Risk, Return and Value in the Family Firm

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Thomas Markus Zellweger

from

Hauptwil-Gottshaus (Thurgau)

Approved on the application of

Prof. Dr. Urs Fueglistaller

and

Prof. Dr. Klaus Spremann

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The President

Prof. Ernst Mohr, PhD

Zusammenfassung

Die vorliegende Arbeit untersucht empirisch, welche Faktoren die Kapitalstruktur sowie die Kontrollrisikoaversion von Familienunternehmen beeinflussen. Die Arbeit zeigt, dass Verhaltensaspekte einen entscheidenden Einfluss auf die Risikobereitschaft von Familienunternehmen ausüben.

Im zweiten Teil zeigt der Autor, dass die Rentabilität von Familienunternehmen von verschiedenen Faktoren abhängt, wie zum Beispiel der Eigentümerkonzentration bei Familienmitgliedern, der Branche, der aktiven Generation sowie der Stärke des Familieneinflusses auf das Unternehmen allgemein. Der Verfasser schlägt ein dynamisches Modell vor, das aufzeigt, wie Familieneinfluss sinnvoll gemanagt werden kann, um die Chancen von Familieneinfluss für das Unternehmen nutzbar zu machen.

Im dritten Teil der Arbeit untersucht der Autor auf neue Art und Weise das Verständnis von Wert und Bewertung. Dazu wird der Begriff Total Value eingeführt. Im Gegensatz zur klassischen Corporate Finance Literatur zeigt Total Value, wie Unternehmer ihre Unternehmen subjektiv bewerten. Dieses Vorgehen gibt einen vertieften Einblick, wie (Familien-) Unternehmer Projekte subjektiv beurteilen.

Abstract

The present text investigates the singularities of family firms with respect to their control risk aversion, their financial performance and their valuation.

With regard to the control risk aversion the text probes a sample of 1215 privately held firms in Switzerland and finds lower leverage levels for family firms affected by undiversified investment, an insufficient separation of private and business wealth, ownership dispersion across siblings. In addition, the text refers to behavioral finance theory and shows that family managers display a strong aversion to control risk, which is however influenced by reference points.

With regard to financial performance the analysis finds significantly lower returns on equity for family firms. The text reveals that family firms face peculiar agency problems which potentially hamper the evolvement of family firms through strategic and financial inertia, ineffective governance, misalignment of interests, and inefficient information processing. The study finds that family influence is not always a blessing or a curse. Whether family influence positively affects firm performance depends on the strength of the family influence, the industry, the firm size and the active generation.

With regard to value and valuation the study probes a sample of 142 publicly traded family and nonfamily firms on the Swiss stock market. The outperformance of family firms can be partly explained by their transparent information setting measured by a lower variance in earnings per share, which reduces analyst forecast dispersion, which positively affects stock performance. In contrast to publicly quoted family firms an analysis of 958 privately owned family firms shows that entrepreneurs subjectively price not only monetary achievements, such as cash flow, but also nonmonetary achievements, such as the age of the firm and their subjective happiness. These findings provide additional insight into entrepreneurial rationales if, as in most cases, a firm is not for sale but rather, is intended to be handed over to a subsequent generation.

Key words: family firm, risk, return, value

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1 Introduction

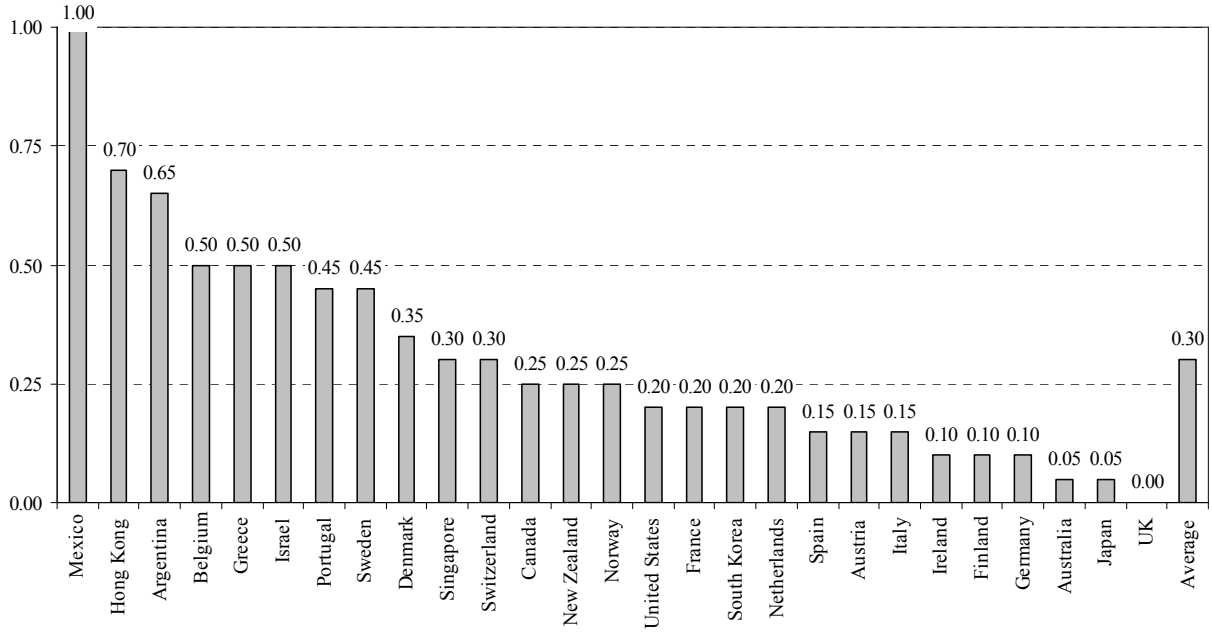
In their 1932 classic, The Modern Corporation and Private Property, Adolph Berle and Gardiner Means call attention to the prevalence of widely held corporations in the United States, in which ownership of capital is dispersed among small shareholders, yet control is concentrated in the hands of managers (Berle and Means, 1932). The book stimulated a body of "managerial" literature on the objectives of such managers, including the important work of Baumol (1959) and Penrose (1959). So far, however, the Berle and Means point of view has clearly stuck (La Porta et al., 1999).

In recent years several studies have questioned the empirical validity of this image. Demsetz (1983), Demsetz and Lehn (1983), Shleifer and Vishny (1986) and Morck et al. (1988) show that even among the largest American firms there is a modest concentration of ownership.

The most recent and complete study on ownership concentration on corporate ownership on all continents has been presented by La Porta et al. (1999). When examining corporate ownership in 27 leading industrial nations, the authors find that on average 30% of the largest firms are controlled by a family. This share is surprisingly high and challenges the findings by Bhattacharya and Ravikumar (2001), who predict that the shares held by families will decrease if an efficient financial market is put in place.

Figure 1: Family control of publicly traded firms around the world

How to read this figure: E.g. in Switzerland 30% of the largest publicly quoted companies are controlled by families (on a minimal ownership level of the family of 20%). Source: La Porta et al., 1999.



The figure above illustrates that corporate ownership differs greatly amongst different countries. Faccio and Lang (2000) take a closer look at the ultimate ownership of Western European corporations and report similar results. Those findings challenge the prevalence of the Berle and Means (1932) corporation in rich and well-developed countries. In contrast, family control is very common.

In an analysis whose scope extends beyond the public quoted companies, Astrachan and Shanker (2002) find that family businesses account for some 57% of employment as well as a similar percentage of the United States' gross domestic product (Gomez-Mejia et al., 2001). Similar numbers regarding employment and percentage of business revenues can be found in works by Heck and Stafford (2001). A comparison of the percentage of family businesses in European countries (quoted and unquoted) fails or becomes difficult due to the problem of the definition of family firms. Shanker and Astrachan (1996) propose a "middle" definition that asks for at least a significant proportion of top management involvement of the family. The broader definition (Klein, 2000) includes family-owned businesses but not

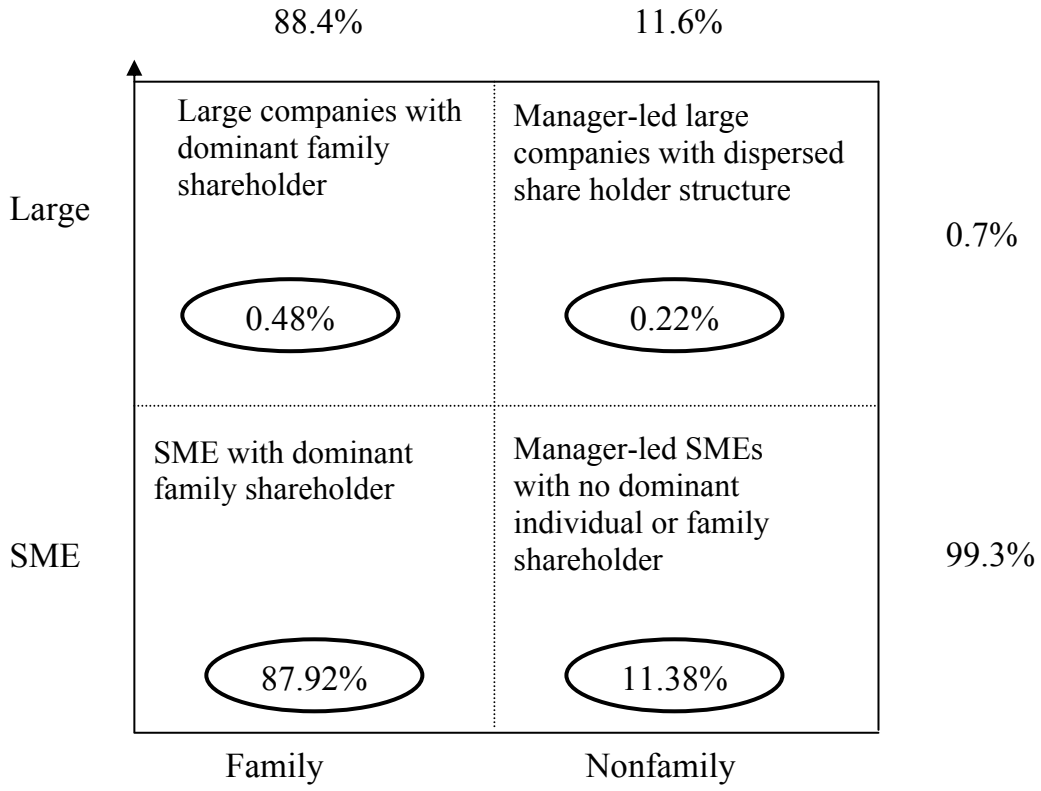
managed by the family in the group of family businesses. In addition, different authors used different sampling criteria (employees and sales volume).

The percentage of family firms differs with the size of the firms. According to Klein (2000), two-thirds of companies with a turnover of up to 50 Mn EUR are family businesses. Nearly 50% of the companies with a turnover between 50 Mn and 250 Mn EUR and nearly 30% of the companies with a turnover of more than 250 Mn EUR are family businesses. Similarly, in their investigation of corporate control, La Porta et al. (1999) report a decreasing share of family firms with increasing firm size.

Figure 2 below clearly indicates the importance of family firms in the Swiss economy.

Figure 2: Family firms and firm size in Switzerland

Data source: La Porta et al., 1999; Frey et al., 2004; Fueglistaller, 1995. How to read this figure: In Switzerland 87.92% of all firms are small and mid sized family firms. 88,4% of all firms are family firms.



For the USA, Shanker and Astrachan (1996) find that family firms contribute 20-40% of the total US Gross Domestic Product. Regarding employment in family firms the same authors find that family firms employ 20-50% of the total work force,

depending on the definition of a family firm. When Shanker and Astrachan (1996) analyze net job creation by family firms, they come up with a share of 20% to 78%, once again depending on the definition of the family firm.

In spite of variations between countries, family businesses represent a substantial portion of an economy and have a massive impact on the economy as a whole. In sum, the issue of family firms is clearly a relevant and timely entrepreneurship topic.

Nevertheless, the above figures and comments reveal some crucial problems regarding sound research on family firms.

First, research in the field lacks a generally accepted definition of the family firm. This point will be further elaborated in chapter 3.1.3.

Second, most family businesses are small or mid-sized. Thus, research on family firms needs to be combined with research on small and mid-sized companies (SME). However, research on SME has taken a functional approach to developing measures and tools to understand how SMEs formulate strategy, evaluate and seize entrepreneurial opportunities, do marketing, or take investment decisions. Despite a vast amount of literature on the role and personality of the entrepreneur (Brauchlin and Pichler, 2000), SME literature has neglected the family as an important organizational variable. Hence, one of the objectives of family business research is to deliver additional findings on how the two social systems, namely the firm and the family, interact. The emanating findings could provide additional insight into related academic research in for example strategy and finance.

Third, as Shanker and Atrachan (1996) pointed out, there is still a lack of sound academic, particularly empirical, research in the field, although “street lore” statistics, which lack evident research origins (e.g. survival rates of family firms), are abundant.

2 Literature review

Traditional finance literature has little to say about how family control affects the way a firm is operated. Research has long focused on the impact of ownership control on corporate value, following the leads of Jensen and Meckling (1976) and Fama and Jensen (1983a and 1983b). Empirical work has focused mainly on two effects: First, the impact of ownership concentration on performance, efficiency and value, and second, the impact of ownership concentration on capital structure as a proxy for risk aversion.

The following literature review will present the most important literature on both aspects in order to assess whether the existing literature provides evidence of financial singularities of family firms. In addition, this procedure is intended to reveal research gaps in family business literature.

2.1 Literature on ownership control, firm performance and value

Many researchers have analyzed the effect of ownership concentration and corporate efficiency and value (e.g. Kaplan, 1989; Smith, 1990; Muscarella and Vetsuypens, 1990; Gibbs, 1993; Ang et al., 1996, Ehrhardt and Nowak, 2003a).

Jensen and Meckling (1976) brought the issue of misalignment between the interests of managers and owners to the forefront. They argue that ownership concentration in the hands of managers and owners aligns the interests of both groups. Agency costs arise when one or more persons (principal(s)) engage another person (agent) to perform a service on their behalf. This involves delegating some decision making. Agency costs are the sum of (1) the monitoring expenditures incurred by the principal; (2) the bonding expenditures by the agent; and (3) residual loss. Jensen and Meckling (1976) hypothesize that the larger a firm becomes, the larger its agency costs become due to increased monitoring. However, they argue that agency costs can be reduced by increasing the level of managerial ownership. Lower agency costs are associated with higher firm values, other things being equal.

Some empirical literature regarding corporate takeovers adds support to the agency theory position that more concentrated management ownership leads to greater efficiency. Takeovers and buyouts concentrate ownership and control among a small group of managers and buyout specialists. This concentration is generally followed by improvements in operating efficiency and increases in firm value (Mc Conaughy et al., 2001). Kaplan (1989), Smith (1990), Muscarella and Vetsuypens, (1990), Phan and Hill (1995) all found improved efficiency following a buyout.

However, the Jensen and Meckling (1976) position that ownership concentration increases firm performance and value is not universally accepted. Certain researchers find a nonmonotonic relationship between ownership concentration and corporate value. Morck et al. (1988) and Mc Connell and Servaes (1990) present some evidence that firm value is positively related to the degree of managerial ownership at lower levels of ownership. The relation is observed to weaken at higher levels, suggesting that high levels of managerial ownership may shield entrenched managers from the discipline of the market for corporate control. Similarly, Griffith (1999) finds that Tobin's *q*, the market value of assets divided by its replacement cost, is a nonmonotonic function of CEO ownership. Specifically, Tobin's *q* rises when the CEO owns between 0 and 15% and declines as CEO ownership increases to 50%. Above 50%, the value again starts to rise. Firm value also is found not to be a function of management ownership when CEO ownership is separated out, indicating that CEO ownership does have a dominating effect on firm value.

Other researchers such as Himmelberg et al. (1999), Holderness and Sheehan (1988b) and Demsetz and Villalonga (2001) question any relation between ownership concentration and performance. The findings of Demsetz and Villalonga (2001) are consistent with the view that diffuse ownership, while it may exacerbate some agency problems, yields compensating advantages that generally offset such problems.

Demsetz (1983) and Demsetz and Lehn (1985) argue that the level of managerial ownership varies systematically as the managers try to maximize firm value. In addition, they posit that the level of managerial ownership does not affect firm value. Fama (1980) suggests that the separation of ownership and control can be an

efficient form of economic organization. He suggests that the labor market for managers functions as assurance that managers act in the best interest of the firm. To make the confusion complete, Tosi et al. (1997) suggest that the agency theory approach oversimplifies the complexity of the agency relationship.

In sum, empirical evidence does not resolve the issue of managerial ownership and corporate value.

Recent academic literature presents evidence of specific characteristics of family businesses regarding value and valuation. For example, Mc Conaughy et al. (1998) substantiate the finding that family relationships provide incentives that are associated with better firm performance. In addition, Mc Conaughy et al. (2001) posit that firms controlled by the founding family have greater value and operate more efficiently. Anderson and Reeb (2003b) report that companies with significant levels of founding family ownership or control typically outperform industry peers. Furthermore, Chrisman et al. (2004) found agency advantages of family firms over their nonfamily counterparts. Similarly, for the German stock market Hasler (2004) found that family firms were outperforming their nonfamily counterparts.

2.2 Literature on ownership and capital structure

A further line of research has investigated the relationship between ownership and capital structure (e.g. Masulis, 1988; Grossman and Hart, 1986; Leland and Toft, 1996). Several authors have analyzed the debt levels of family firms (Gallo and Vilaseca, 1996; Mishra and Mc Conaughy, 1999; Mc Conaughy, 2001; Lyagoubi, 2003). They all find that family firms tend to avoid control risk associated with higher leverage levels.

The existing literature analyzing capital structure as a proxy for the control risk propensity of a firm at some point refers to one of the following theories.

First, some researchers look at the availability, thus the offer and demand, of capital. The finance gap is hypothesized to exist for the small businesses, as they face higher investigation costs for loans, are generally less well informed on sources of finance,

and are less able to satisfy loan requirements (Groves and Harrison, 1996). In particular, the finance gap seems to increase with diminishing firm size (Pichler, 2004). Restricted availability was found to be induced in part by a restricted offer by creditors, due, for example, to high costs of risk assessment or agency costs of debt financing with SMEs (Vos and Forlong, 1996).

Second, many studies have examined the benefits of leverage since Miller-Modigliani's (1958) theorem of the irrelevance of capital structure was published. That theorem states that in a world with perfect capital markets but without taxes, changes in leverage have no effect on a firm's value. However, the existence of market imperfections has led financial theorists to agree that an optimal capital structure does exist for each firm. There is evidence that debt creates a tax shield advantage through interest payments, which is, however, balanced by the cost of bankruptcy. This theory is supported by De Angelo and Masulis (1980) and Givoly et al. (1992), who documented a positive relationship between the debt ratio and tax rate changes.

Third, the information hypothesis, popularized by Ross (1977), suggests that managers use capital structure to signal information about the firm's future cash flows and operating risk. The information hypothesis argues that this effect occurs due to asymmetrical information between managers and shareholders, and suggests that with an increase in leverage managers signal information about the firm's capacity to meet future interest payments.

Fourth, the pecking order hypothesis introduced by Myers and Majluf (1984) suggests that managers will first seek to finance assets with the lowest cost financing available. It argues that managers will issue the least risky security available to reduce costs.

Fifth, agency issues (Jensen and Meckling, 1976) were also found to have explicative power in financing decisions. For example, Timmons (1990) finds increasing agency costs of external financing from the early stage to the maturity phase of the firm (similarly Zimmer, 1998). Other studies examined the risk and the cost of preventing equity claimants from expropriating debt claimants by the investment of funds into riskier projects. Other authors have examined the agency

advantage of different forms of financing over the life cycle of the firm (Vos and Forlong, 1996).

There are studies which are outside the main streams of research cited above. Demsetz and Lehn (1985), for example, suggested that the forces affecting ownership structure are optimal firm size, effective control of management by owners, government regulation, and the firm's ability to provide amenities to owners. Cho (1998) found support for the Demsetz and Lehn (1985) contention that ownership structure is a function of firm characteristics. Research undertaken by Romano et al. (2000) found that financing decisions are influenced by firm owners' attitudes toward the use of debt as a form of funding moderated by external environmental conditions (e.g. financial market considerations). Van Auken (2001), on the other hand, states that the familiarity of owners with alternative forms of capital can have an influence on capital structures. Also, Hall et al. (2004) found that collateral and country specificities where important determinants of capital structure decision making in privately held firms.

2.3 Critical comments on the existing literature

Clearly, the literature mentioned above raises more questions concerning performance, risk and firm value than it answers. However, in the last few years, research published in the finance field has begun to take into consideration not only the differences between family and nonfamily firms but also the impact of family as an additional organizational variable on financial issues of a firm.

The existing research on the financial characteristics of family firms is most rewarding. However, in some way or other, the existing literature displays the shortcomings below.

