could have significant implications for the long-term survival of the firm (Anderson, R. C., Duru, A., & Reeb, D. M., 2012).

In contrast to the common perception, there is some literature that argues that family firms are in fact more risk willing. Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007)
argue that family firms often are willing to accept more uncertainty and undertake more debt than non-family firms if they are in a financially distressed situation and they fear losing control of the firm. Further, Gomez-Mejia et al. (2007) finds that when family firms have the choice between a low risk option that includes loss of their majority share and a high-risk option that let the family keep control over the company, most family firms then choose the high-risk option. This behavior potentially implies that family firms are more exposed to bankruptcy in the long run due to their risk-taking behavior. (Gomez-Mejia et al., 2007). The reasoning for this seemingly reckless behavior from an economic perspective is that the controlling family tries to reduce the socioemotional wealth-loss that might occur in the event they need to sell of a part of their company to fund potential financial distress costs. (Gomez-Mejia et al., 2007).

3.3 CEO

Previous research on CEOs in family firms has mainly focused on how this will affect the financial performance of family firms over time. The following section will focus on the different aspects and results identified by previous literature on the subject. Faccio M. & Lang H.P. (2002) found evidence that less than a fourth of all family firms are managed by a professional CEO, this implies that family firm leadership tend to be handed down through the generations.

Sirmon, D. G., & Hitt, M. A. (2003) pointed out that firm-level entrepreneurship may be of particular importance to a family firms as it aims at identifying and take advantage of opportunities in the dynamic and uncertain competitive environment of the 21st century. Hence, the leadership dimension of the family firms becomes increasingly important to understand the dynamics of the different leadership functions in relation to both performance and risk-taking behavior of the CEO.

A more complete understanding of the family firm CEO is necessary because family firms tend to be overly dependent on a single decision maker (Feltham, T. S., Feltham, F. & Barnett, J. J., 2005) furthermore, senior executives play a key role when it comes to promoting a firm’s commitment and support of entrepreneurship over time (Zahra, Neubaum, & Huse, 2000). In this thesis, we will focus on the whether or not the CEO
of the firm is a member of the founding family and the implications this might have for the risk-taking behavior of the company over time. Previous research done by Aldrich & Cliff (2003) illustrates that one of the greatest concerns facing a family firm is how they can sustain and protect the firms' values over time.

The research points out that many family leaders become strategically conservative over time, which in turn minimizes the entrepreneurial activities and incentives of the company. This actions by the family CEO have a direct effect on the overall risk-taking of the company. As Zahra et al. (2004) pointed out, most family firms prefer long-term planning, because it is necessary for the firms long term survival across multiple generations. Chua, Chrisman & Sharma (1999) summarized the priorities of family firms in the following way in relation so survivability over time: (1) be governed/ managed by family, (2) have a vision for the firm consistent with the strategic direction held by the family, and (3) be potentially sustainable across multiple generations. This further emphasizes the focus on family CEOs.

Previous research on the subject highlights the importance of the personal characteristics of the CEO as one of the key factors when it comes to predicting entrepreneurial behavior. Statistics have shown that family CEOs remain in power much longer than their counterparts in non-family firms, which further increases the potential impact the CEO has on the long-term performance of the company Gersick et al. (1997).

The age of the CEO is hence considered a key variable to determine the level of entrepreneurial behavior (Levesque, M., & Minniti, M.,2006). Based on time allocation theory by Becker, G., (1965) and Levesque, M., & Minniti, M. (2006) CEO’s entrepreneurial efforts tend to decline over time. As CEOs grow older, they may limit decision making to commonly held norms of industry behavior, rather than seeking unique, yet risky, strategic directions (Hambrick & Finkelstein, 1987). Younger entrepreneurs have been found to adjust their expectations faster in response to new information than do older entrepreneurs, supporting the notion that older entrepreneurs are more satisfied with status quo. (Parker, S. C., 2006). Previous research by Stewart, W. H., Watson, W. E., Carland, J.A., &
Carland, J.W. (1999) has identified the age of the CEO to be significantly negatively correlated with innovation and risk taking. In other words, the family one could say that the CEOs motivation for risk-taking varies across time Morris (1998). Moreover, the goal of the family CEO is to build a legacy for their children. This behavior may often lead to a decreasing risk-taking and innovation as the CEO becomes older. (Sharma, P., Chrisman, J. J., & Chua, J. H., 1997)