2.3.1 The family influence challenge

Ownership is not a reliable measure of the degree to which and the way in which families are influencing their firms. Even if the real family influence exercised in practice is difficult to measure, there is evidence that this influence is not solely rooted in ownership. Astrachan et al. (2002) find that in addition to bureaucratic control mechanisms as the family's share in ownership, in management and supervisory board (Prahalad and Doz, 1981; Johnson and Kaplan, 1987; Mintzberg, 1994), the family's experience and its influence on the firm's culture are further determinants affecting family influence on a firm. This will be further elaborated on the definition part, chapter 3.1.3. Following Astrachan et al. (2002) the relevant issue is not whether a business is family or nonfamily, but the extent and manner of family involvement in and influence on the enterprise. Thus, studies that are limited to ownership concentration as a proxy for family influence compared to other variables do not produce satisfactory results. Depending on the definition of the family firm, further elements such as culture and experience need to be included. Academia and practice would very much profit from a research approach that strives to elaborate financial characteristics of family firms measuring family influence on a continuous scale.

2.3.2 The risk aversion challenge

Risk aversion is generally measured by the firm's debt level. Capital structure can help to explain how family firms evolve, finance their evolution from generation to generation or how differing family influence affects debt levels.

However, the fact that debt levels are experienced to be lower in family firms than in nonfamily firms (Gallo and Vilaseca, 1996) does not necessarily mean that family firms are more risk averse. Capital structure is an insufficient measure for risk aversion, for several reasons, which will be further elaborated in chapter 4.1. For example, the intermingling of personal and business wealth can distort capital structure. Or, if a large share of total wealth is tied to the firm and hence hardly

diversifiable, self financing of risky prospects can also be interpreted as the family's will and ability to bear considerable risks themselves.

Thus, capital structure and related traditional finance theory as outlined in the preceding chapters do not seem to be fully convincing in their attempt to explain the family firms' hypothesized risk aversion.

As personal involvement of family members in the firm is a crucial element of family firms, personal perceptions and preferences deserve further attention, also with regard to the risk taking propensity of family firms and their managers (Norton, 1991).

Research is needed which draws from a behavioral-oriented research body to examine in more depth the individual risk aversion of the managers of family firms. Behavioral finance (e.g. Kahneman and Tversky, 1991) is one approach. The theoretical concepts of behavioral finance, as proposed by Kahneman and Tversky (1991), seem to be particularly useful in analyzing financing decisions of family firms. When nonfinancial goals and human behavior of the person(s) leading the firm cannot be fully explained with traditional financial theory based on the paradigm of pure rationality, behavioral finance might be able to provide further insight.

2.3.3 The agency myth

Even though Mc Conaughy et al. (2001) find that a persistent theme suggests that family ownership and control are beneficial in mitigating the principal agent conflicts, there are contradictory opinions on this question.

Kets de Vries (1993), for example finds that family differences and role conflict can lead to behavior that is not in the best interest of the firm. Psychological conflict within the family (such as sibling rivalry, autocratic behavior, nepotism) can offset the benefits of reduced monitoring. Similarly, Schulze et al. (2003a and 2003b) find that altruism can cause agency costs in family firms. Levinson (1971) suggests that family firms are "…plagued with conflicts", which can be costly to mitigate. The role of trust, altruism but also stewardship (Davis et al., 1997) should be further studied to answer the question of whether, below the line, the agency advantages as

proposed by traditional financial theory are prevailing or the disadvantages are larger.

2.3.4 The valuation challenge

Valuation techniques are well elaborated in literature and practice (Spremann, 2002) if one assumes efficient markets. However, the question persists of how much a firm is worth to the family when it is not for sale or when the firm is privately owned and nobody can profit from an increase in firm value. What is value, for example, if the firm should be handed over to the next generation? Generally accepted valuation methods such as Capital Asset Pricing Model (Ross, 1977) are based on the assumption of efficient capital markets and do not cope with the characteristics of family firms. These include, for example, longer planning horizon and importance of nonfinancial goals. Even if efficient capital markets produce information (Spremann, 2002), on the present value of an investment for example, markets normally convey information only on the financial value of an investment or a firm.

Capital markets can hardly value the emotional value a family attributes to its firm. Therefore, it is hypothesized that corporate finance activity with family firms (e.g. sale of a family firm) is particularly successful if the valuation accounts for not only the monetary value but also the emotional value which the family attributes to its firm.

2.3.5 The data challenge

Reliable information on family firms is extremely difficult to obtain (Wortman, 1994, Schulze et al., 2003b). Public information is unreliable because most family firms are privately held and have no legal obligation to disclose information. Government documents and Dunn and Bradstreet are also of little use because family-managed firms are not listed as a separate category of business organization. Finally, it is difficult for researchers to collect primary data or to target selected groups of family-managed firms for study because there is no reliable way to identify family firms a priori (Daily and Dollinger, 1993). Consequently, researchers are forced to rely on selfreported data, sample from a broad population, and identify family-managed firms ex post (Daily and Dollinger, 1991, 1993; Handler, 1989).

2.3.6 Additional challenges

There are further challenges family firms are facing which, however, are not directly related to the financial characteristics of this type of firm. For example, family firms face a demographic challenge due to the shrinking size of families particularly in Europe (Garrett et al., 2003; Goldstein et al., 2003).

In addition, family firms also face peculiar problems through the innate combination of two social systems the family and the firm falling together in the family enterprise. This combination of social systems creates ambivalent situations (Lansberg, 1983; Kepner, 1983) affecting the relationships between managers (Davis and Tagiuri, 1989). Through this sociological dimension family firms are also affected by sociologic trends as for example the increasing cooperation of women in work life, hedonism and multi-optional behavior (Gross, 1994).

2.4 Research questions

Based on the literature review and the challenges for family business research, the present text takes a small step along the path to fill some of the research gaps at the intersection of research in finance and family business. As such, the study follows Mahérault (2000) in taking the family firm as a specific field of research within the finance field. The text will analyze three main questions, each discussed in a separate chapter.

2.4.1 Risk

The first part of this study, discussed in chapter 4, analyzes the risk aversion of family firms. Risk aversion is understood as the propensity to take respectively aversion against taking risky financial decisions (see the definition part, chapter 3.1.1 for more details). Risk as considered in other areas of management science, for example regarding product or marketing decisions, are explicitly excluded.
The text will first investigate whether traditional theories on capital structure are appropriate to analyze the differing debt levels of family firms - debt level being considered as a proxy for control risk aversion (Mishra and Mc Conaughy, 1999).

Research question 1:

Which traditional theories on the capital structure of the firm fit the characteristics of family firms? For the discussion see chapter 4.2.

Subsequently, the text will investigate whether specific characteristics of family firms have an impact on their control risk propensity measured in terms of debt levels. In particular, the text investigates the impact of low diversification of family wealth (Forbes Wealthiest American Index, 2002), the intermingling of private and business wealth (Haynes et al., 1996), ownership dispersion (refer to the literature outlined in chapter 2.2) and the impact of generation on control risk aversion of family firms.

Research question 2:

How does the fact that the family's investment is hardly diversifiable affect control risk aversion measured in terms of debt levels? For the discussion see chapter 4.3.1.

Research question 3:

How does intermingling of personal and business finance affect control risk aversion measured in terms of debt level? For the discussion see chapter 4.3.2.

Research question 4:

Is the control risk aversion of family firms, measured in terms of debt level, affected by ownership dispersion? For the discussion see chapter 4.3.3.

Research question 5:

Is the control risk aversion of family firms, measured in terms of debt level, affected by the generation active in the firm? For the discussion see chapter 4.3.4.

The above research questions all investigate the debt levels of family firms considered as the external manifestation of a firm's control risk aversion. It is assumed that the higher control risk aversion, the lower is the leverage level of the firm (Mishra and Mc Conaughy, 1999). The text however also strives to shed new light on the capital structure decision making process - hence on the internal dimension of control risk aversion. The analysis will draw from the findings of studies in behavioral finance (Kahneman and Tversky, 1991) and will question if family firm managers display loss aversion and reference point dependence when taking capital structure decisions. This approach provides new insight into the control risk aversion of family and privately held firms in general by taking a subjective view that looks beyond pure rationality underlying earlier research on the subject. To this end the following research question will be answered.

Research question 6:

Is the control risk aversion of family firm managers affected by loss aversion and reference point dependence? For the discussion see chapter 4.5.

For scholars this research provides a better understanding on the control risk propensity of family firms. For practitioners, such as family firm CEOs and consultants to family firms, this research presents not only qualitative but also new empirical evidence on the forces at play in a family firm. With a raised awareness of the risk propensity of their firms, practitioners will better understand on how to overcome the pitfalls of family firm management.

2.4.2 Return

The second part of this study, discussed in chapter 5, analyzes the financial return of family firms. Conventional decision theory considers investment choice to be a trade off between risk and expected return as defined in the capital asset pricing model (Sharpe, 1964; Lintner, 1965; Mossin, 1966; Black, 1972; Ross, 1976; March and Shapira, 1987). Hence, chapters 4 and 5 are interrelated.

Whether there are performance differences between family or nonfamily firms regarding their financial performance has been widely studied in literature. Jaszkiewicz (2005) reports that only 20% of all performance studies analyze non-quoted family firms. The existing literature (e.g. Holderness and Sheehan, 1988a; Chen et al., 1993; Lloyd et al., 1986, Gallo et al., 2004) however report diverging findings on the financial performance of family businesses. The present text therefore tries to provide additional insight into performance differences by probing a sample of privately held firms in Switzerland.

Research question 7:

Is there a performance difference between privately held family and nonfamily firms? For the discussion see chapter 5.1.

The performance differences between family and nonfamily firms need to be interpreted carefully. An important and only recently developed stream of research on agency aspects in closely held firms points out that even in firms where owners and managers are from the same family and where traditional agency theory (Jensen and Meckling, 1976) would predict zero agency costs, there are indeed costly agency effects that need to be mitigated (Schulze et al., 2003a and 2003b). Within this context this section strives to answer two research questions:

Research question 8:

What are the agency problems specific to family firms? For the discussion see chapter 5.2.1 and following.

Research question 9:

What are the strategic and financial implications of the agency problems observed in family firms and how do they affect return? For the discussion see chapter 5.2.6.

In comparison to the abundant literature on ownership dispersion and economic performance (e.g. Kaplan, 1989; Smith, 1990; Muscarella and Vetsuypens, 1990; Gibbs, 1993; Ang et al., 1996, Ehrhardt and Nowak, 2003a and further literature cited in chapter 2.1) the impact of family influence has never been thoroughly considered in studies of the financial performance of family firms. Therefore, the text will investigate the relation between family influence respectively ownership dispersion and financial performance.

Research question 10:

Is there an entrenchment effect of family influence on firm performance? Is there an optimal level of family influence? For the discussion see chapter 5.3.

Research question 11:

Does the firm performance depend on ownership dispersion within the family? For the discussion see chapter 5.4.

The next section of the text strives to answer the question whether family firms are more successful in specific industries, e.g. less capital intensive industries. It is hypothesized that family firms are able to deploy their inherent strengths (e.g. personal ties within the firm and with clients) better in certain industries than in others.

Research question 12:

In which industries are family firms outperforming their nonfamily counterparts? For the discussion see chapter 5.5.

The paper will also examine whether family firms are outperforming their nonfamily counterparts depending on firm size. This question challenges the popular belief that smaller firms are more successful as family firms and larger firms display a higher performance in the organizational form of the nonfamily firm (Berle and Means, 1932).

Research question 13:

Is there a performance difference between family and nonfamily firms depending on firm size? For the discussion see chapter 5.6.

Based on the popular belief that certain generations are less successful than others in financial terms (Mann, 1901) the following research question is answered:

Research question 14:

Is there a performance difference depending on the generation active in the firm? For the discussion see chapter 5.8.

2.4.3 Value

The third part, presented in chapter 6, focuses on value and valuation issues of family firms. This section works in two directions.

The first direction investigates publicly traded family firms. It refers to recent findings in academia that family firms outperform their nonfamily counterparts on the world's stock exchanges (Morck et al., 1988; Anderson and Reeb, 2003b; Mc Conaughy et al., 2001; Hasler, 2004). The text will therefore examine whether the Swiss publicly quoted family firms are outperforming their nonfamily counterparts and what the reasons for an outperformance might be.

Research question 15:

Are family firms outperforming their nonfamily counterparts in terms of stock market performance on the Swiss stock exchange? For the discussion see chapter 6.1.

Research question 16:

What are the reasons for the outperformance of family firms on the Swiss stock exchange? For the discussion see chapter 6.1.1 and following.

The second direction of chapter 6 examines valuation issues in privately held family and nonfamily firms. The text explicitly measures monetary and nonmonetary values in family firms.

Even if Mc Conaughy (2000) finds that family CEOs have lower levels of compensation and require fewer compensation-based incentives than nonfamily CEOs there is evidence that family firms have sources of monetary gains other than

salary. Some authors have investigated the relevance of individual financial gains as perks and perquisites in family firms (Morck et al., 1988; Johnson et al., 1985; Slovin and Sushka, 1993). However, these funds have not yet been systematically considered as an integral part of value.

Research question 17:

How much money do families earn in the form of perquisites from their firms and how do these monetary flows affect firm value? For the discussion see chapter 6.2.1.

Next to the monetary values, families derive a great portion of value from nonmonetary gains (Ward, 1997). Hence, the subjective value the individual entrepreneur assigns to his firm is hypothesized to differ from the market price that does not account for those nonmonetary, subjective gains. One central challenge in the research on family firms lays in the analysis of the difference between the subjective valuation of the firm by the individual manager and the objective market price for the same firm. In that sense the analysis tries to extend the literature on overoptimism bias (Lovallo and Kahneman, 2003), which managers tend to display when valuing their risky projects. From a practical point of view it is of interest to better understand the factors influencing subjective value in order to get additional insight into the corporate finance activity of privately held firms and to more accurately determine offer prices and price ranges.

Research question 18:

What factors affect the subjective value an entrepreneur attributes to his firm? For the discussion see chapter 6.2.2 and 6.2.3.

According to Copeland et al. (2002) companies create value by investing in capital at rates of return that exceed their costs of capital. Considering that family managers derive value also from nonmonetary rewards, as for example from the independence

of the firm (Spremann, 2002), raises the question what implied costs of capital family and nonfamily managers are applying to their firms.

Traditional financial researchers argue that the costs of capital of family firms need to be at least as high as those demanded by the public market for capital (Schulze, 2005). Applying lower costs of capital than required on the financial market leads to underinvestment and is not sustainable over a longer period of time. If family firms applied lower costs of capital, these researchers argue, family firms would have disappeared in the competition with nonfamily firms.

It could be countered that the cost of capital can be lower not only due to nonfinancial rewards to the family. Given that the family itself is the most important source of equity to this type of firm (Achleitner and Poech, 2004; Poutziouris, 2001), the family itself can determine accurate costs of equity. Therefore, the text strives to answer the following two research questions:

Research question 19:

What are the costs of capital of family firms compared to those of nonfamily firms? For the discussion see chapter 6.3.

Research question 20:

What are the opportunities and threats for family firms of applying lower costs of capital than nonfamily firms. For the discussion see chapter 6.3.5 and 6.3.6.

In sum, the text considers Habbershon's et al. (2003) call to study in more detail the degree and nature of family influence on firms and wealth creation. It strives to support Mahérault's (2000) finding that family businesses could be a specific field for research in finance.

3 Definitions and research methodology

3.1 Definitions

3.1.1 Risk and return

Risk and return are fundamental and at the same time opposite concepts in financial theory. Due to this innate interdependence of risk and return, the two chapters can not be separated completely from each other. Classical financial theory postulates a positive correlation between risk and return in the sense that in a world of efficient capital markets, return cannot be increased without carrying more risk (Bernstein, 1996). Conventional decision theory considers investment choice to be a trade off between risk and expected return as defined in the capital asset pricing model (Sharpe, 1964; Lintner, 1965; Mossin, 1966; Black, 1972; Ross, 1976; March and Shapira, 1987). Although there are researchers who have questioned a positive relation between the average return and systematic risk of common stocks (Fama and French, 1992) there is overwhelming empirical evidence on a positive relation between the two.

In finance literature, risk is sometimes defined as the probability that the actual return on an investment will deviate from the expected return (Van Horne, 1980) and is often combined or confused with the probability of an event which is seen as undesirable. Usually the probability and some assessment of expected harms must be combined into a believable scenario, combining risk, regret and reward probabilities into expected value.

Risk as used in this text is considered as future harm from some present action on the control the entrepreneur has over his firm. Hence the text discusses in particular control risk. The text uses two main approaches to measure control risk and control risk aversion.

The first approach is leverage level, which is considered as the manifestation of control risk aversion in the firm's balance sheet. It is assumed that the higher control

risk aversion, the lower is the leverage level of the firm (Mishra and Mc Conaughy, 1999).

The second approach determines control risk aversion of the individual person by the individual's aversion or propensity to make risky financial choices that have an impact on the level of control he has over his firm. It roots in the finding that leverage levels of family firms can be an insufficient measure for the control risk aversion or propensity of a firm or the entrepreneurs controlling it. The reasons for these findings will be discussed in chapter 4.2 and following. Such a measurement of control risk aversion allows working out the behavioral differences between family and nonfamily firm managers, as will be elaborated in chapter 4.5. This approach uses the methodology proposed by Kahneman and Tversky (1991) to measure the individual's control risk aversion.

Return as used in chapter 5 is considered as the financial reward from some present action. Return is defined as the financial return of the firm. Depending on the research question and the data available the text analyzes financial measures as cash flow, cash flow or return on equity defined as cash flow divided by equity. Those measures were chosen as they represent standard financial measures used in other studies on financial aspects of family firms (Jaskiewicz, 2005). Chapter 3.2 provides an overview on the measures used to answer the outlined research questions.

3.1.2 Value

In common economic language, if an asset has a value it has a significance with regard to the satisfaction of a need. One can distinguish between the objective and subjective value of an asset, understood as the objective versus the subjective usability of the asset for a certain aim (DTV, 1995). In general, for economic sciences with focus on valuation issues, the main interest is in the objective value. To have objective value, the asset has to be valuable to more than two persons and for more than one moment in time (stability condition). According to Spremann (2002) the financial value of an asset is the use of the asset measured in monetary terms. The asset has value, because of its characteristics and, second, due to its significance for a larger number of persons. In microeconomic theory, the value of a

good equals its marginal price (Mankiw, 2004). Therefore, the value of the good is defined by the value of the next best alternative.

The above definitions are well suited to define the value of an asset which is determined by a market (e.g. commodities, firms quoted on the stock market). Hence, the analysis of publicly quoted family firms in chapter 6.1 will refer to the traditional concept of market value of a firm, as defined by the market capitalization.

However, these definitions of value are inadequate for the assessment of family firms that are not for sale, e.g. many privately held ones, for several reasons.

First, values other than the financial value are predominant in a family firm's management decisions. Family business managers place much higher priority on profitability, low debt level, family wealth, survival and independence of the business than on growth and firm value (Ward, 1997). Value in this context means "utility" as defined by Vos and Forlong (1996).

Second, if a company has no objective price the subjective value to the entrepreneur is the reference parameter for the success of his entrepreneurial activity. This subjective value is biased by the individual's goal set and thus difficult to measure. The difficulty lays in the diversity of individual goal sets and the nonmonetary nature of these goals.

Third, the value an individual or a family attributes to its firm might change over time when affected by emotional elements (e.g. family quarrels etc.). Hence the subjective value does not satisfy the stability condition (Spremann, 2002).

Fourth, microeconomics defines the value of a good by its marginal price or the value of the next best alternative. The monetary and nonmonetary losses someone has to bear through the exit from the firm might however be so high that there is no corresponding next best alternative to the existing situation.

One central purpose of this text (see chapter 6) is to develop an adapted framework for the valuation of and value management in family firms, especially for those that are not for sale.

3.1.3 Family firm

Although in 1989 Handler said that "defining the family firm is the first and most obvious challenge facing family business researchers", more than a decade later the challenge remains (Klein, 2002).

Besides Handler (1989) many authors have addressed the subject. Among these were Heck and Scannell (1999) and Litz (1995). Definitions cited earlier in literature concern mostly ownership (e.g. Berry, 1975; Lansberg et al., 1988), ownership and management involvement of an owning family (Burch, 1972; Barnes and Hershon, 1976) and generational transfer (Ward, 1987). In contrast, more recent definitions concentrate on family business culture (Litz, 1995; Dreux IV and Brown, 1999).

To systematize the discussion, Gersick et al. (1997) proposed a three-circle model of the family business. This model has been widely accepted in consulting. The authors describe the family business as a system with three independent but overlapping subsystems, namely ownership, family and business.

The detailed review of definitions employed in studies reveals that there is no clear demarcation between family and nonfamily businesses and that no single definition can capture the distinction between the two types of entities (Astrachan et al., 2002). Artificially dichotomizing family versus nonfamily firms, when no such clear cut dichotomy exists, seems to create more problems than it solves. In addition, definitions that differ only slightly make it difficult not only to compare investigations but also to integrate theory.

Hence this study proposes to use a continuous scale for the measurement of family influence, as will be outlined below.

3.1.4 Family influence

Smyrnios et al. (1998) point out that "complexities associated with a sound definition of a family firm raised a number of methodological concerns related to sampling issues, appropriate group comparisons and establishing appropriate measures used to derive statistics." The authors even mention that the complexity and the resulting confusion can call into question the credibility of family business research.

Following the arguments of Astrachan et al. (2002), this text proposes that a relevant issue is not whether a business is family or nonfamily, but the extent and manner of family involvement in and influence on the enterprise. In the view of Astrachan et al. (2002) there are three dimensions of family influence that should be considered. These are power, experience and culture. This measure is called the Family-Power, Experience and Culture scale (= F-PEC).

Although F-PEC is a compelling instrument, its full use and practicability for empirical research is limited-for three reasons. First of all, the culture subscale, one of the three subscales, is difficult to quantify as it intends to measure the values predominant in family firms. Measuring values can hardly be achieved via a one time assessment. As values remain constant over time, measuring values is difficult because one has to differentiate between emotions, which change over time (Klein, 1991) and values, which do not. Hence this requires measuring twice, which is hardly practicable for empirical research.

Furthermore, it remains open to what degree one subscale can influence or partly replace the other. For example, one could imagine that high scores in the power subscale influence the culture prevailing in that company (culture subscale). In addition, it is questionable whether firms with the same total level of F-PEC but with differing subscales (e.g. one firm with high levels of power subscale and low levels of culture subscale compared to a firm with inverse power and culture subscale) can be considered the same.

Finally, any empirical research initiative that tries to measure the interdependence of a variable (e.g. risk aversion) and family influence needs to measure not only this variable but also family influence via F-PEC. This implies a three-page questionnaire, only for the measurement of family influence, which limits the practicability of F-PEC.

One solution to the measurement problem is limiting family influence to the power subscale. Family shareholders have a strong preference for control (Hart, 1995), and tend to control equity, government and management board (Frey et al., 2004). This is exactly what the power subscale (F-Power) within F-PEC is measuring. Klein called the same measure “Substantial Family Influence (SFI)” (Klein, 2000).

The advantage of the F-Power respectively the SFI definition is its practicability while keeping the possibility of measuring family influence on a continuous scale. According to this definition, a family business is a company that is influenced by one or more families in a substantial way. A family is defined as a group of people who are descendants of one couple and their in-laws as well as the couple itself.

Substantial Family Influence (SFI) is composed of three elements (Klein, 2000):

1. The family's share in the capital of the firm, on condition that the family holds at least some shares, plus
2. The family's share of the seats on the governance board, plus
3. The family's share of the seats on the management board.

According to Klein (2000) a firm can be considered as a family firm, when the sum of the family's share in equity, in government and management board is equal to or larger than 1. At most, a family can fully control all three elements. Family influence then amounts to 3 (SFI = 3). In analytical terms this can be written as follows:

$$If\ \ S_{Fam} > 0\ \ \ SFI : (\frac{S_{Fam}}{S_{total}}) + (\frac{MoSB_{Fam}}{MoSB_{total}}) + (\frac{MoMB_{Fam}}{MoMB_{total}}) \geq 1$$

With:

S = stock; SFI = substantial family influence; MoMB = Members of management board; MoSB = Members of supervisory board; Fam = family.

As this broad definition is accepted in relevant scientific literature (Klein 2000; Shanker and Astrachan, 1996), choosing Substantial Family Influence (SFI) for this text assures international comparability of the research results with existing and future studies regarding the relation between financial issues and family influence.
The definition carries the advantage of being modular in the sense that it allows working out figures with differing definitions, including for example solely ownership and management and / or supervisory board participation.

3.2 Empirical research samples, data collection and evaluation

The present study uses empirical data analysis to answer the outlined research questions.

The empirical analysis used different data sets, depending on the research questions to be answered (Table 1 and Table 2). Whenever an empirical investigation is made in the study, the text will refer to Table 1 or Table 2 and indicate the data set used in order to facilitate the overview. The empirical analysis was performed with the Statistical Software Package for Social Sciences (SPSS). The statistical test applied is in each case indicated in the text.

Table 1: Data samples (I)

Sample Nr.	Date	Type of firm, country	Collection method, Data source	N, Return rate	Main research question	Measure	Chapter
1	April 2004	Privately held family and nonfamily firms, CH	Anonymous questionnaire to 7'000 firms. Addresses randomly selected from independent address provider, sample not stratified for size classes	1215, 17.3%	Risk	Capital structure	4.1 to 4.4
					Return	Return on equity	5.1 to 5.8
2	September 2004	Privately held family and nonfamily firms, CH	Questionnaire sent to 450 current and former participants of executive seminars at the University of Sankt Gallen	148, 33.1%	Risk	Behavior	4.5
3	April 2005	Publicly quoted family and nonfamily firms, CH	Datastream, Bloomberg and IBES	140	Value	Information setting and stock market performance	6.1.1

Table 2: Data samples (II)

Sample Nr.	Date	Type of firm, country	Collection method	N, Return rate	Research question	Measure	Chapter
4	May 2004	Publicly quoted family and nonfamily firms, USA	Analysis of EBIT variance on data derived from Thomson Financial and Business Week 2003	449	Return	Information setting and stock market performance	6.1.1
5	April 2004	Publicly quoted family and nonfamily firms, CH	Analysis of stock market performance based on data derived from Datastream	270	Value	Evolution of market capitalization to build performance indices	6.1
6	July 2004	Privately held family and nonfamily firms, CH	Questionnaire to 59 members of focus groups for whose firms the financial data was available at the University of Sankt Gallen	59	Return	Implications of agency problems	5.2.6
					Value	Individual Financial Gains	6.2.1
7	May 2005	Privately held family and nonfamily firms, CH	Anonymous questionnaire to 10'000 firms. Addresses randomly selected from independent address provider, sample not stratified for size classes	958, 9.1%	Value	Total Value and Emotional Value	6.2.2

4 Risk in the family firm

Conventional decision theory considers investment choice to be a trade off between risk and expected return (March and Shapira, 1987). This chapter deals with the first element, risk. In particular, this section investigates control risk aversion of family firms as introduced in the definition of risk as understood for this text (see chapter 2.4.1). The text addresses the following research questions.

The text will first investigate which traditional theories on capital structure are appropriate to analyze the differing debt levels of family firms - debt level being considered as a proxy for control risk aversion.

Subsequently, the text will investigate whether specific characteristics of family firms have an impact on their control risk propensity measured in terms of debt levels. For example, the text will work out how the fact that the family's investment is hardly diversifiable affect control risk aversion measured in terms of debt levels. In addition, it will be answered how intermingling of personal and business finance affect control risk aversion measured in terms of debt level. Furthermore the text investigates whether control risk aversion of family firms, measured in terms of debt level, is affected by ownership dispersion. Additionally, it will be probed whether control risk aversion of family firms, measured in terms of debt level, is affected by the generation active in the firm.

The above research questions all investigate the debt levels of family firms, which can be considered as the external manifestation of a firm's control risk aversion. The text however also strives to shed new light on the capital structure decision making process-hence on the internal dimension of control risk aversion. To this end it will be investigated if family firm managers differ form their nonfamily counterparts regarding capital structure decision making.

For scholars this research provides a better understanding on the risk propensity of family firms. For practitioners, such as family firm CEOs and consultants to family firms, this research presents not only qualitative but also new empirical evidence on the forces at play in a family firm. With a raised awareness of the risk propensity of

their firms, practitioners will better understand on how to overcome the pitfalls of family firm management.

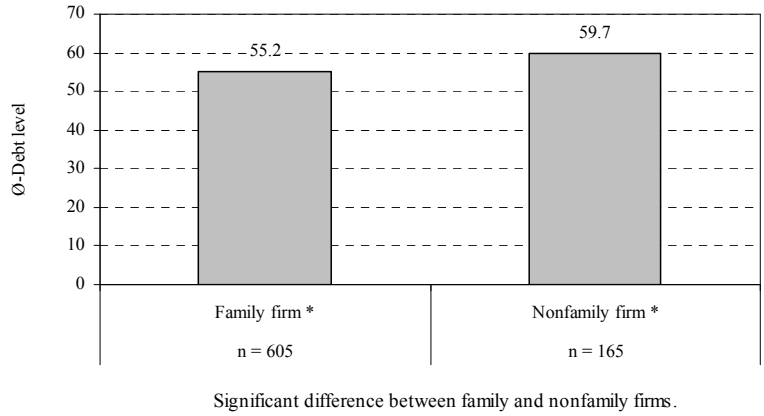
4.1 Capital structure of family firms

Literature on the subject of capital structure of family firms is abundant. Capital structure is of particular interest to family firms as it can affect the risk of an organization and, therefore, the risk to which managers are exposed (Mc Conaughy et al., 2001).

Agrawal and Nagarajan (1990) noted that firms with no long-term debt are more likely to be family controlled. In addition, family relationship is found to be an important factor to eliminate leverage and thus risk. In 1994 Mc Conaughy found that large public founding family controlled firms (FFCFs) use significantly less debt than non-FFCFs. Moreover, Gallo and Vilaseca (1996) found a low debt to equity ratio in family firms. Finally, the first large scientific survey about family firms by Arthur Andersen / MassMutual Life Insurance in 1997 confirmed that family businesses tended to avoid debt (Mishra and Mc Conaughy, 1999). Below Figure 3 displays the mean debt levels of family firms compared to nonfamily firms in Switzerland. The differences were not as marked as expected from the studies cited above but are still statistically significant.

Figure 3: Debt level of family and nonfamily firms-full sample

Data source: Data sample Nr. 1, refer to Table 1. The analysis includes both family and nonfamily firms. Data is in percent. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



Significant difference between family and nonfamily firms.

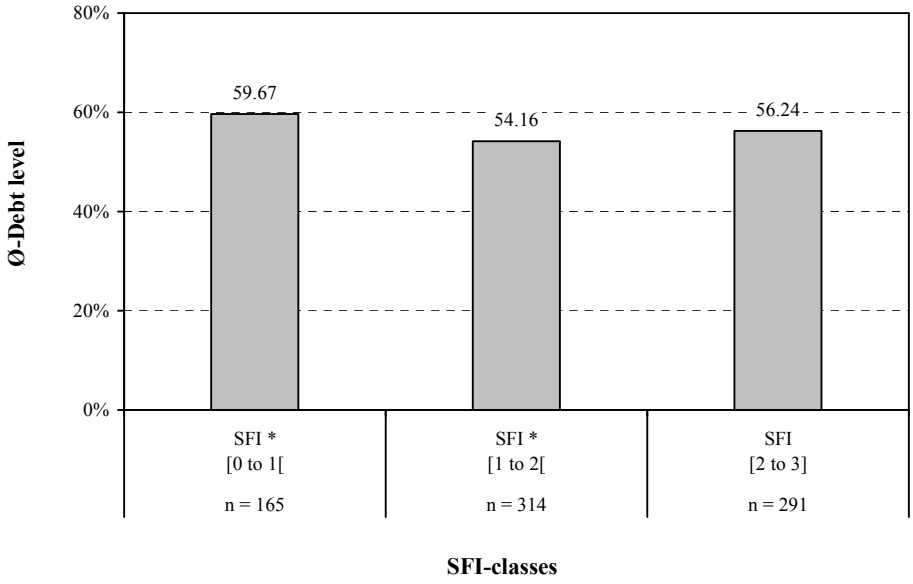
Regarding the term structure of debt, the existing literature delivers contradictory results. Mishra and Mc Conaughy (1999) found that the term structure of debt is different in family firms from nonfamily firms. They state that the preference for low debt levels of founding family controlled firms is more marked for short-term debt. The authors conclude that founding CEOs have more to lose, making the cost of financial distress even higher. Since financial distress can result in a loss of founding family control, the CEOs of family firms reduce the control risk by reducing total leverage and avoiding short-term debt. Conversely, Lyagoubi (2003) posits that family firms issue more short-term debt than other firms. It is added that the increased level of short-term debt is due to a specific perception of family firms by creditors. Creditors might believe that family firms bear more information asymmetry risk than other firms. In order to decrease this risk, they prefer short-term lending.

Mc Conaughy and Mishra (1999) suggest that the use of debt is related not to managerial ownership but family control. The authors use family ownership as a proxy for family control. The analysis should not however be limited to family ownership as family control is not limited to ownership. It further includes government board and management board involvement, as defined by SFI (chapter 3.1.4). This approach gives a more distinctive insight into the question of how

family influence affects control risk aversion measured by debt level. It could be hypothesized that within the group of family firms, firms that are strongly controlled by families are even more control risk averse (Figure 4).

Figure 4: Debt level and family influence (SFI)

Data source: Data sample Nr.1, refer to Table 1. The analysis includes both family and nonfamily firms. Statistical test applied: T-test. Significance level: 0.05.



* = T-Test: Significant mean difference between SFI-classes [0 to 1[and [1 to 2[.

The above studies draw a unanimous picture of the lower leverage levels of family businesses. However, the reasons for the lower debt levels have never been investigated thoroughly. The following chapters strive to shed light on this question.

4.2 Traditional theories on capital structure

The following subchapters challenge the traditional capital structure literature with regard to their explicative power concerning the lower debt levels of family firms.

4.2.1 Offer and demand of debt

Some researchers have looked at the availability, in particular the offer of capital. The finance gap is hypothesized to exist for small businesses (and thus many family firms), because they face higher investigation costs for loans, are generally less well informed about sources of finance and are less able to satisfy loan requirements (Groves and Harrison, 1996). The finance gap seems to increase with diminishing firm size (Pichler, 2004). As several studies point out that family firms tend to be smaller in size than nonfamily firms (Frey et al., 2004; Klein, 2002), it would follow that many family firms face a disadvantage regarding the availability of debt. Amsden (1992) notes that financing difficulties typically constrain the growth of family firms. The author however does not specify the type of financing difficulties or whether the difficulties are due to a limited offer and / or an unsatisfied demand.

In this respect, Vos and Forlong (1996) found that the restricted availability of financing was caused in part by a restricted offer by creditors, due for example to high costs of risk assessment or agency costs of debt financing with SMEs. However, even if smaller and family firms consider access to capital as an important constraint to growth, it is questionable whether this argument is generally valid for family firms. In fact, for restricted availability of capital to be meaningful an unsatisfied demand is required.

Research on the importance of business goals prevailing in private and family firms acknowledges, that independence, and therefore also independence from external financing and creditors (e.g. banks) is an important business goal in itself (Ward, 1997). Evidence about a consciously restricted demand for external sources of financing is provided by studies that revealed an underestimated importance of financial bootstrapping (Winborg and Landström, 2000). In addition, Poutziouris

and Sitorus (2001) find that the reliance of family firms on short-term debt is due to their higher profitability rather than to a limited access to capital markets. When asked about the importance of factors affecting capital structure decision making, family firms find that accessibility of capital is only between "moderately important" and "important" (Figure 5).

Even for larger family firms demand for external capital has been found to be deliberately limited: Achleitner and Poech (2004) finds that 63% of the largest German family firms with a turnover of between 400 Mn and 1.3 bn EUR do not consider that the access to capital was hindering their firm's growth although they follow very conservative financing policies.

Thus, scientific investigation and experience from practitioners indicate that problems other than the availability of debt need to be found to explain the lower leverage levels of family firms.

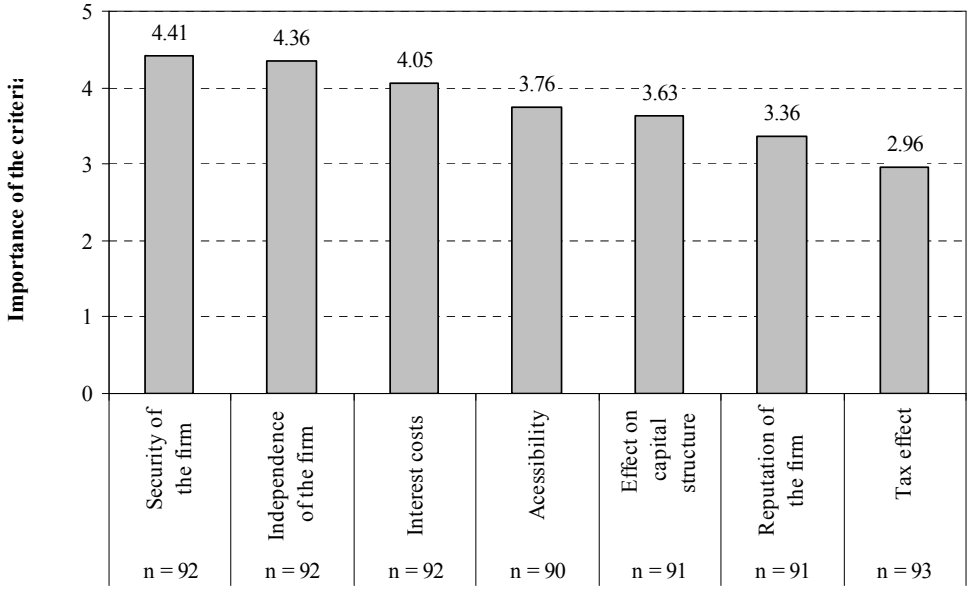
4.2.2 Tax shield of capital structure

Many studies have examined the benefits of leverage since Miller – Modigliani's (1958) theorem of irrelevance of capital structure. In contradiction to this theorem, there is evidence that debt creates a tax shield advantage through interest payments, which is balanced however by the cost of bankruptcy. This theory is supported by De Angelo and Masulis (1980) and Givoly et al. (1992) who documented a positive relationship between the debt ratio and tax rate changes.

The fact that family firms have lower debt levels raises the question of whether this type of firm does not consider tax shield when making financing decisions. Below Figure 5 indicates that family firms rate tax shield of debt financing as being "rather unimportant" to "moderately important". It becomes evident that the security of the firm, its independence and the financing costs are much more important factors affecting capital structure decision making in family firms, at least in privately held ones.

Figure 5: Factors affecting capital structure decision in family firms

Data source: Data sample Nr. 2, refer to Table 1. The analysis includes family firms only. Labels: 1 = completely unimportant, 2 = unimportant, 3 = moderately important, 4 = important, 5 = very important. No statistical test applied. How to read below figure: the interest costs are the third most important criteria when family managers decide about financing decisions, reaching 4.05 points on a scale from 1 to 6.



4.2.3 Information hypothesis

The information hypothesis popularized by Ross (1977) suggests that managers use capital structure to signal information about the firm's future cash flows and operating risk. The hypothesis argues that this effect occurs due to asymmetrical information between managers and shareholders, and suggests that with an increase in leverage, managers signal information about the firm's capacity to meet future interest payments.

Information theory predicts that stock prices (and therefore company value) increase when a rise in leverage is announced, as this decision implies the management's conviction that the financial strength of the company can carry the burden of interest payment. In contrast to an increased debt level, the receiving of external equity indicates investment projects with higher risk and less security but potentially high returns. The management therefore prefers to share the risk with external investors.

Applying the information hypothesis to family firms leads to the question of what kind of signals family businesses display with their financing and for whom the signals are intended. In the case of many family businesses, data on the capital structure is private and interpretable only by informed family members or other well informed parties involved in the family firm. Information is often not provided to a large public and is therefore not interpretable by independent investors. Nevertheless, large publicly quoted family firms provide signals with their capital structure. Low debt levels indicate the strong belief and commitment of family shareholders to their firm. At the same time, the families also show their dislike for leverage while having to accept lower returns on equity.

Thus, the information hypothesis seems to be a useful instrument in the world of publicly quoted family firms; it gives investors a sign that can influence their expectations. Yet it does not seem to have strong clarifying power for the low debt levels of privately held family firms.

4.2.4 Pecking order hypothesis

The pecking order hypothesis by Myers and Majluf (1984) can provide further insight into why the balance sheets of family firms carry less debt. The hypothesis suggests that managers will seek to finance assets with the lowest cost financing available. It argues that managers will issue the least risky security available to reduce costs.

Pecking order hypothesis was found to be useful in understanding capital structure decision making of these firms (Wagenvoort and Hurst, 1999; Watson and Wilson, 2002; Cassar and Holmes, 2003). The behavior of families as shareholders has also served as a field of research on the family's willingness to engage in equity transactions (Westhead et al., 2001). Westhead's et al. (2001) study proposes that owners of family firms are reluctant to sell equity to outsiders, preferring to remain independent and to transfer the business to the next generation of family members. The authors state that owners generally pursue strategies that ensure business survival and independent ownership, even if this these strategies may retard family

business growth prospects. Bhagwat (2002) finds that nonfamily firms are more likely to be growth-inspired whereas family companies are governed by the "keep it in the family" tradition. And similarly, in a study of 240 UK firms Poutziouris (2001) concludes that family firms adhere strongly to the pecking order principles of financing.