Previous literature has identified several differences between family CEOs and professional CEOs. First, professional CEOs tend to be better at the financial aspects of the business operations and pay on average lower interest rates on their debt and also enter into acquisitions which turn out to be more profitable in the long run. Second, professional CEOs tend to hire less skilled employees which in turn leads to lower overall wages. This behavior can be viewed in relation to the Agency Problem which might exist in family firms where the CEO is hired in by the founding family. (Sraer D. & Tesmar D., 2007)

Nevertheless, as Sraer D. & Tesmar D. (2007) pointed out, family firms tend to outperform their counterparties in the non-family owned companies. Their research showed that; (1) the founding family has on average higher productivity of their labor, (2) however, there exists differences between hired and family CEOs, statistics has shown that the productivity of labor in professionally run family companies tends to be lower than in the case there the CEO is part of the family, (3) CEOs in family firms tend to pay lower wages than widely held firms, (4) lastly, professionals tend to compensate somewhat by having higher labor to capital ratios.

3.4 FINANCIAL CRISIS AND FAMILY FIRMS
There is limited research on the topic of financial crisis and family-controlled firms. Lins, K. V., Volpin, P. & Wagner, H. F. (2013) looked at the performance of family firms in the 2008-2009 financial crisis. In their research, they found evidence that family firms performed significantly worse than non-family firms during the financial crisis. Further, they argue that the relative bad performance was due to that family firms on average invested proportionally less than non-family firms during financial distress. Their research did however not include the risk aspect of the different
investment strategies implemented by the firms prior to the crisis or whether the family firms' performance during the crisis was due to irrational behavior (Gomes-Mejia, 2007). Economic theory argues that a firm with high risk-taking behavior would perform worse in a financial crisis compared to a firm with low risk-taking behavior (Anderson, R. C., & Reeb, D. M., 2004).

Our thesis will focus on discover whether family firms in fact, are less risk-willing. Further, we will explore the effect family CEO have on the risk-taking behavior of the company compared to when there is a professional CEO. Finally, this thesis aims at uncovering the source of the firms' behavior with respect to risk taking. This paper will look at both family and non-family firms prior, during and after the 2008 – 2009 financial crisis. If our findings indicate that family firms are less willing to accept risk in normal times, then the family firms should also have a higher survivability rate in financial downturns because of the reduced costs related to financial distress.
4 THEORY

4.1 PECKING ORDER THEORY

The main goal of this thesis is to shed light on the risk-taking behavior of Norwegian family firms. One way to assess the relative riskiness of different companies is to look at their leverage. The pecking order theory of capital structure is one of the most recognized theories regarding corporate leverage. Myers, S.C. (1984) defined and formalized this theory as the process where companies search for different sources of funding. More precisely the choice between external or internal financing regarding asymmetric information. According to this theory in the event that outside funds are necessary, firms in general prefer debt to equity because of the reduces or lower cost associated with debt issues.

As the Pecking order theory suggests because of information non-transparency most family firms will prefer internally generated funds. This has been shown by Storey, D.J. (1994), where he pointed out that family firms tend to be risk-averse and often want to minimize the loss of control. In general, previous research has shown that family owned firms tend to prefer private equity and debt markets rather than entering the public market to obtain funding. SMEs within the family segment typically receive a substantial amount for their funds from excess cash, owner capital, members of the management, family and friends. Mukherjee, T.K. (1992) further confirms this in his research and states that small family businesses tend to rely on family loans for startup capital and initial growth. This in turn might limit the total leverage of family firms in comparison to public firms. Research by Berger, A.N., and Udell, G.F. (1998) and Storey, D.J. (1994) illustrated that risk aversion and retaining ownership and direct control of the firm has a prominent significance when it come do the financial decision-making process.