If one considers as a cost the loss in any goal predominant in family firms, e.g. control and independence, financing with external funds can be considered as very costly.

Pecking order hypothesis therefore proves to be helpful in understanding low debt levels of family firms. Nonetheless, monetary costs of financing are certainly not the sole criterion considered when it comes to financing decisions.

4.2.5 Conclusion and outlook

The above subchapters have analyzed the explicative power of traditional finance literature. The results are rather disillusioning. Except for the pecking order theory none delivers convincing explanations for the capital structure of family firms. Therefore, the following chapters will in more details look at the characteristics of family firms in order to better understand where the differences in capital structure derive from.

4.3 Characteristics of family firms and their capital structure

The next chapters will more closely look at the characteristics of family firms and propose alternative rationales to explain capital structure decision making in family firms.

4.3.1 Undiversified investment

Masulis (1988) delivers a further possible answer for the reduced debt levels of family firms. He suggests that managers prefer having less leverage than shareholders in order to reduce the risk of their undiversified investment in the company. This theory is well applicable to managers of family firms who have a considerable part of their estate invested in the company. Forbes Wealthiest American Index (2002), for example, indicates that family business owners invested an average of 69% of their fortune in the firm. Consequently, CEOs of family firms tend to be more risk averse because they have "most of their eggs in one basket". Casson (1999) and Chami (1999) propose (following Becker, 1981) that founding families view their firms as an asset to bequeath to family members or their descendants rather than as wealth to consume during their lifetimes. A study by Agrawal and Nagarajan (1990) showed that over 100 corporations listed on the U.S. stock exchanges use no long-term debt at all. The authors find that all-equity firms are characterized by greater equity ownership by top managers and more family involvement.

These findings support the hypothesis that managers avoid leverage to reduce control risk to their undiversified personal and family capital. Next to a low diversification of financial capital, human capital of the family is also closely tied to the firm. Normally, a manager's employment, employability and reputation depend on this human capital investment. Even if the employment and employability of the family business manager is not in danger at first due to the power that is accumulated in his position, just as financial capital in the family firm, the risks associated with human capital are hard to diversify (Amihud and Lev, 1981). Risk,

in this case, is strongly linked to the viability of the company. For this reason, when decisions are made in the firm, managers will choose solutions that ensure the survival of the business. It is not therefore surprising that the family business owners' desire to protect their monetary and nonmonetary benefits induces a business perspective that lasts farther into the future (e.g. one or more generations) than the perspective of a more short-term oriented manager with a time horizon of a few years to one working life.

4.3.2 The separation of business and family wealth

Amongst other factors, organizational form may affect the ability to take risks. The choice of the organizational form can be considered as a mechanism to increase the separation between business and personal risks as seen in the corporate form, for example. On the one hand, sole proprietorships and partnerships do not have the legal protection from unlimited liability in the case of business failure. These organizational forms have a lower degree of separation between business and personal risks than corporations (Ang et al., 1995). On the other hand, the corporate form experiences a weakening limited liability protection by pledging personal collateral and personal guarantees.

Ang et al. (1995) find that firm size is related inversely to the incidence of personal commitments (similarly Avery et al., 1998). The finding that smaller firms, therefore many family firms, tend to secure debt with family assets has an important consequence. Leverage levels within family firms are flawed, as there are often vanishing boundaries between private and business assets (Haynes et al., 1999). The actual asset base should therefore include private and business fortune as they are often tied to each other.

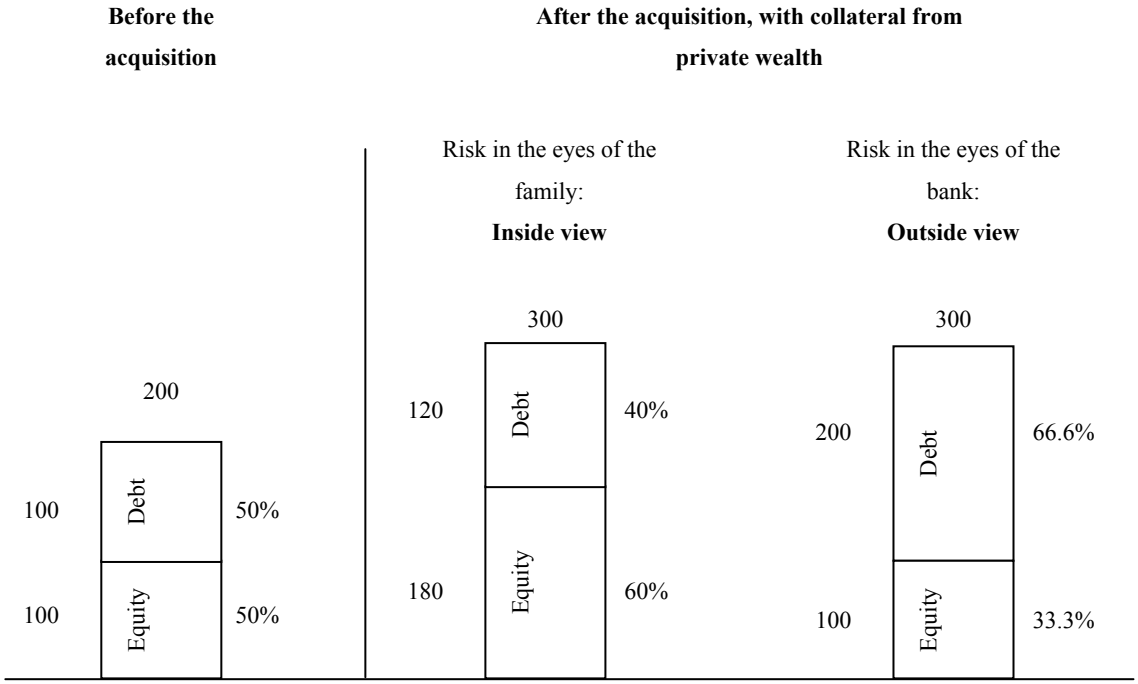
An example: imagine a family firm that has a balance sheet that is 50% debt and 50% equity financed. Total assets amount to 200. The family firm then acquires a building for 100. To finance the acquisition the bank requires pledging of private securities of the family, at the value of 80. In the eyes of the bank, risk of this

investment has been reduced with the collateral. In the eyes of the family however, risk has increased.

Seen from the inside, with the eyes of the family, capital that is fully liable (equity capital) has increased from 100 before the acquisition to 180, as the collateral on the securities is fully liable in case of bankruptcy (Figure 6).

Seen from the outside, with the eyes of the bank and the financial community that analyzes the balance sheet of the firm, equity is still 100 (Figure 6).

Figure 6: The impact of debt collateral on leverage levels



If the private collateral is not divulged in the notes to the accounts, no family outsider will notice that the actual financial risk which the family is bearing is larger than 100. This implies that a true view of risk aversion of the family entrepreneurs is only feasible, if one includes all financial relations (particularly collateral by the family to secure loans) between the family and the firm. Such an integrated analysis as proposed above draws a very diverse picture of the firm and its capital structure.

Hence, even if balance sheets display low leverage levels (outside view), in the eyes of the family (inside view) this level is still overstated. The equity capital that is at

risk is larger in the eyes of the family. Families therefore display a considerable willingness to bear financial risk, represented by the share of capital that is fully at risk in the case of default of the company.

Family firm finance and accounting is different from that of nonfamily firms not only because of vanishing boundaries between debt and shareholder capital, as outlined in the above example. The financial ratios of privately held firms as return on asset or return on equity can also be flawed (Levin and Travis, 1987). If assets like cars, real estate etc. that are exclusively privately used, are accounted for in company accounts, the asset base is over- and the return ratios understated. Conversely, if business related assets are owned by the family but are not accounted for in company accounts, return ratios tend to be overstated. Consequently, financial ratios of privately held family firms can be distorted and hardly comparable to those of public firms.

Just as the debt / shareholder structure and financial ratios, income statements of family firms also need to be analyzed carefully, as they often represent the lifestyle of the family. For example, rent for real estate can be artificially inflated to transfer funds to the family in order to avoid excessive fiscal burden. Similarly, perquisites and payments to family members can cloud the true profitability of the firm.

Thus it becomes clear that balance sheet structure, income statement and therefore also financial ratios can be distorted in family firms. To understand this phenomenon one has to keep in mind the goal set of family firms which may have objectives other than profitability and accounting transparency for outside shareholders. The above findings underline the importance of an individual approach to the analysis of family firm financing that respects the specific characteristics of the given family (Levin and Travis, 1988).

Taking a distinct view of family firm's accounts is of particular interest for private and commercial banks. For private banks offering family office services it can be essential to obtain insight into the intertwined finances in order to assess the risk profile of the family.

Commercial banks tend to have different views on family firms. By studying only the repayment capabilities of the firms, they tend to overlook ownership wealth

(Gallo and Vilaseca, 1996) and intermingling financial commitments between the family and firm. An integrated view could however lead to financial services that fit better the real needs and control risk aversion of family firms and their families.

4.3.3 Ownership dispersion

The agency positions of outside owners and owner-managers differ. Outside owners tend to prefer growth oriented risk taking because they benefit solely from the appreciation of shareholder value. They can even afford to be indifferent to the level of risk that is specific to any particular investment made by a given firm because they can reduce that risk by diversifying their portfolios. In contrast, owners who manage private firms define the firm's value in terms of utility; they will undertake risks that are commensurate with their preferences for certain outcomes (Vos and Forlong, 1996).

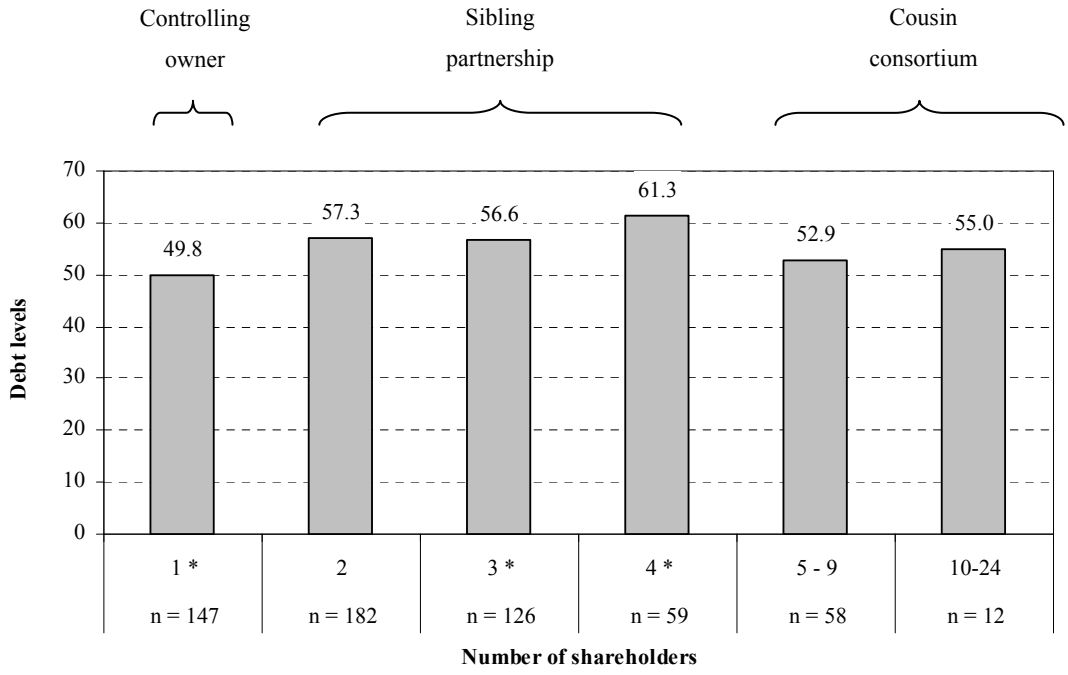
In the life of a firm, ownership is expected to pass over from full control of one or very few shareholders to a more dispersed shareholder structure. If an owner - manager relinquishes equity to outside owners, agency theory predicts that the changes in the incentives facing the owner-manager will cause the firm's value to decline. Specifically, as inside owners now bear only a fraction of the risk or cost of the benefits they receive, they have incentive to act opportunistically and make decisions that promote their personal interests as opposed to the interests of the outside owners. In this way, fractional ownership creates agency problems. It can give inside owners incentive to free ride on outside owners' equity and to favor consumption over investment. Similarly, inside owners might get incentive to follow investment strategies that are riskier, with higher debt levels.

The question addressed here is whether fractional ownership in family firms creates agency problems in the way described above, or whether family relationships promote the within-group goal alignment of ownership interests and encourage investment. In particular, this chapter analyzes the extent to which ownership dispersion within family firms alters a firm's use of debt.

Gersick et al. (1997) find that the ownership dispersion of a family firm passes through three broad stages: First, that of a controlling owner, in which most shares are held by the founder, or in the case of later generations, by a single individual. Second, that of a sibling partnership, in which relatively equal proportions of ownership are held by members of a single generation. Third, that of a cousin consortium, in which ownership is further fractionalized as it is passed on to include third and later generations. Figure 7 below displays the differing debt levels throughout the three stages.

Figure 7: Debt level and family shareholder dispersion

Data source: Sample Nr.1, refer to Table 1. The analysis includes only family firms. Data is in percent. Statistical test applied: T-test. Significance level: 0.05.



Significant differences of means between:
1 shareholder and three shareholders
1 shareholder and 4 shareholders

4.3.3.1 Controlling owner

Following Schulze et al. (2003b), this text argues that in the case of firms with a controlling owner parental altruism causes owners to maximize their personal utility subject to the constraint that an agent receives his reservation utility (reservation utility being the utility the agent could receive by redeploying resources to their best alternative use). Maximizing personal utility in the case of one single controlling owner mostly means ensuring independence and survival of the firm, thus reducing or keeping debt levels low. Reservation utility is of less importance as agents do not exist at all (in the case of full control over the company) or do not yet exist, if the controlling owner strives to pass on the business to heirs at a later stage.

Furthermore, as a large amount of the controlling owner's estate is invested in the firm diversification is rather low. A highly leveraged financing structure, therefore, would endanger the estate of the controlling owner and his family.

4.3.3.2 Sibling partnership

As mentioned above, in the sibling partnership members of a single generation hold relatively equal proportions of ownership. If there is a principal shareholder, he can be expected to fulfill a quasi family-leader role, using the firm's resources to promote family welfare and to favor the reinvestment of earnings over the consumption of those earnings via dividends and other payments (Gersick et al., 1997). However, altruistic ties among members of a nuclear family tend to be stronger than those among members of an extended family (Becker, 1981). Therefore, sibling partners are likely to be more concerned about their own welfare and that of their immediate families than they will be about each other's welfare (Schulze, 2003b).

The findings presented in above Figure 7 are contradictory to the findings of Schulze et al. (2003b). These authors argue that, in contrast to traditional agency theory, increased ownership dispersion among sibling partnerships can engender misalignment and loss aversion. Schulze et al. (2003b) argue that increased concern for their own children and the added pressure from outside family directors (and in-

laws) to sustain or enhance the dividend pay out result in an increased reluctance to bear risk and therefore in lower debt levels.

The present text and the empirical findings agree with Schulze et al. (2003b) in the sense that sibling partners are likely to be more concerned about their own welfare. However, in contrast to Schulze et al. (2003b) the behavior described above is found to engender more consumption and dividend pay out, which reduces the equity base of the company (Figure 7). The hypothesis that sibling partnerships display more consumption will be tested subsequently (chapter 4.3.3.4).

Additional evidence to explain the higher debt levels of sibling partnerships is derived from research findings on decision making processes in groups (e.g. Janis, 1972). Janis (1972) finds that under specific conditions a group of people will take riskier or more cautious decisions than a single person will. In the case of a sibling partnership, shareholdings are little dispersed; individuals have a large share of their fortune tied directly to their equity stake. In most cases the riskiness of this commitment is even greater due to a firm-specific investment in human capital. Consequently, such a commitment can be considered as relatively risky. Stoner (1968) predicts that for questions on which subjects considered themselves relatively risky, unanimous group decisions were even more risky than the average of the individual decision (risky shift). Hence, group think effects can provide additional insight into the riskier financial structure of family firms with two to four shareholders.

4.3.3.3 Cousin consortium

By the time a firm enters the stage of cousin consortium, ownership has become more dispersed. It is not likely for a cousin to hold a controlling majority in the firm. Therefore, one can expect that this situation reduces the relative degree of influence a family agent has on the future value of his claim. In turn, this reduces the agency costs of expropriation by majority shareholders and mitigates the double moral hazard issues experienced in the two preceding stages (for details on double moral hazard refer to chapter 5.2.2.1).

It follows that in cousin consortia, inside directors should be less concerned with consumption and dividend pay out and more concerned about the future value of their estate and how that value will be affected by a possible future dilution of ownership. If a family firm has arrived at this stage, it needs to align the interests of the family members to secure the long-term survival of the business, on which, at this stage, many family members are depending. In turn, this results in lower debt levels.

Again, psychology provides further insights. For example, larger groups, like cousin consortia, are shown to produce more inequality in contributions to group discussion (Mc Cauley, 1998). Therefore, decision making in larger groups can be characterized by a rivalry of minority interests. Consequently, decision making in larger groups requires coalition forging and interest bargaining that can result in the risk averse behavior shown in collaborative groups (Ranft and O'Neill, 2001). Early group think theorists called this phenomenon cautious shift (Nordhoy, 1962).

Stoner (1968) found that group decisions tend to be more cautious on items for which widely held values favored the cautious alternative and on which subjects considered themselves relatively cautious. Correspondingly, cousin consortia, which include also inactive family members and extended family branches, are found to share cautious values such as preserving family wealth and income from the family business. For larger families with a dispersed shareholder structure it can therefore be crucial to separate from inactive and overcautious family members in order to regain the capacity to act (Prokesch, 1991).

4.3.3.4 Individual financial gains and shareholder dispersion

There is evidence of altering financial behavior throughout the stages of controlling owner, sibling partnership and cousin consortium. It will be examined whether there are also differences between the three stages regarding the consumption of individual financial gains which are defined as private benefits (e.g. fringe benefits such as wine, clothes, construction of private premises) that are paid via company accounts for tax reasons. This issue will be further discussed in chapter 6.2.1.

As argued in the subchapters above, it has to be hypothesized that a controlling owner has the liberties to consume perks freely, without any restriction by other family shareholders. Besides the legal restrictions, the only limitation derives from the owner's will to keep the business healthy.

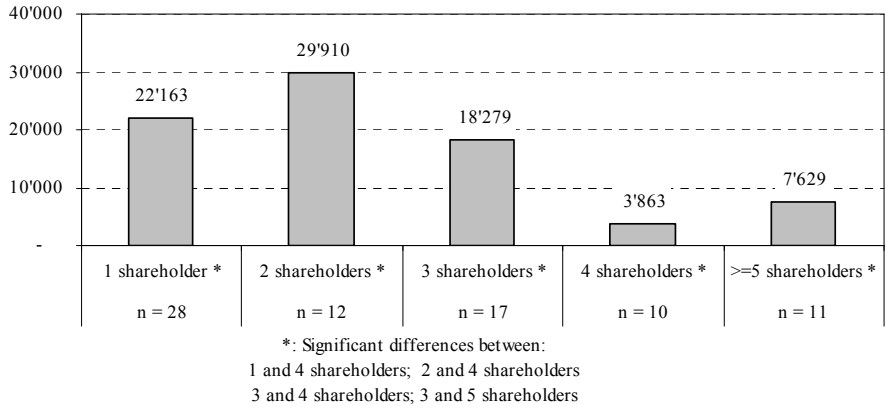
In the next phase, the sibling partners are likely to be more concerned about their own welfare and that of their immediate families than they are about each other's welfare, as outlined above. Thus, such behavior is expected to engender more use of individual financial gains.

Finally, in the cousin consortium, family managers need to align the interests of many shareholders who are tied to the firm with their investment. As outlined in the preceding subchapter, the family manager should be less concerned with consumption and dividend pay out and more concerned about the future value of their estate.

Figure 8 below displays the amount of individual financial gains by 78 small and mid-sized firms in the Swiss construction industry. Just as elaborated above, the analysis here finds an inversed U-shaped function, with a maximum of consumption or perks in the case of the sibling partnership with 2 shareholders. An increased consumption of individual financial gains might in turn reduce the equity base of the firm. In this sense the increased consumption of individual financial gains within sibling partnerships with 2 to 4 shareholders provides an additional explanation to the higher debt levels of this type of firm.

Figure 8: Individual financial gains per year in CHF and shareholder dispersion

Data source: Data sample Nr. 6, Table 2. Individual financial gains is defined as goods and benefits that are mainly used for private purposes but are paid via company accounts for tax reasons.



4.3.4 Generation and capital structure

In addition to undiversified investment, intermingling of private and business finances and shareholder dispersion, the transfer of the business from generation to generation is a widely discussed topic in family business literature, both literary and economic. In Thomas Mann's 1901 novel on the Buddenbrooks family, the author outlined in a dramatic way how the transfer from one generation to the next affects the fortune of a firm and the wealth of a family.

Business economists have been analyzing successions for a long time and have decided what constitutes successful succession planning (Ward, 1997). Furthermore, theorists analyzing agency issues and trust in family firms found that later generations may not trust other family members in the same way they trusted their parents (Drozdow and Carroll, 1997). Literature has also analyzed the values and the model of man predominant in family firms and found that many family firms stick to that model of man, often stewardship based, over several generations and through several stages of the life cycle of the firm (Corbetta and Salvato, 2004).

However, little is known about the financial characteristics and the generation active in the business. Casson (1999) and Chami (1999) propose (following Becker 1974,

1981) that founding families view their firms as an asset to bequeath to family members or their descendants rather than as wealth to consume during their lifetimes. There is anecdotal evidence that the succession from the second to the third generation is often the most difficult one (Mann, 1901; Ward, 1987). However, scientific literature does not provide sound empirical analysis on the capital structure of family firms in relation to the generation active in the firm.

Therefore, the analysis performed here compares the generation active in ownership, management and supervisory board with the capital structure of their firms. The findings are summarized in Table 3 below.

Table 3: Capital structure and generation charge

Data source: Sample Nr. 1, Table 1. The analysis includes only family firms. Statistical test applied: T-Test. Significance level: 0.05.

Influence via	**Significant differences in capital structure between first, second, third and fourth or higher generation**
Generation active in ownership	None
Generation active in management board	None
Generation active in supervisory board	None

Despite the number of reports on differing risk-taking characteristics of subsequent generations, no significant differences in capital structure could be detected.

The above findings stand in contrast to the discussion on ownership dispersion and debt level. With regard to control risk aversion as measured by debt level, ownership dispersion and the induced agency effects as represented by individual financial gains and group think effects seem to have stronger clarifying power. Nevertheless, differences between generations will be helpful when analyzing financial return in the family firm (refer to chapter 5.8).

4.4 Conclusion, limitations and outlook

The preceding chapters and further research (Gallo and Vilaseca, 1996) indicated that family firms are less leveraged and use more self-financing, which is interpreted as prove for control risk aversion of family firms.

However, leverage levels are an insufficient measure for risk aversion in general. If for example a family pledges personal collateral this indicates that the family is willing to bear high financial risks, as it puts family wealth at risk. Self-financing of risky prospects rather indicates the will and the ability to bear considerable amounts of financial risk. This argument receives additional weight if one considers that on the average families have 69% of their family estates invested in the firm (Forbes Wealthiest American Index, 2002) and that managers consider personal risk when making decisions regarding firm risk (May, 1995). Similarly privately held family firms, the vast majority of family enterprises, have hardly any possibility to diversify, either financially or personally, the risk associated with investment in their firm. So, who would call a shareholder investing roughly two thirds of his money in one single illiquid asset risk averse?

In addition, there are concerns regarding leverage level, even as a measure for control risk aversion. As mentioned, leverage levels can be flawed due to the insufficient separation of business and family wealth or the allocation of private investments to company accounts.

Besides this, debt level is only an ex post measure for control risk aversion. It only informs about the absolute preference of risk measured by the firm's debt level. However, it sheds no light on the decision making process regarding the choice of debt level.

Furthermore, the costs of capital of family firms have not been assessed sufficiently. As found in chapter 4.2.4, the pecking order theory has strong explicative power and empirical evidence for family firms. Thus, it is useful to have a closer look at the costs of equity and debt in family firms. It can be argued that compared to nonfamily firms, the costs of equity of family firms are lower, as these firms all in all face lower agency costs and profit from longer investment horizons which lowers the

annualized risk and the corresponding cost (Hull, 2003). Under this regime, capital structure is induced rather by the lower cost of equity than by control risk aversion. These thoughts on cost of capital will be further elaborated in chapter 6.3.
Finally, capital structure as a measure for control risk aversion does not account for individual preferences and experiences for example regarding financing. Matthews et al. (1994) argue that certain entrepreneurs might be willing to risk more money in both their businesses and their personal live. Other entrepreneurs may differentiate between personal and business funds, willing to make risky financial decisions only within the business context while safeguarding all personal funds from uncertainty. Such context dependent behavior is of particular interest for family firms as a large part of the owner's estate, as mentioned above, is invested in the firm (Forbes, 2002).

The above arguments show that leverage level is neither an indicator for risk aversion in general, nor sufficiently precise as an indicator of control risk aversion. Therefore, the following chapter strives to investigate, whether behavioral aspects as managerial preferences (Barton and Gordon, 1988; Barton and Matthews, 1989) can shed more detailed light on control risk aversion in family firms. This chapter will draw from the research body on behavioral finance (Kahneman and Tversky, 1991) to examine in more depth the individual risk aversion of the managers of family firms. The theoretical concepts of behavioral finance, as proposed by the above authors, are useful in analyzing the financing decisions of family firms, where non-financial goals cannot be fully explained with traditional financial theory.

4.5 Behavioral aspects

Despite numerous attempts over the past thirty years to understand capital structure decision making, it is a concept which continues to be a source of challenge. In fact, capital structure decision making has even been characterized as being a puzzle (Myers, 1984) whose pieces have not yet fallen into place. The above analysis on the capital structure of family firms was able to reveal some pieces of the puzzle.

Earlier capital structure theories, grounded within the finance paradigm (agency theory, transaction cost theory) have contributed to solving the puzzle. By introducing sociological concepts such as altruism (Schulze et al., 2003a) or trust (Arrow, 1974; Casson, 1995), these theories could be extended.

However, as outlined in chapter 4.4, capital structure can be an insufficient measure for control risk aversion. Questions like the influence of managerial preferences remain open. More recent efforts suggest that one should take a broader "managerial perspective" (Barton and Gordon, 1988; Barton and Matthews, 1989), which considers non-financial and behavioral factors.

As Matthews et al. (1994) note, more recent research efforts have included the investigation of factors such as perceived business risk, (Kale et al., 1991), institutional ownership (Chaganti and Damanpour, 1991), firm size, management risk perceptions and preferences (Norton, 1991). Norton's (1991) finding strongly suggests that an approach considering market conditions, managerial preferences, and perceptions as the key determinants of capital structure decisions is needed (similarly Sadler-Smith et al., 2003).

Most early decision-making models were based on the notion that decision making follows a rational and systematic pattern. The rational and normative model (*optimizing model*) assumes that a decision maker is completely objective and logical with clearly defined goals, comprehensive data and objective evaluation of the data. The notion that individuals have the capacity to make such optimal decisions, however, has long been challenged. It has been argued that the time available and the cognitive abilities of individuals to perceive and process vast amounts of information are limited (Cyert and March, 1963).

Research in the areas of cognitive psychology and information processing provide support for taking the individual approach (*individual model*) to understanding capital structure decisions in privately held firms. Inferences, heuristics, biases and a lack of learning have all been offered as explanations for differences between actual and optimal decisions and behavior (Kahneman and Tversky, 1972, 1973; Nisbett and Ross, 1980; Einhorn, 1982). For example, managers of privately held companies are expected to be confronted frequently with situations where decisions must be made with limited information. Lack of resources for detailed information gathering and analysis can force them to delay decision making until all necessary information is perceived to have been obtained (rational approach). Or, some entrepreneurs may make decisions based on intuition, that is, on experience and judgment. Simon (1987) and Fredrickson (1984) indicate that both comprehensiveness and intuition are equally important for explaining decision making. Considering these individual differences, any two individuals dealing with the same limited amount of information and investment outlays can be expected to make different decisions regarding capital structure and ownership. Each can be assumed to weigh aspects of the information differently based on his intuition, biases, preferences, personal goals and experience.

With respect to risk-taking propensity, one can assume that for the same person, behavior will either remain constant or vary across contexts. Such context-dependent behavior is of particular interest for family firms as a large part of the owner's estate is invested in the firm (Forbes, 2002).

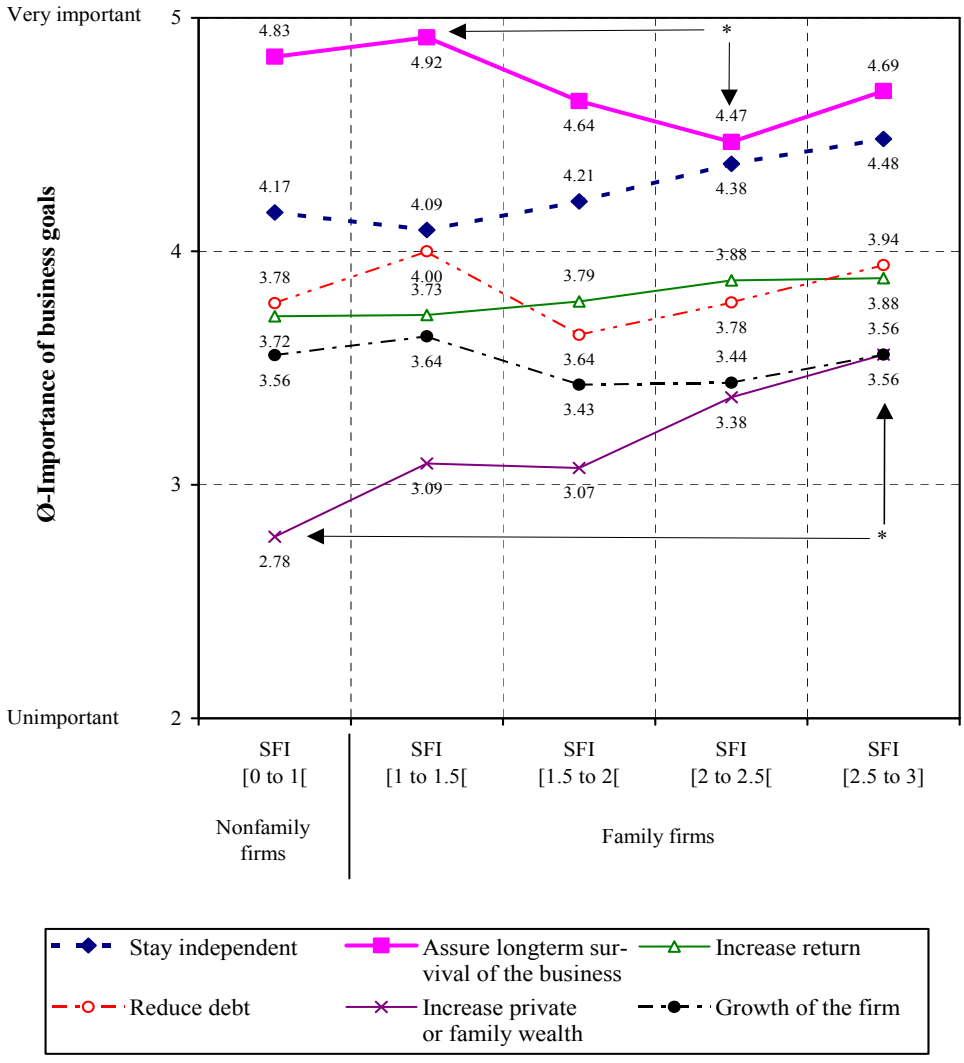
In addition, family firms are found to follow specific business goals that cannot be explained by the rational approach claiming that profit maximization is the panacea of all entrepreneurial activity (Figure 9). The business survival and independence goal are the most important ones as postulated by Ward (1997) and Spremann (2002).

The importance of certain business goals changes depending on the level of family influence. Surprisingly, "increase return" or "growth of the firm" remain nearly constant throughout all SFI classes, although some authors (Ward, 1997) postulated that the growth goal is of less importance in family firms than other goals. However,

the goals "increase private and family wealth" and "stay independent" rise in importance with increasing SFI. "Assure long-term survival of the business" is decreases slightly in importance with rising SFI.

Figure 9: Family influence and the importance of business goals

Data source: Sample Nr. 2, Table 1. Statistical test applied: T-test. Significance level: 0.05.



Assure longterm survival of the business:
* = U-Test: Significant mean difference between SFI-classes [1 to 1.5[and [2.5 to 3].
Increase private or family wealth:
* = U-Test: Significant mean difference between SFI-classes [0 to 1[and [2.5 to 3].

At this stage we can conclude that firms follow a complex mix of goals that can differ, for example, with changing family influence. The sheer complexity of this

goal-mix shows that simple profit maximization as postulated by the rational model is not very useful in understanding the true motives of firms, particularly of family firms.

Hence, these findings support the claim for an integrative approach that respects the individual goal-set and value function of an entrepreneur. In their seminal paper on loss aversion in risk less choice, Kahneman and Tversky (1991) state that the outcomes of risky prospects are evaluated using a value function that is common to most individuals. Next to diminishing sensitivity, which states that the marginal value of gains and losses decrease with their size, Kahneman and Tversky (1991) find that individuals tend to be loss averse and make their decisions depending on a reference point (Myagkov and Plott, 1998).

Based on the behavioral finance literature and the analysis presented above the present text strives to shed new light on capital structure decision making and control risk aversion by investigating whether managers display loss averse behavior and reference point dependence when making investment decisions.

Hypothesis 1:

Managers of privately held firms display loss averse behavior when confronted with investment choices affecting their capital structure.

Hypothesis 2:

Managers of privately held firms display reference point dependence when confronted with investment choices affecting their capital structure.

The analysis will first investigate the behavior of managers of privately held firms in general. Subsequently, it will be separated between managers of family and nonfamily firms.

If the above hypotheses are verified, this would support the individual model as presented above and challenge the rational approach as the foundation of most traditional capital structure theories.

4.5.1 The research-sample and data collection

To obtain representative data 148 managers of privately held companies in Switzerland, Germany and Austria filled out a standardized questionnaire. The respondents were all in managing positions in small and mid sized firms with 10 to 400 employees; the large majority of the respondents were owner-managers and interrogated as former participants of executive education courses at the University of St. Gallen. The equity levels of the firms ranged from 0% to 95%, the median equity level was 50%. The median return on equity of the firms was 8.75%. 40% of the respondents were in the construction industry, 23% in manufacturing, 19% in the service sector and 8% in trade - the remaining 10% were in other sectors. The age of the respondents varied between 28 and 55 years.

In the questionnaire the addressees were asked two questions (refer to Table 4) regarding their investment priorities under two different hypothetical situations. The managers were asked to imagine a situation in which their firm was confronted on the one hand by low equity levels (which was presented as a proxy for high control risk) but on the other hand by high returns on equity (as a proxy for return). The entrepreneurs were asked to decide between two investment projects, alternative 1 and alternative 2, (Table 4).

Table 4: Test of loss aversion

Data source: Sample Nr. 2, Table 1. 148 entrepreneurs of family and nonfamily firms were asked the following question: “Imagine your firm can be characterized as described in situation 1. Situation 1 stands for a firm with low equity level hand a high return on equity of 15%. You now need to decide between two investments projects that lead to two possible outcomes, represented by alternative 1 and alternative 2, see table below.”

	Equity level (as a proxy for control risk)	**Return on Equity (as a proxy for return)**
Present situation 1 (Reference point 1)	Low (high control risk)	15%
Alternative 1	Moderate (moderate control risk)	10%
Alternative 2	High (low control risk)	5%

The entrepreneurs were to consider the present situation as outlined above as their reference point. Considered from reference point 1, the different equity levels available through both alternatives were considered as gains, whereas the decreases in return on equity were considered as losses. These relations were reversed in situation 2 with the reference point being characterized by very high equity levels (representing low control risk) and a very low return on equity of 3%.

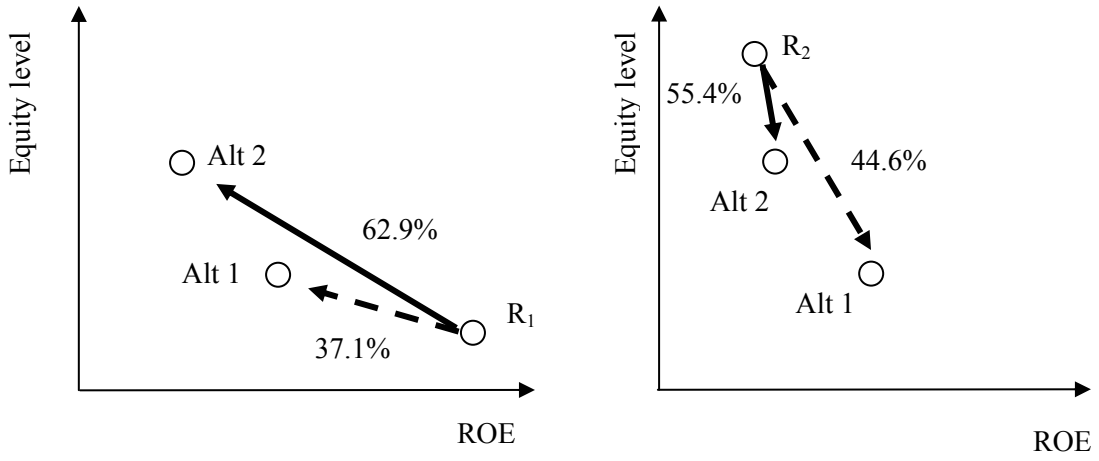
The rational approach predicts that managers will choose the same alternative independent of the reference point. According to behavioral finance loss aversion however implies that a given difference between two options will generally have greater impact when it is evaluated as a difference between two losses than when it is viewed as difference between two gains (Kahneman and Tversky, 1991). Therefore, considerations of loss aversion predict that more persons will choose alternative 1 under reference point 1, than under reference point 2. Similarly, more persons are expected to choose alternative 2 under reference point 2, than under reference point 1.

4.5.2 Results and discussion for privately held firms in general

Data analysis revealed that under reference point 1 (low equity level, ROE = 15%) 62.9% of the respondents opted for alternative 2, the remaining 37.1% for alternative 1. The situation looked different under reference point 2 (very high equity level, ROE = 3%) in which 55.4% of the same persons opted for alternative 2 and 44.6% for alternative 1 (Figure 10).

Figure 10: Loss aversion and reference point dependence-full sample

Data source: Sample Nr. 2, Table 1.



These findings give distinct insight into capital structure decision making by managers of privately held firms.

Firstly, there seems to be an absolute preference for alternative 2, as the absolute majority opted for it when considered from both reference points. Whatever their reference point, they tend to prefer high equity levels and a return on equity of 5% to moderate equity levels combined with 10% of return. For many entrepreneurs, the increase in control is worth the loss of 5% (10% minus 5%) in return on equity. As equity levels serve as a proxy for control risk (low equity levels representing high control risk), one can conclude, that managers of privately held companies tend to dislike control risk induced by their capital structure.

Secondly, Hypothesis 1 that people are always loss averse as defined by Kahneman and Tversky (1991) is only partially verified. The fact that under reference point 1 the majority of managers opt for alternative 2 is not consistent with the theory by Kahneman and Tversky (1991) who would have predicted that the majority of people would display loss averse behavior and choose alternative 1. In contrast to this, when the same managers start from reference point 2 the large preference for alternative 2 diminishes, to 55.4%, 44.6% now opt for alternative 1. This is

consistent with the findings of Kahneman and Tversky (1991) who would have predicted the same result. Loss aversion implies that the same difference between two options will be given greater weight if it is viewed as the difference between two disadvantages (relative to a reference state) than if it is viewed as the difference between two advantages. Alternative 2 is thus preferred as a difference between alternative 1 and alternative 2 in the dimension of control involves disadvantages relative to reference point 2 and advantages relative to reference point 1.

Thirdly, there is evidence for the existence of reference point dependence. As stated above and as Figure 10 graphically displays, the managers chose differently depending on their reference point.

Whereas under reference point 1, 62.9% (93 of 148) opted for alternative 1, 44.6% (66 of 148) chose it under reference point 2 (Table 5). The reference point dependence was empirically tested. Of the 93 people who opted for alternative 1 under reference point 1, 68 (73.1%) chose alternative 2 under reference point 2 and can thus be considered as loss averse according to the definition by Kahneman and Tversky (1991) under both reference points (Table 5).

However, of the 82 people who opted for alternative 2 under reference point 2, 68 (82.9%) opted for alternative 1 under reference point 1 and can thus be considered as loss averse under both reference points (Table 5).

Table 5: Descriptive statistics and Chi square test-full sample

Data source: Sample Nr. 2, Table 1. How to read above table: E.g. of the 82 people who opted for alternative 2 under reference point 2, 68 opted for alternative 1 under reference point 1 and thus could be considered as loss averse under both reference points, as defined by Kahneman and Tversky (1991). Significance levels: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Distribution of answers

		Reference point 2		
		Alternative 1	Alternative 2 (loss averse)	
Reference point 1	Alternative 1 (loss averse)	25	68	93
	Alternative 2	41	14	55
		66	82	148

Chi square test

	Value	Asymptotical significance (2-sided)	True significance (2-sided)	True significance (1-sided)
Chi-square after Pearson	31.778	0.000 ***		
Correction for continuity	29.878	0.000 ***		
Likelihood quotient	32.772	0.000 ***		
Fisher test			0.000 ***	0.000 ***
Relation linear-linear	31.563	0.000 ***		
McNemar-Test			0.012 *	
Number of valid n	148			

As in the above cross table all expected cell values are ≥ 1 and in none of the cells the expected cell values were smaller than five, the preconditions for chi square testing are met. Therefore, the statistical method chosen is valid. Chi square testing on the distribution of the variables “loss averse answer under reference point 1” and “loss averse answer under reference point 2” showed that the two variables were significantly independent. Hence Hypothesis 2 is verified, as the answers of the entrepreneurs depend on the reference points.