4.2 AGENCY THEORY

Agency theory is relevant to our thesis when it comes to deciding whether a professional CEO, as an agent, would be more reckless and take on more risk to gain his/her own self-interest. In comparison to a professional CEO, a family-CEO have more stake in the firm and therefor would try to minimize
unnecessary risk. Principal-agent theory states that the agent, given self-interest, may or may not behave as agreed upon (Eisenhardt, K. M., 1989). The agent may have moral hazard, which is that the agent simply does not put the agreed-upon effort into the job (Eisenhardt, K. M., 1989). The second outcome which agency theory discuss is adverse selection. Adverse selection could be that the family firm chooses the wrong CEO/agent because of self-proclaimed characteristics of the agent (Eisenhardt, K. M., 1989). Both of these types of principal-agency problem may be harmful for the firm and result in higher unnecessary risk for the family firm.
5 METHODOLOGY

In the following section, we will present our tentative methodology. We acknowledge that this methodology is limited to knowledge prior to receiving our dataset, hence we expect that there will be some changes to our approach after we have revised our data.

Our aim is to evaluate whether or not family firms take on more or less risk in form of operation and financial risk compared to non-family firms in Norway. We will use these results to confirm or deny our initial hypothesis. Next, we will run statistics on why this behavior exists in family firms, with focus on whether or not the CEO is a family member and if this has any significant effect on the firms' business operations and risk taking. Finally, we are going to look whether the family firms' ability to withstand the economic recession during the 2008 – 2009 financial crisis is significantly greater than non-family firms with respect to the survival rates and costs related to financial distress.

**Operational risk measure = Sales / costs or Portion of fixed assets or the correlation between sales and costs.**

We will measure the operational risk for both family and non-family firms. The more the operational risk measure varies over time, the riskier the firm is. Previous research has identified that "other things equal, the higher the operating leverage the larger the overall and systematic risk of stock" (Lev, B. 1974).

**Financial risk (leverage) = Debt / Equity**

There are several ways to measure the level of financial risk. Some of the most common statistics are: Return on Equity, Debt to Equity and Return on Capital Employed. In this thesis, we are going to express the risk-taking behavior through the leverage of the firms.

First, we are going to organize our data in a panel data regression. Through this we will be able to learn about the relationship between several independent or predictor variables across time. Furthermore, we intend to implement standard clustered standard errors to control for possible heteroscedasticity in the standard errors. Finally, to determine whether
family firms have a higher survivability rate than non-family firms we are going to run descriptive statistics to determine the relative survival rates and cost of financial distress prior, during and after the 2008 – 2009 financial crisis. To do this we our aim is to utilize the difference-in-difference technique to gain insights into the firms’ behavior prior, during and after the financial crisis. We will then use the results to determine whether the risk-taking behavior of family firms has a significant effect on survivability rates compared to non-family firms.

5.1 HYPOTHESIS

5.1.1 Risk Taking

H0: Family firms take on the same amount of risk as non-family firms in Norway.

H1: Family firms take on less risk than non-family firms in Norway.

5.1.2 CEO

H0: The choice of internal versus external CEO does not affect risk taking in family firms.

H1: Family CEOs take on less risk than non-family CEOs.

5.1.3 Family firms and financial crisis

H0: Family firms do not perform differently than non-family firms with respect to survival rate and financial distress cost during a financial crisis.

H1: Family firms tend to have a higher survival rate and are less exposed to financial distress in financial crisis.
6 DATA

The data we are going to use in our empirical study was obtained through the CCGR Data Extraction Inquiry. The data is extracted from the Department of Financial Economics at the Norwegian School of Management (BI). The dataset includes both family and non-family firms. This study is limited to non-listed firms in Norwegian and the dataset includes data from 2000 – 2015.