Apparently, the managers seem to consider situations with high control risk as “insecure” as it does not correspond to their control goal. In turn they will try to move to a situation with less control risk even at a considerable cost.

However, if the same managers have to consider investment alternatives from an initial situation with low control risk they do behave in a loss averse manner and opt for investment alternatives which induce only slightly more control risk. Such

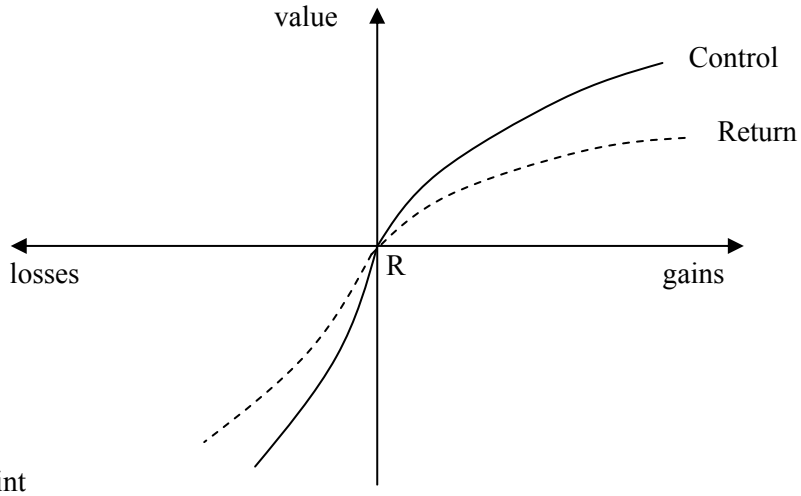
behavior can be indicative of a general behavior of managers of privately held firms: if they feel "secure" and have to bear little control risk they will try to adhere to this situation.
Still it is important to notice that the relative importance of alternative 1 increases when considered from reference point 2. The share of people opting for alternative 1, the more risky alternative, increases from 37.1% (under reference point 1) to 44.6% (under reference point 2). Apparently, managers of privately held firms are ready to bear additional control risk if they can start fro a secure initial position, as represented by reference point 2.

Fourthly, the analysis revealed differing endowment effects for equity levels as a proxy for control risk and return. Endowment effect finds that the utility loss of giving up one good is greater than the utility gain associated with receiving it (Kahneman et al., 1990). The endowment effect was found to be more perceptible for equity level than for return. Apparently, the loss in utility with a decrease of 10% of ROE from reference point 1 to alternative 2 was acceptable to a majority of people (Figure 10). However, only a minority of people (44.6%) accepted a decrease in equity from very high to moderate from reference point 2 to alternative 1.

Fifthly, based on the original value function suggested by Kahneman and Tversky (1991) the above findings lead to the description of specific S-shaped value functions for the two business goals, control and return. These value functions are concave at the reference point, and convex below it, as illustrated in below Figure 11. In addition, loss aversion implies that the function is steeper in the negative than in the positive domain. That is, losses loom larger than corresponding gains.
As the analysis found differing endowment effects, an equal rise in return and control is expected to induce a differing increase in value to the entrepreneur. The increase in value induced by the rise of control is expected to be larger than the one induced by an equal increase in return (Figure 11). Similarly, in the case of an equal decrease of control and return, the decrease in value induced by control is expected to be larger compared to the one induced by the decrease in return (Figure 11).

Figure 11: Value function for return and control for privately held firms

The figure is adapted from Kahneman and Tversky (1991).



R = reference point

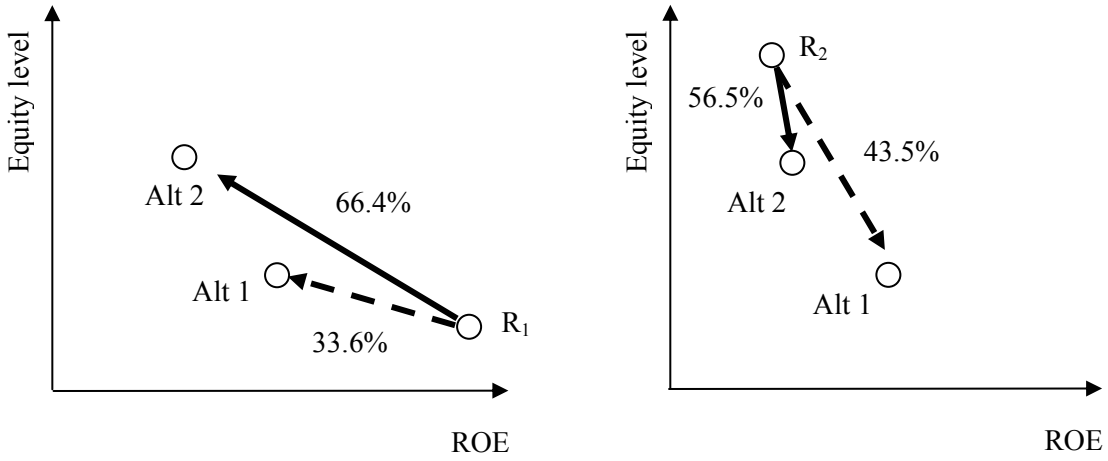
The specificities found above are generally valid for privately held firms. They give insight into the subjective rationales of managers of this type of firm.
Subsequently, it will be analyzed whether family and nonfamily firms display differing behavioral characteristics.

4.5.3 Results and discussion for family firms

As mentioned in the introduction to this chapter, it will be tested how family firms make the investment decisions outlined above and if they display differing behavioral characteristics compared to the nonfamily firms. To this end the sample of all entrepreneurs of privately held firms analyzed above was split up into two subgroups, namely 124 family firm managers and 24 nonfamily firm managers. The groups were built by measuring Substantial Family Influence (SFI) (see chapter 3.1.4 for details), SFI < 1 being a nonfamily firm manager, SFI ≥ 1 being a family firm manager. Both groups included owners *and* managers. The distribution of the answers looked as follows (Figure 12).

Figure 12: Loss aversion and reference point dependence - family firms only

Data source: Sample Nr. 2, Table 1. The analysis includes only family firms.



The following lines summarize the main findings:

Firstly, the absolute preference for alternative 2 is even more marked for the family firms in comparison to the full sample analyzed in the preceding chapter. This finding supports the hypothesis that managers of family firms have a strong preference for higher equity levels representing lower control risk. Whatever their reference point, they tend to prefer high equity levels and a return on equity of 5% to moderate equity levels combined with 10% of return.

Secondly, there is even stronger evidence for the existence of reference point dependence. As stated above and as Figure 12 graphically displays, the managers chose differently depending on the reference point. Under reference point 1 only 33.6% opted for alternative 1, whereas 43.5% chose it under reference point 2.

The reference point dependence of the answers was empirically tested. Of the 42 people who opted for alternative 1 under reference point 1, 9 (=21.4%) opted for alternative 2 under reference point 2 (Table 6) and thus can be considered as loss averse according to the definition by Kahneman and Tversky (1991) under both reference points. However, of the 70 people who opted for alternative 2 under reference point 2, only 9 (=12.9%) opted for alternative 1 under reference point 1

(Table 6) and thus can be considered as loss averse under both reference points according to the definition by Kahneman and Tversky (1991).

Table 6: Descriptive statistics and Chi square test - family firms only

Data source: Sample Nr. 2, Table 1. The analysis includes only family firms. How to read above table: E.g. under reference point 2, 70 respondents chose alternative 2. Of these 70 people, only 9 opted for alternative 1 under reference point 1 and can thus be considered as loss averse under both reference points as defined by Kahneman and Tversky (1991). Significance levels: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Distribution of answers

		Reference point 2		
		Alternative 1	Alternative 2 (loss averse)	
Reference point 1	Alternative 1 (loss averse)	33	9	42
	Alternative 2	21	61	82
		54	70	124

Chi square test

	Value	Asymptotical significance (2-sided)	True significance (2-sided)	True significance (1-sided)
Chi-square after Pearson	31.690	0.000 ***		
Correction for continuity	29.572	0.000 ***		
Likelihood quotient	32.880	0.000 ***		
Fisher test			0.000 ***	0.000 ***
Relation linear-linear	31.434	0.000 ***		
McNemar-Test			0.005 **	
Number of valid n	124			

Thirdly, as observed for all privately held firms, loss aversion strongly depends on the reference point-also with the family firms. As Kahneman and Tversky (1991) would have predicted, the majority of family entrepreneurs opted for alternative 2 when considering the two alternatives from reference point 2. Loss aversion therefore implies that the same difference between two options will be given greater weight if it is viewed as difference between two disadvantages (relative to a reference state) than if it is viewed as difference between two advantages. Alternative 2 is thus preferred as a difference between alternative 1 and alternative 2 in the dimension of control involves disadvantages relative to reference point 2 and advantages relative to reference point 1.

The answers under reference point 1 however are not in line with the predictions of Kahneman and Tversky (1991). The majority of the respondents opt for alternative 2 and can therefore not be considered as loss averse. Hence, family firms are not always loss averse - their behavior depends on the reference point.
Fourthly, just as with all privately held firms the analysis revealed differing endowment effects for equity levels as a proxy for control risk and return. Endowment effect finds that the utility loss of giving up one good is greater than the utility gain associated with receiving it (Kahneman et al., 1990). The endowment effect was found to be more perceptible for equity level than for return. Apparently, the loss in utility with a decrease of 10% of ROE from reference point 1 to alternative 2 was acceptable to a majority of family managers (Figure 12). However, only a minority of the people (43.5%) accepted a decrease in equity from very high to moderate from reference point 2 to alternative 1.

Fifthly, given the empirical findings above, family firms need to display even steeper value functions for control compared to those of all private firms outlined in Figure 11. An equal rise in return and control is expected to induce a differing increase in value to the family entrepreneur. The increase in value induced by the rise in control is expected to be larger than the increase in value induced by the rise in return. Similarly, in the case of an equal decrease of control and return, the decrease in value induced by control is expected to be larger than the decrease in value induced by return.

In sum, the analysis showed that managers of family firms have an even stronger preference for control when compared to all managers surveyed, even if it costs them several percentage points in return on equity. The investigation also showed that family firms depend on reference points when making investment decisions affecting their capital structure. Apparently, family firm managers displayed a strong dislike for situation 1, which could be characterized as a firm with high control risk for the owners but also high return. Furthermore, it could be shown that managers of family firms did not always decide in a loss averse manner (as defined by Kahneman

and Tversky, 1991). Whether the family managers display loss averse behavior depends on the reference point.

Managers behave in a more loss averse manner if they can start from a secure initial position with low control risk. However, the family managers increasingly opt for the more risky investment alternative 1 if they can start from a secure initial position (reference point 2).

Finally, the discussion revealed a stronger endowment effect for control in comparison to all privately held firms, giving rise to a steeper value function for control with the family firms in comparison to all privately held firms.

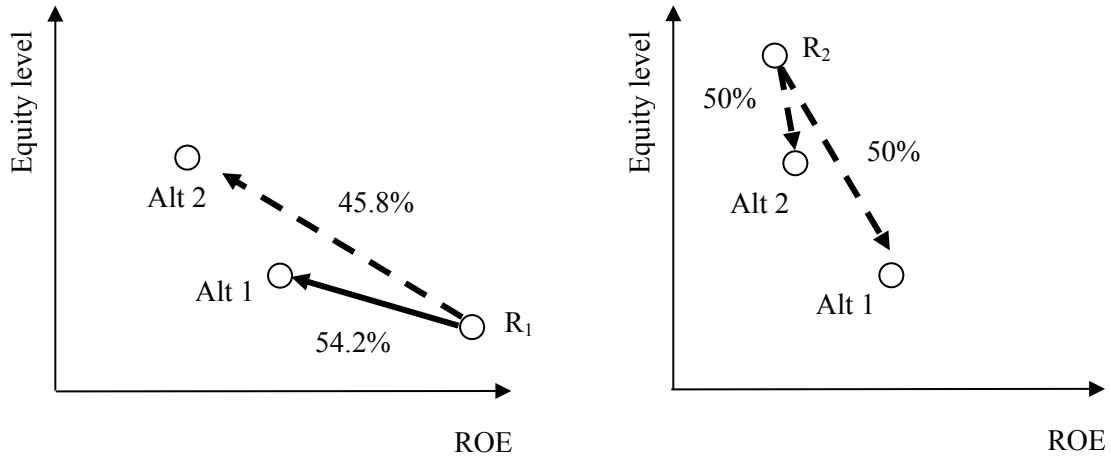
4.5.4 Results and discussion for nonfamily firms

The 24 nonfamily firm managers answered differently compared to their family counterparts.

Firstly, the unconditional preference for alternative 2 as experienced with the family firms is not present. In total, alternative 1 was preferred over alternative 2 (Figure 13).

Figure 13: Loss aversion and reference point dependence - nonfamily firms only

Data source: Sample Nr. 2, Table 1. The analysis includes only nonfamily firms.



Secondly, there is no empirical evidence for reference point dependence anymore. Even though the answers differ slightly depending on the reference point, the

differences cannot be considered as significant (Table 7). Hence, nonfamily managers do not display reference point dependence in their investment choices.

Thirdly, nonfamily firm managers display loss averse behavior at least in reference point 1 as the majority of nonfamily managers opted for alternative 1. This stands in contrast to the result for family firms which displayed loss averse behavior under reference point 2 but not under reference point 1.

Fourthly, the endowment effects for control and return were reversed compared to the ones observed with the family firms. The majority of nonfamily managers considers a loss in return on equity of 5% (10% minus 5%, from alternative 1 to alternative 2, considered from reference point 1) as more negative than a rise in independence from moderate to high. Consequently, they opt for alternative 1. The loss of return looms larger than the gain in independence. This relationship is exactly reversed in family firms. Hence, nonfamily firm managers display a stronger preference for return and a weaker preference for control than family managers do.

Table 7: Descriptive statistics and Chi square test-nonfamily firms

Data source: Sample Nr. 2, Table 1. The analysis includes only nonfamily firms. How to read above table: E.g. under reference point 1, 13 people chose alternative 1. Of these 13 persons, 5 opted for alternative 2 under reference point 2, and thus could be considered as loss averse under both reference points as defined by Kahneman and Tversky (1991). Significance levels: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Distribution of answers

		Reference point 2		
		Alternative 1	Alternative 2 (loss averse)	
Reference point 1	Alternative 1 (loss averse)	8	5	13
	Alternative 2	4	7	11
		12	12	24

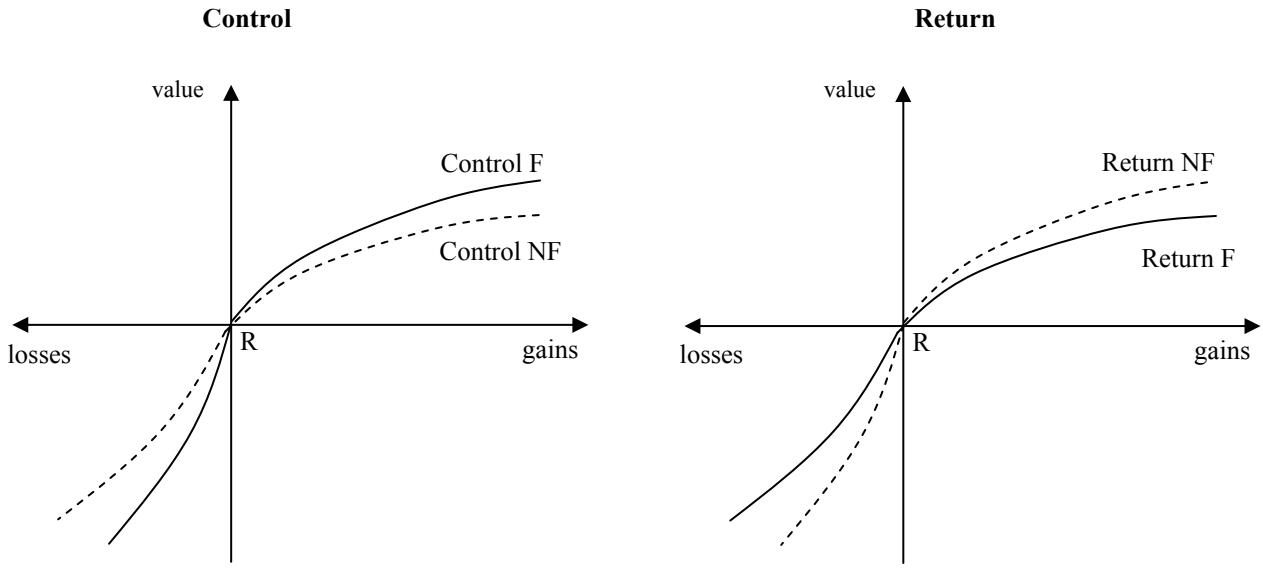
Chi square test

	Value	Asymptotical significance (2-sided)	True significance (2-sided)	True significance (1-sided)
Chi-square after Pearson	1.510	0.219		
Correction for continuity	0.671	0.413		
Likelihood quotient	1.527	0.217		
Fisher test			0.414	0.207
Relation linear-linear	1.448	0.229		
McNemar-Test			1	
Number of valid n	24			

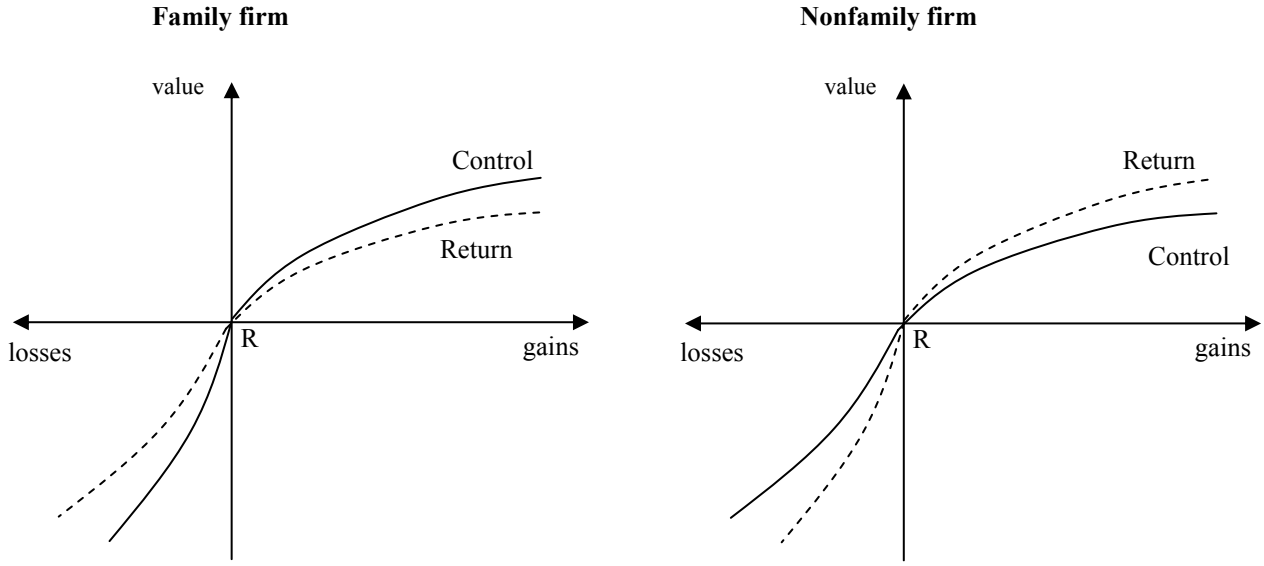
These findings give rise to specific value functions for return and control in family and nonfamily firms (Figure 14), with a stronger endowment effect for control for the family firms and a stronger endowment effect for return for the nonfamily firms.

Figure 14: Value functions for return and control for family and nonfamily firms

The figures are adapted from Kahneman and Tversky (1991).



R: Reference point, F: Family, NF: Nonfamily



R: Reference point

4.5.5 Risk aversion and status quo bias of family and nonfamily firms

Differing preferences for control and return supposedly also affect the preferred control risk-return profile of a family manager compared to that of a nonfamily manager when allocating personal assets. This hypothesis was tested as well. In order to answer this question, family and nonfamily managers were asked to chose one of five portfolios with a risk return profile ranging from very high risk / very high return to very low risk / very low return.
No significant differences could be found between family managers and nonfamily managers. Hence, family managers are not generally more risk averse. As shown in the preceding chapter, the riskiness of decisions of family managers depends strongly on the reference point. The riskiness of decisions of nonfamily managers however is unaffected by reference points.