The variables we have chosen for this study is illustrated in the table below.

<table>
<thead>
<tr>
<th>Table name</th>
<th>Item number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Account_Data</td>
<td>item_4</td>
<td>CEO birth year</td>
</tr>
<tr>
<td>2 Account_Data</td>
<td>item_9</td>
<td>Revenue</td>
</tr>
<tr>
<td>3 Account_Data</td>
<td>item_14</td>
<td>Payroll expense</td>
</tr>
<tr>
<td>4 Account_Data</td>
<td>item_15</td>
<td>Depreciation</td>
</tr>
<tr>
<td>5 Account_Data</td>
<td>item_30</td>
<td>Other interest expenses</td>
</tr>
<tr>
<td>6 Account_Data</td>
<td>item_35</td>
<td>Income before extraordinary items</td>
</tr>
<tr>
<td>7 Account_Data</td>
<td>item_63</td>
<td>Total fixed assets</td>
</tr>
<tr>
<td>8 Account_Data</td>
<td>item_78</td>
<td>Total current assets</td>
</tr>
<tr>
<td>9 Account_Data</td>
<td>item_87</td>
<td>Total equity</td>
</tr>
<tr>
<td>10 Account_Data</td>
<td>item_98</td>
<td>Total other long-term liabilities</td>
</tr>
<tr>
<td>11 Account_Data</td>
<td>item_105</td>
<td>Dividends payable</td>
</tr>
<tr>
<td>12 Industry_Code</td>
<td>item_11102</td>
<td>Industry codes</td>
</tr>
<tr>
<td>13 Misc_2000</td>
<td>item_504</td>
<td>District number</td>
</tr>
<tr>
<td>14 Misc_2000</td>
<td>item_13420</td>
<td>Company age</td>
</tr>
<tr>
<td>15 Ownership_Control</td>
<td>item_13601</td>
<td>Share owned by CEO (direct ownership)</td>
</tr>
<tr>
<td>16 Ownership_Control</td>
<td>item_14002</td>
<td>Number Of Owners (ultimate ownership)</td>
</tr>
<tr>
<td>17 Family</td>
<td>item_15302</td>
<td>Largest family sum ult ownership</td>
</tr>
<tr>
<td>18 Family</td>
<td>item_15304</td>
<td>Largest family has CEO</td>
</tr>
<tr>
<td>19 Account_Data</td>
<td>item_76</td>
<td>Cash and cash equivalents</td>
</tr>
<tr>
<td>20 SSB_FORETAKSDAT</td>
<td>item_50109</td>
<td>Number of employees</td>
</tr>
</tbody>
</table>

Comment: The dataset includes only variables where the dummy variable: 14507 = 1 (Not part of a business group)
# TIME SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>1 - 2</th>
<th>3</th>
<th>4 - 9</th>
<th>10 - 13</th>
<th>14 - 22</th>
<th>22 - 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliver Preliminary Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work on the Thesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliver draft Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize Thesis Delivery of the Thesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Research
The research period will be limited to the first two months of 2018, after this point we expect to do task specific research when required throughout the Thesis duration.

## Delivery Preliminary Thesis
The deadline for submitting the Preliminary Master Thesis is 15th of January 2018.

## Feedback
Arrange a feedback session with our supervisor in order to get feedback on our approach before we start working on our Master Thesis.

## Adjustments
Make the required adjustments in accordance with the feedback received from our supervisor.

## Work on the Thesis
This will be an ongoing activity from week 4 – 22.

## Deliver draft
Our aim is to deliver the first draft of our Master Thesis prior to week 22.

## Feedback
Arrange a feedback session with our supervisor prior to week 22.

## Finalize the Thesis
Make the necessary corrections or adjustments in accordance to the feedback received from our supervisor.

## Delivery of the Thesis
The Thesis will be signed, sealed and delivered within the submission date of 3rd of September. However, our aim is to deliver the finalized version of the Master Thesis during week 25.
8 REFERENCES