Similarly whether family managers display differing status quo biases was tested. Status quo bias means that the disutility of giving up an object is greater than the utility associated with acquiring it (Samuelson and Zeckhauser, 1998). Kahneman and Tversky (1991) predict that an alternative becomes significantly more popular when it is designated as the status quo. Consequently, it was empirically tested whether the status quo bias for family managers differed from the status quo bias for the nonfamily managers. The family and nonfamily managers were asked to reinvest a certain amount of money that was currently invested in high risk / high return assets. To this end the respondents had to decide between five alternatives with a risk return profile ranging from very high risk / very high return to very low risk / very low return. Again no significant differences could be detected between family and nonfamily firm managers.

Thus family managers are not generally more risk averse, nor do they display a stronger status quo bias. Therefore, if family firm managers display loss averse behavior regarding control risk this does not mean that they tend to be more risk averse.

4.5.6 Conclusion and limitations

Other authors have applied behavioral aspects to financing issues of privately held companies (e.g. Sadler-Smith et al., 2003; Mishra and Mc Conaughy, 1999). However their understanding of behavior was not originally rooted in the findings of behavioral finance theory. It was the intention of this chapter to analyze whether capital structure decision making by privately held companies can be explained using this theory and whether family and nonfamily firm managers display differing behavior.

Firstly, the analysis showed that managers of privately held firms in general, and to an even stronger degree family firm managers, have a strong preference for control even if it costs them several percents in return on equity. Family firms therefore display a particularly high control risk aversion.

Secondly, the investigation showed that family firms representing the majority of privately held firms opt for investment decisions affecting their capital structures depending upon reference points. Nonfamily managers did not display any influence of reference points.

Thirdly, it could be shown that managers of family firms did not always decide in a loss averse manner, as expected by Kahneman and Tversky (1991). Whether the family managers display loss averse behavior depends on the reference point used.

On the one hand, if family managers consider investment alternatives from an initial situation with high control risk they do not behave in a loss averse manner and opt for the investment alternative that reduces control risk even if it implies a considerable loss in return. Apparently, the family managers consider situations with high control risk as “insecure” as it does not correspond to their control goal. In turn they will try to move to a situation with less control risk even at a considerable cost.

On the other hand, if the family managers have to consider investment alternatives from an initial situation with low control risk they do behave in a loss averse manner and opt for investment alternatives which induce only slightly more control risk. Such behavior can be indicative of a general behavior of managers of privately held firms and, in particular, of family firm managers: if they feel “secure” and have to bear little control risk they will try to adhere to this situation.

In addition, it seems important to notice that the share of managers who opt for alternative 1 (see Figure 12) has changed depending on the reference point. As mentioned above, under both reference points alternative 1 gets only the minority of votes. However, the share of people opting for alternative 1-with more control risk and higher return than alternative 2-increases from 33.6% to 43.5% when the person can switch from a rather "insecure" initial situation 1 to a rather "secure" initial situation 2. Apparently, the managers increasingly prefer the riskier investments if they can afford it, as represented by the secure initial position.

Fourthly, the discussion revealed differing endowment effects of control and return. For family firms, the loss in utility of giving up control was found to be higher than for return. This relation is exactly reversed in the nonfamily firm. In addition, a comparable loss in return (control) in the family firm loomed smaller (larger) than in the nonfamily firm.

Hence, what seems to be the best control / return combination in the eyes of a nonfamily manager is not necessarily seen as the best option by the family manager. Family managers tend to prefer control / return profiles that assure higher control even if the returns are lower. Loss aversion should not, however, be confused with risk aversion. As shown in chapter 4.5.5, family firms are not more risk averse than nonfamily firms. High preference for control rather indicates a differing appraisal of control as compared to return by family and nonfamily managers.

The present text provides evidence to the works by Leary and Roberts (2004) who find that privately held firms tend to (re)balance actively their leverage in order to stay within an optimal range-whereas by "optimal" depends on the specific behavior as outlined above. Therefore, the present text provides support to Cho (1998) who questions the assumption that ownership structure is exogenously determined, as claimed by traditional capital structure theories outlined in chapters 4.2, and brings into question the results of studies that treat ownership structure as exogenous. The analysis performed in this section clearly shows that investment choices with an impact on capital structure are endogenous and depend on behavioral factors such as the individual preference for certain goals (control / return). As could be shown, family firms are different in this respect and provide, therefore, additional insight

into the capital structure discussion. To this end behavioral finance theory provides a solid framework for discussion.

One limitation of this analysis is the restricted sample of 148 respondents and that the 450 persons have not been randomly selected. Nevertheless, the approach chosen and the findings presented support the choice of an individual perspective to investigate the behavior and choices of individuals regarding capital structure, at least in privately held companies.

Further analysis is needed of reference points and a possible confounding effect. Respondents might misinterpret the reference point given in the questionnaire and use instead their own experience and reference point and running the selection against this own internal reference point.

Even if the individual model is particularly useful when analyzing smaller and private firms that are strongly dominated by one or few persons, it might be interesting to test further the results with CFOs and CEOs of larger and publicly quoted companies. The research approach chosen does not, however, relate to aggregation of individual behavior and choice making in bigger firms and anonymous markets.

A lot of decision making in privately held companies is influenced by the nonfinancial goals and the behavior of the person(s) leading the firm. As researchers in the field one needs to accept the fact that financing in privately held companies cannot be fully explained by traditional financial theory based on the paradigm of pure rationality. The text presented is an additional piece in the capital structure puzzle.

4.6 Conclusion and outlook

Control risk aversion of firms has traditionally been discussed by measuring the capital structure of firms.

Chapter 4.1 revealed that family firms indeed display lower debt levels than their nonfamily counterparts, which confirms the findings of other authors (e.g. Gallo and Vilaseca, 1996). This finding could also be verified with increasing levels of family influence as defined by Substantial Family Influence (SFI).

Taking a closer look at traditional capital structure theory, the analysis in chapter 4.2 revealed that solely pecking order theory has strong explicative power for family firms.

In chapter 4.3 the text therefore tried to shed more light on further, family firm specific factors affecting capital structure and the hypothesized control risk aversion of family firms.

First of all, chapter 4.3.1 showed that the capital structure of family firms can be explained by the low diversification of family wealth. In addition, a large part of income derives from a firm specific investment in human capital. Risk, in this case, is strongly linked to the viability of the company.

Secondly, chapter 4.3.2 revealed that an insufficient separation of private and business wealth may cause leverage levels of family firms to be flawed. To assess the risk propensity of a family firm an integrative view of the true asset base of the family consisting of business and private wealth is proposed.

Thirdly, chapter 4.3.3 showed that increasing ownership dispersion induces an inversely U-shaped curve of leverage in family firms. Thus, family firms with very concentrated and family firms with wide-spread ownership dispersion have lower leverage levels than firms with medium ownership dispersion. On the one hand, this is found to be influenced by group think effects (Janis, 1972; Stoner, 1968). On the other hand, individual financial gains with continuing shareholder dispersion provide a further explanation.

Fourthly, despite anecdotal evidence regarding the risk taking propensity of continuing generations (Mann, 1901), chapter 4.3.4 found no empirical evidence regarding differing debt levels and the generation active in the firm.

Chapter 4.4 revealed that capital structure is an insufficient measure for control risk aversion in general. Debt levels can be flawed, particularly in family firms, and are therefore not a very reliable indicator even of control risk aversion. In particular, behavioral aspects like managerial preferences remain neglected. A subjective approach better explains capital structure decision making in family firms. This is due to the fact that family firms and many privately held firms in general also follow non-financial goals, which cannot be fully explained with traditional financial theory. Based on the research body of behavioral finance (Kahneman and Tversky, 1991), chapter 4.5 demonstrates that family entrepreneurs display a strong preference for control and a high aversion to control risk. Their investment choices that affect capital structure prove to depend on reference points.

Family managers consider situations with high control risk as “insecure” as it does not correspond to their control goal and opt for investment strategies that bring them closer to the control goal. In contrast, if family managers feel “secure” and have to bear little control risk they will try to adhere to this situation. In addition, it was found that family managers increasingly opt for investment strategies with higher control risk and higher return if they can start from a “secure” initial situation, represented by low control risk. Apparently, the managers increasingly prefer the riskier investments if they can afford it, as represented by the secure initial position.

Family firms therefore show stronger endowment for the control goal than for the return goal. Consequently, they show differing value functions for control and return. Despite the stronger preference for control, the analysis could not detect that family firm managers were generally more risk averse than their nonfamily counterparts.

In sum, it was exhibited that traditional finance theory that proclaims exogenous factors affecting control risk aversion as measured by capital structure needs to be completed by the proposed subjective behavioral approach that fosters endogenous

factors (Cho, 1998). Only a combined view gives insight into capital structure decision making not only of family firms, but of privately held firms in general.

Whereas the preceding chapter has analyzed the control risk associated to family firms, the following chapter will investigate the corresponding financial returns. In particular, it will be questioned how for example control risk aversion and the predominance of nonfinancial goals affect the profitability of family firms.

5 Return in the family firm

Discussing the return of economic activities should not be separated from the discussion of risk associated with those activities, as risk and return are normally positively correlated (Bernstein, 1996). In that sense, the preceding chapter delivered insight into the returns to be expected in family firms; in efficient markets, lower / higher risk normally leads lower / higher return to be expected.

To analyze how the organizational input variable "family" and the financial output variable "return" are interrelated the following research questions will be addressed.

The text investigates whether there are performance differences between family and nonfamily firms. Subsequently, it will discussed, where these differences derive from.

It will be discussed, whether family firms really exhibit the ideal precondition of low agency costs as hypothesized by Fama and Jensen (1983a and 1983b). In addition, the strategic and financial implications of the agency problems observed in family firms will be analyzed.

Subsequently, the text examines whether there is an entrenchment effect of family influence and family ownership on firm performance and if there is an optimal level of family influence. Furthermore, the text studies whether there is a performance difference between family and nonfamily firms depending on further organizational factors as firm size and industry and the generation active in the firm. In the end, it is the intention of this chapter to provide a methodical approach to the question, whether family influence is good or bad for the financial returns of a family firm.

5.1 Family and nonfamily firms and financial performance

The performance studies mentioned at the beginning of chapter 5 deliver compelling results on the performance of family firms. Jaskiewicz et al. (2005) find that all existing performance studies on family firms can be distinguished according to the following three criteria: firstly, methodology, defined as the width of the definition

of family-owned businesses and the technique of performance measurement. Secondly, stock market quotation, referring to the fact that only 20% of all performance studies analyze non-quoted family firms (Holderness and Sheehan, 1988a; Chen et al., 1993; Lloyd et al., 1986) whereas the remaining 80% examined quoted family firms. Thirdly, research focus, whereas certain studies are analyzing family versus nonfamily firms others are investigating for example founder versus successor controlled firms.

The present analysis is complementary to these studies in many ways. In this section it concentrates especially on privately held firms and therefore provides additional empirical results for the less analyzed non-quoted family firms. It measures family influence and therefore overcomes the defects of a dichotomous family / nonfamily comparison, as introduced in chapter 3.1.3. In this sense it will answer the question if there is an entrenchment effect due to family influence. This is complementary to the literature that measured entrenchment due solely to ownership concentration (Gomez-Mejia et al., 2001). The following subchapters will also analyze issues such as the influence of industry, firm size and generation on the financial performance of family firms.

The following subchapters will concentrate on privately held family firms by using Substantial Family Influence (SFI) as defined in chapter 3.1.4 as the measure of family influence. The performance will be measured by return on equity (ROE). This is in line with the most literature using return on assets and return on equity as the performance measure (Jaskiewicz et al., 2005).

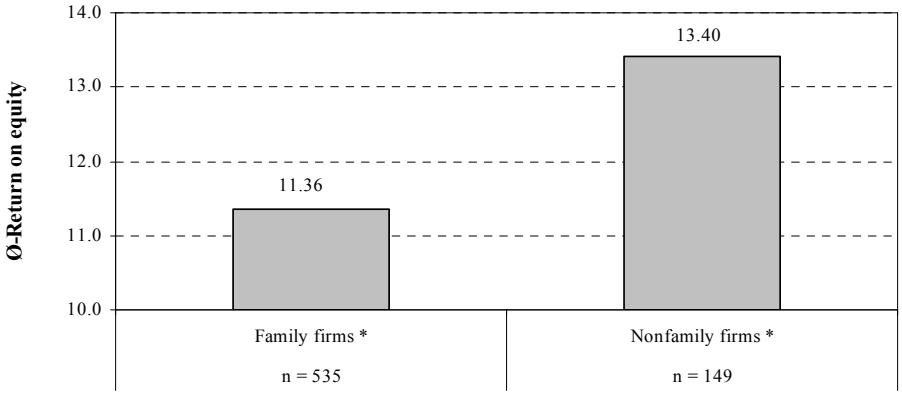
This continuous measurement of family influence stands in contrast to the aforementioned performance studies by Anderson and Reeb (2003b) as these authors define a company as a family firm as soon as the family has an equity stake of at least 20% in the company. A firm with a family equity stake of below 20% but with a high share of family participation in the management or the supervisory board is not considered as a family firm. Thus, Anderson and Reeb's (2003b) definition and also the one used by La Porta et al. (1999) on corporate ownership around the world, are based on definitions that do not capture the full range of possibilities through which families can bureaucratically influence a firm. In addition, the above surveys

only included publicly quoted companies, which account for less than 1% of all family firms (Klein, 2000; Frey et al., 2004).

One of the principal findings of this survey regarding the performance of family firms is that family firms are significantly lower performing in terms of return on equity (ROE) than nonfamily firms. Family firms reported a mean ROE of 11.36% and nonfamily firms a ROE of 13.40% (Figure 15).

Figure 15: Return on equity of family and nonfamily firms

Data source: Sample Nr. 1, Table 1. The analysis includes both privately held family and nonfamily firms. Statistical test applied: T-test. Significance level: 0.05.



* = Significant mean ROE difference between family and nonfamily firms

Literature analyzing the performance of non-quoted family firms is not only scarce but also ambiguous in its findings. Poutziouris et al. (2002) for the UK and Gnan and Montemerlo (2001) for Italy find higher returns for family firms. Ganderrio (1999) analyzing Swedish family firms finds no significant performance differences between the two. For Spain, similar non significant differences are reported by Gallo et al. (2000). In contrast, Gallo and Vilaseca (1996) found lower returns on sales for family owned firms in Spain. The results are not only incoherent but were also obtained using differing measures of performance such as return on assets, return on sales, return on equity and profit margins.

Therefore, the above results (Figure 15) are not meant to solve ultimately the performance question raised by the aforementioned studies. From a methodological

point of view the performance differences would need to be controlled for firm size, industry and particularly risk.

Keeping in mind this limitation, literature and practice provide the following main explanations for the lower performance of family firms.

Firstly, the lower ROE can be affected by the less levered capital structure (refer to chapter 4.1 for details). This is in accordance with the finding that family firms have high levels of earning retention and below average dividend payment (Jaskiewicz et al., 2005). Hence the returns need to be lower as they represent a lower control risk associated with an investment in family firms.

Secondly, family firms display vanishing boundaries between debt and equity (Levin and Travis, 1987). Families tend to provide their firms with assets which are often not properly classified as equity or as debt. Similarly, the asset base in itself can be distorted as families tend to book private related assets into company accounts. Hence, specific accounting practices of family firms impede comparability with nonfamily firms.

Thirdly, family firms are reported to follow rather conservative financial reporting and are found to bury profits in many ways for competitive and tax reasons (Donnelley, 1964).

Fourthly, if goals such as independence are predominant in family firms, ROE is not the ultimate business goal as experienced in many quoted nonfamily firms and postulated by traditional finance text books (Copeland et al., 2000). This finding is in line with Donnelley (1964) who finds that the sharpness of profit discipline of managers needs to be questioned. Donnelley (1964) seems to consider this as a weakness of family firms. However, if one allows for nonfinancial goals in family firms, it is not surprising that the firms will allocate their resources correspondingly and not mainly to achieve the highest monetary returns to shareholders.

Hence, there are some explanations as higher debt levels corresponding to higher control risk, the vanishing boundaries between debt and equity distorting the asset base of family firms, conservative financial reporting about the returns of the company and the prevalence of nonmonetary goals which provide insight into the lower returns of family firms.

However, further elements, as the specific agency problems of family firms, the importance of differing family influence, the role of ownership dispersion, the size of family firms and the industry they are active in and finally the generation active in the firm are able to provide a much deeper insight into the performance differences of family firms.

5.2 Agency and the family firm

Agency theory focuses on how the gap between management and ownership can lead to conflicting interests between managers, bond holders and owners. Agency theory is based on the idea that managers will not always act in the best interests of the investors. For instance, managers may seek to consume perquisites and decrease their work load if the cost of doing so is mainly absorbed by the investor. Consequently, agency costs consist of the monitoring, bonding and auditing of managerial performance (residual loss) by both debt holders and shareholders (Jensen and Meckling, 1976).

5.2.1 The traditional view

Jensen and Meckling (1976) laid the foundations for the discussion of company value as it relates to the level of managerial ownership. Fama and Jensen (1983) commented that agency problems are reduced if the residual claimants and the decision agents are the same. Similarly, De Angelo and De Angelo (1985) suggested that family involvement serves to monitor and discipline managers because of long-term relationships among family members and within the firm. Similarly, the incentive alignment hypothesis predicts that family CEOs have greater incentive to maximize financial value than nonfamily CEOs because in addition to the commercial incentives to create financial value, family CEOs may further derive non-commercial benefits from their position, such as family identity within the firm (Mc Conaughy, 2000).

It is evident that family firms, just as their nonfamily counterparts, face agency costs that can arise from lender-owner, majority-minority owner and family-nonfamily member conflicts of interests (Chrisman et al., 2004). However, there are several agency issues that are specific to family firms and therefore deserve closer consideration.

5.2.2 Altruism

One of the implications of the traditional view outlined above is that it spars the family firms the need to monitor closely management or the expense of pay incentives (Schulze et al., 2003a). However, evidence about family-owned and family-managed firms is at odds with this conclusion. Levinson (1971) writes that family firms are "…plagued with conflicts". In addition, survey data indicates that over 70% of family firms pay incentives to employed family members (Fraser, 1990; Greco, 1990). Schulze et al. (2003a) try to explain this difference by introducing altruism, as a powerful force within family life and, by extension, within the family firm.

Theologians tend to view altruism as a moral value that motivates individuals to undertake actions which benefit others without any expectation of external reward (Batson, 1990). Sociologist, in contrast, tend to view altruism as a trait or preference that is endogenous to a man's character and based, at least in part, on feelings, instincts, and sentiments (Lunati, 1997). Economists hold a similar view and generally model altruism as a utility function in which the welfare of one individual is positively linked to the welfare of others (Bergstrom, 1989). The incentive it provides is therefore powerful and self-reinforcing because efforts to maximize one's own utility allow the individual to satisfy simultaneously both altruistic and egoistic preferences. Parents, it follows, are generous and charitable to their children not only because they love them but also because their own welfare would decline if they acted in any other way (Becker, 1981).

Simon (1993) and Eshel et al. (1998) note that altruism compels parents to care for their children, encourages family members to be considerate of one another, and

fosters loyalty and commitment to the family and the firm. Family membership becomes valuable in ways that both promote and sustain the bond among the members. This bond, in turn, provides a history, identity, and language to the family. The intimate knowledge among family members facilitates communication and decision making (Gersick et al., 1997). Furthermore, altruism is expected to improve or at least to increase communication and cooperation among family agents and to increase their use of informal agreements (Daily and Dollinger, 1991). Finally, altruism fosters loyalty and commitment to the family and to its prosperity (Ward, 1987).

5.2.2.1 Altruism in the family and tied transfer agreements

In contrast to the positive aspects listed above, altruism can also create agency problems that are costly to mitigate and therefore can make pay incentives to family members necessary. For example, since altruism is at least partly motivated by the parents' desire to enhance their own welfare, parents have incentive to be generous although that generosity may cause their child to free ride or to shirk responsibility (e.g. leave an assigned household chore for a parent to complete or to misuse their parents' money).

Parents are therefore faced with a Samaritan's dilemma in which their actions give beneficiaries incentive to take actions or make decisions that may ultimately harm the parents' own welfare. Literature characterizes these problems as double moral hazard problems (Buchanan, 1975). More broadly, the Samaritan's dilemma is representative of a class of agency problems associated with the exercise (or lack) of self-control by the principal. Self-control problems arise whenever parties to a contract have both the incentive and the ability to take actions that "harm themselves and those around them" (Jensen, 1994).

Tied transfer agreements (O'Donoghue and Rabin, 2000) are able to mitigate the agency threat, by making a transfer of a promised benefit contingent on the agent's (e.g. children's) behavior (Lindbeck and Weibull, 1988). As Schulze et al. (2003a) note, the advantage of tied transfer agreements is that they can be crafted to fit

virtually any desired period. They can be the short-term ("You get this bike if your grades are sufficiently good."), near ("Do well in high school, and I pay you a trip to Switzerland.") and long-term ("Someday this firm might be yours.").

But the fact that tied transfer agreements can easily be customized can become a disadvantage. First, it might be difficult for parents to identify transfer plans that will have the desired incentive effects. Second, children might realize that altruism can make it difficult for parents to enforce their plans. And finally, tied transfer plans work only if conditional transferability exists, that is, if each child's tastes or preferences for different goods can be expressed in terms of a single commodity, like money, which ensures that the transfer is just and equitable.

However money is not always enough, as the goods to be transferred cannot always be easily valued (e.g. a house or a firm) or are biased by the different tastes of the children (e.g. your house is nicer than the one I got). These information asymmetries make it difficult for altruistic parents to be both generous and just and increase the risk that tied transfer plans may not only fail to properly motivate the beneficiary but may also spark conflict or jealousy among siblings or within the household.

5.2.2.2 Altruism and the induced agency problems

Schulze et al. (2003a) posit that the nature of agency problems in family firms is embedded in the past and in the ongoing parent-child relationships and therefore is characterized by altruism.

However, family firm principals are not always altruistic. For example, if ownership is concentrated on one individual, as in the case of founder based family firms, issues of asymmetric altruism may simply not exist. Similarly, whenever managerial control resides with the individuals owning only a minority of shares (as in many sibling or cousin consortia), the agency costs arising from the conflict of interest of ownership and management may raise the agency costs to the level of nonfamily firms. With increasing family participation and control in the firm, altruism is expected to rise.

In sum, agency problems rooted in altruism and self-control are exacerbated when the CEO holds the privileges of ownership and can make altruistic transfers (such an owner is referred to as a controlling owner). This broadens the CEO's capacity to make altruistic transfers (like implicit claims for employment, or explicit contracts for perquisites) to family members (referred to as family agents). These privileges and the sense of entitlement they often evoke (Gersick et al., 1997) can create agency costs, if the controlling owner (principal) needs to monitor the family agents or if the family agents need to monitor the controlling owner.

5.2.2.3 Monitoring of the agents

There are at least three reasons for the family CEO to monitor the family agents. First, the hire of family agents (e.g. children) is often determined by family status and not by professional qualifications. Monitoring may, therefore, be required to assure that the decisions and activities undertaken by the family agent are appropriate and commensurate with his position and level of authority.

However, certain disciplinary measure as for example the exclusion of family members from the firm are hardly conceivable in a family firm. Thus, the risk that the perquisites, privileges and liberties granted by the CEO may spark a Samaritan's dilemma (as described in chapter 5.2.2.1) can call for close supervision. Therefore, monitoring is necessary in order to minimize shirking and / or free riding. In addition, altruism reduces the effectiveness of a CEO's supervision. Altruism hampers the ability of a family firm's principal owner to use internal governance mechanisms like monitoring. This effect is particularly noticeable if the disciplinary measures have repercussions on familial relations (Meyer and Zucker, 1989). In turn, family agents, as they may have done when they were children, tend to free ride on the CEO. This is of particular importance whenever the responsibilities of the CEO and family agents overlap (Lindbeck and Weibull, 1998).

Third, at widely held public firms fractional ownership gives insiders incentives to free ride on the outside owner's equity. The case is expected to look different in the family firm: the power and the virtue of being the head of the firm and often the

family make it hard for family agents to control the controlling owner. These constraints, combined with the risk that the controlling owner may undertake investments that other family members do not view as the best, lead the family agents to prefer consumption to investment. In addition, family agents tend to do so (in the form of pecuniary and nonpecuniary benefits) at rates that are high relative to their ownership stake. Thus, in contrast to the widely held firm, family insiders have incentives to free ride on the controlling owner's equity (Schulze, 2003b). At this level, the controlling owner is obliged to monitor and limit these consumptions.

In sum, the agency effects of altruism suggest that ownership can have the opposite agency effects when firms are family-managed than expected by traditional agency literature. Thus, altruism can enforce family principals to monitor family agents.

5.2.2.4 Monitoring of the principal

There are also reasons, however, for family agents to monitor the controlling owner. First of all, as agents are often minority shareholders they need to assure that the controlling shareholder does not expropriate them.

Second, proponents of behavioral agency theory, e.g. Wiseman and Gomez-Mejia (1998), argue that owners who manage a private firm define its value in terms of their personal utility. As the utility of the altruistic family CEO is influenced by the needs of the other family members, altruism compels the controlling owner to consider the needs of the firm and each family member when defining his first-best option. It can not, however, be in the interest of family agents (e.g. siblings) that the self-interest of the controlling owner be predominant. Predominance of self-interest could lead the controlling owner to invest in projects with which the agents do not agree. For example, age might cause the controlling owner to avoid investments that other family members favor. He might view the investments as too risky or as personally threatening-for example in the case that they oblige the controlling owner to learn new skills. Over time, the economic incentive to do what maximizes personal utility can blur the controlling owner's perception of what is best for the firm or family. Self-interest and the firm's and the family's best interest may be

viewed as one (Schulze et al., 2003b). The family members thus have incentives to monitor the controlling owner and incur agency costs in an effort to insure that their best interests are being served.

Third, altruism reduces the CEO's ability to effectively monitor and discipline family agents. As mentioned above, just as in a household, altruism systematically biases the CEOs' perceptions and the information they filter and process about employed children. Agents must therefore see that the achievements of each one amongst them are considered justly and that none of the agents can excessively free ride.

Fourth, agency problems may arise as owner-control can engender agency problems of adverse selection, particularly due to inefficient labor markets (Schulze et al., 2000). Widely-held firms, in contrast, are presumed to face efficient labor markets and their external governance significantly reduces the threat of adverse selection and hold up of these firms (Besanko et al., 1996; Stulz, 1988). As family firms do not possess these external governance structures they often continue to favor family members for management positions even if those members are not productive in the proposed positions (Gomez-Mejia et al., 2001). In turn, agents must assure that family principals decide on the most suitable manager, determined by the requirements of both social systems, that of the family *and* that of the firm.

In sum, self-control problems that altruism and owner-control exacerbate can make it difficult for the family CEO (principal) to choose between doing what is best for themselves, best for their family and best for the firm. This limits the family principal's ability to make impartial and thus economically rational decisions. Agents therefore need to monitor the family CEO in order to assure that his decisions are as impartial as possible.

5.2.3 Agency costs due to nonfinancial business goals

The incentive structures of family business managers are more complex than those of widely-controlled firms as they include for example goals as independence, increase family wealth and independence of the business (Spremann, 2002; Ward, 1997).

Therefore, what is considered to be good for the family firm in the eyes of an outside manager, even if he is (co)owner, is not necessarily good in the eyes of a family member active in the firm. For example, outsourcing jobs to a service provider abroad can have a positive net present value, but can also compromise the social status of the family in the social community. Similarly, employing a less capable family member in an executive position can be considered as an agency cost in the eyes of a manager; in the eyes of an altruistic family principal, this is not a cost, but a gain, as he derives a personal benefit from caring for his family member.

5.2.4 Agency costs in large family business groups

In addition to the problems between family agents and family principals (e.g. CEOs) outlined above, there are also agency problems that are typical to large family business groups. Bebchuk et al. (1999), Morck et al. (2000) and Filatotchev and Michiewicz (2001) specifically focused on the key difference between widely held firms and large family business groups. They report that in the latter agency costs involve managers who act solely for one shareholder, the family, while potentially neglecting other shareholders. This means that incentive alignment might exist amongst family members, but does not mean that family shareholders automatically pull in the same direction as the nonfamily shareholders.

5.2.5 Agency costs due to inefficient markets for capital and labor

Further agency costs are induced by inefficient markets for capital and labor. This is, family members often face high exist costs of their commitment in the firm-in financial and nonfinancial terms. Especially in private family firms, leaving is hardly

conceivable because the remaining family members might not have the liquidity to pay an appropriate price for the share. Furthermore, a family-external investor is often rejected by the remaining family members for psychological reasons, such as differing business interests (Achleitner and Poech, 2004). Thus, for many family firms the absence of a liquid and efficient capital market drastically increases the exit costs.

Members of a family firm might also face an inefficient labor market. A family member who has been working with the firm and then intends to exit the firm might face difficulties in finding a comparable job, especially in the same industry.

There could be emotional barriers to exiting the firm due to social pressure to continue the legacy of the family.

Both, inefficient capital markets and inefficient labor market increase exit costs. These agency costs are hidden or contingent, in the sense that they are not relevant if nobody wants to leave the firm.

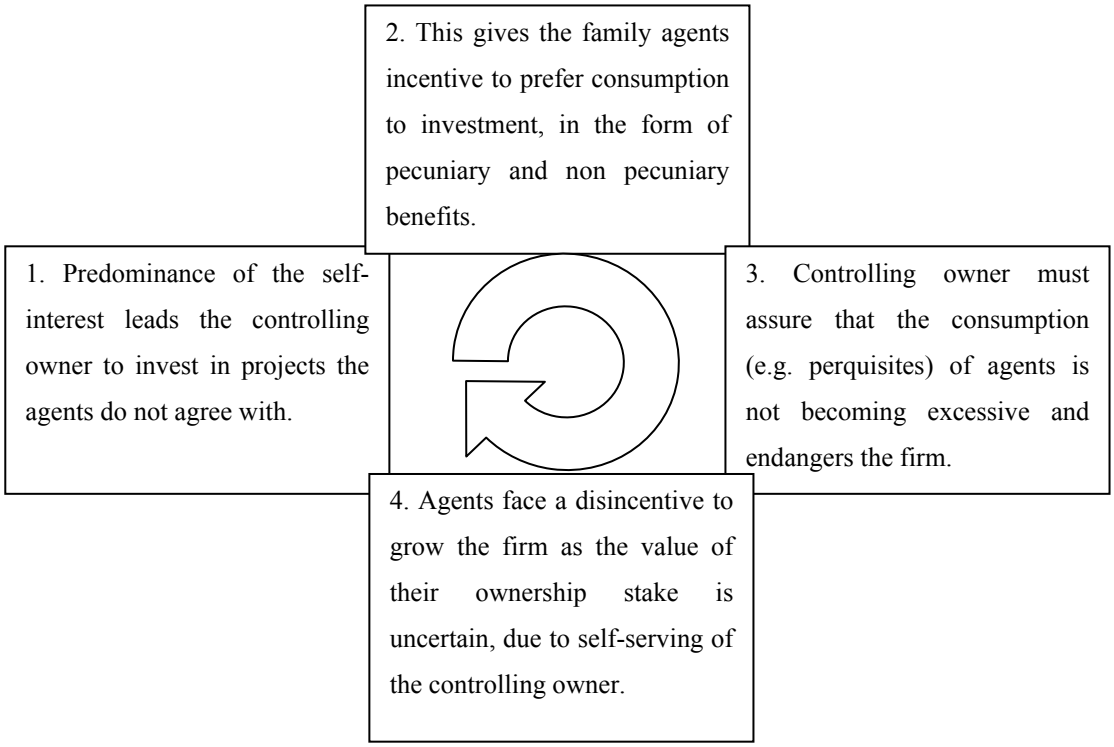
5.2.6 Consequences of agency problems

The result of the problems above described is a complex web of entwined agency problems which can adversely affect these firms' ability to compete. This can happen in at least five ways: strategic inertia, financial inertia, ineffective governance, misalignment of interests and ineffective information processing.

5.2.6.1 Strategic inertia

It has been shown that mutual control is necessary to mitigate the potential agency conflicts in the family firm. Agents (e.g. siblings) often face high exit costs, both pecuniary and nonpecuniary. This can lead to a relationship in which both parties are locked in. In the end these excessive exit costs cause a state of paralysis (Schulze et al., 2003b) referred to as strategic inertia. Below Figure 16 gives an example how inertia can arise.

Figure 16: Strategic inertia in the family firm



Sundaramurthy and Lewis (2003) and Audia et al. (2000) discussed this issue in more detail. They find reinforcing cycles that foster strategic persistence and organizational decline (Hambrick and D'Aveni, 1988) but find also reinforcing cycles that foster collaboration and control as means of managing.

In firms with a *collaborative approach*, directors and executives seek to become a cohesive governing team. Researchers propose that these circumstances and past firm success provide seeds for rising group-thinking (e.g. Janis, 1972) and strategic persistence (e.g. Kisfalvi, 2000). Audia et al. (2000) explain that decision makers in this context often exhibit considerable confidence in their team, in their collective strategies, and in their beliefs regarding cause-effect relations. Faulty attributions of the success and over-confidence desensitize decision makers to negative feedback. Information gathering and processing efforts may then suffer (Sundaramurthy and Lewis, 2003). Over time, the governance teams show increasingly rigid mental maps and constrict information flow (Lindsley et al., 1995). This unquestioned and positive framing of the firm's strategy and environment may foster risk aversion, as

well as underinvestment in new initiatives (Ranft and O'Neill, 2001). A lack of external monitoring (Hansen and Hill, 1991) can exacerbate myopia. Under these circumstances a drastic environmental shift can have an immediate impact.

When performance declines, so does the team's collective efficacy. Group-thinking, which had been a source of stability, fuels threat-rigidity during decline (D'Aveni and Mac Millan, 1990). According to Staw et al. (1981), low performance intensifies stress, causing managers to restrict their information gathering and to rely instead on familiar knowledge in an effort to reduce complexity and anxiety.

There are further analogies with family firms, especially lower performing ones. Studies depicting group-think as observed in families find that in cases of lower performance people display escalating commitment to a failing course of action (Kisfalvi, 2000). Decline in risk propensity also contributes to this escalation. According to Whyte (1989), a cohesive group will not only seek consensus around the current course of action but will also make decisions that promote an even more extreme version of the existing strategy. This "risky shift" (Sundaramurthy and Lewis, 2003) is of particular importance for family firms. Sticking with an inappropriate strategy appears safe (low risk) but is actually a high-risk decision. Likewise, prospect theorists (Kahneman and Tversky, 1979) posit that managers tend to be more risk-seeking when facing losses. Rather than to accept losses as "sunk costs", actors tend to choose a course of action that risks an even greater loss.

Firms with a *control approach* seek vigilant outsider dominated boards and active monitoring. An environment of high performance and control may spark distrust in a reinforcing cycle. Controls may squelch manager's stewardship motives and aspirations. Frey (1993, 1997) finds support for this "crowding out effect". This effect suggests that monitoring and bonding mechanisms undermine motivation. In addition, this effect is found to be reinforcing as agents increasingly perceive controls as indications of distrust, further motivating them to reduce their effort. Meanwhile, managers may experience ambivalence, feeling pride in their firm's performance as well as frustration over controls and distrust. This in turn can lead to a polarization of board and management team, and can over time engender myopic

behavior that inhibits learning and risk-taking (Piderit, 2000). Moreover, boards dominated by outsiders who are less involved with internal operations than the those in the management are more likely to use financial, outcome based controls than subjective, strategic controls. Yet tight financial controls often result in shortened time horizons and risk-avoidance behavior on the part of managers (Hayes and Abernathy, 1980). Active external monitoring (Graves, 1988) can further suppress long-term investments and result in extensive corporate diversification (Fox and Hamilton, 1994). When insiders are well represented on the board, on the other hand, executives are more willing to invest in long-term research and development projects (Baysinger et al., 1991). In this cycle, polarization and myopic behaviors-and their accompanying information asymmetry and risk aversion-confirm the distrust, prompting even greater use of rational controls. These self fulfilling prophecies (Merton, 1949) lead to even more control and even more distrust and a decreasing intrinsic motivation in a downward spiral (Ghoshal and Moran, 1996).

Under both circumstances, collaboration and control, if one approach becomes overemphasized, the aforementioned reinforcing cycles can be fueled. Whatever the predominant approach in a specific family business, it can cause either perils of group-think or distrust. Both approaches can result in the risk aversion associated with high levels of ownership concentration combined with altruistic incentives that encourage moral hazard and problems of self-control. In turn, this potentially prevents family firms from pursuing necessary entrepreneurial activities such as innovating, venturing and strategic renewal activities (Schulze et al., 2002; Zahra et al., 2000). In the end, this erodes the firm's entrepreneurial orientation and replaces it with strategic inertia.

These findings are consistent with the observations by Meyer and Zucker (1989) who find that family firms are vulnerable to a form of inertia that can paralyze decision-making and threaten firm survival. Similarly Muehlebach (2004) posits in her work on the deployment of the inherent strengths of family firms that these firms need to adjust dynamically family influence in order avoid paralyzing inertia and to keep the ability to tackle market opportunities proactively.

Embracing and balancing both approaches facilitates learning and adaptation to environmental changes and prevents from strategic inertia.

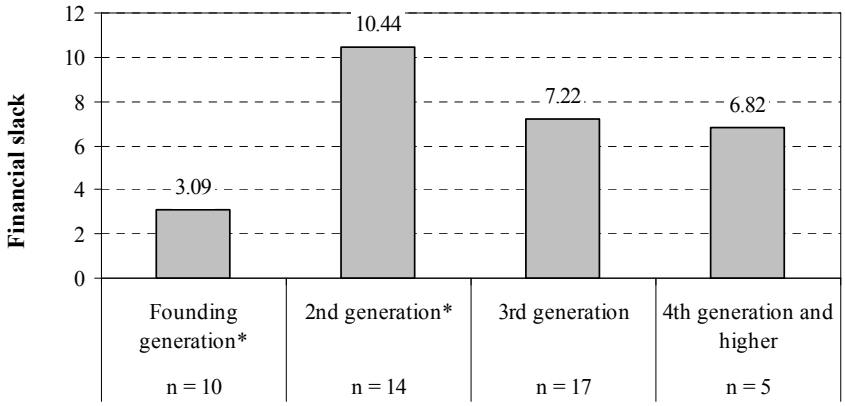
5.2.6.2 Financial inertia

As mentioned, family firms tend to stick to the pecking order theory of financing, last but not least due to the fear of losing control (Mc Conaughy and Mishra, 1999). Holding cash and marketable securities reduces the need to borrow and can therefore have the quality of insuring the independence of the family firm. Mc Conaughy and Mishra (1999) find that the share of cash and marketable securities in the total assets, referred to as financial slack, is higher in family firms than in nonfamily firms. Similarly, Agrawal and Nagarjan (1990) find that all equity firms, which tend to be family firms, are characterized by greater liquidity positions than levered firms. However, these studies do not answer the question of whether there are differences in the levels of financial slack with altering family influence and if financial slack has an impact on the (financial) management of these firms.

Based on the finding by George (2005) it can by hypothesized that financial slack first raises and then declines also with succeeding generations active in the business (Figure 17) as uninvolved family members need to be paid out with cash and marketable securities.

Figure 17: Mean financial slack and generation

Data source: Sample Nr. 6, Table 2. The analysis includes only small to mid-sized family firms from construction industry. Financial slack: share of cash and marketable securities as a percentage of total assets. Statistical test applied: Mann-Whitney-U- test. Significance level: 0.05.



Significant difference between founding and 2nd generation.

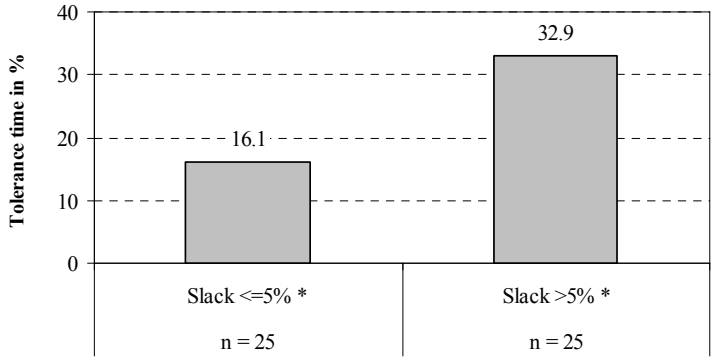
Figure 17 gives limited empirical evidence that financial slack first raises and then decreases after the second generation.

If family firms in actual fact face a larger financial slack than their nonfamily counterparts, as found by Mc Conaughy and Mishra (1999), one can hypothesize that financial slack reduces the disciplinarian pressure of interest payments to concentrate on profitable projects. Hence, profit discipline is hypothesized to fall with increasing financial slack (George, 2005).

To test this hypothesis, profit discipline is measured by tolerance time, which is defined as the share of negative EBITs of all observed EBITs for one firm. For example, if a firm displays a tolerance time of 20%, 1 out of 5 EBITs observed for this firm is negative. Tolerance time is inversely related to profit discipline as it is expected to be an indicator of a family's will and ability to assure the profitability of the firm. This means that a tolerance time of 50% indicates a lower profit discipline than a tolerance time of 20%.

Figure 18: Mean tolerance time and mean financial slack

Data source: Sample Nr. 6, Table 2. The analysis includes only small to mid-sized family firms, all from construction industry. Tolerance time: share of negative EBITs of all observed EBITs for one firm. Tolerance time is considered as a proxy for profit discipline. Tolerance time and profit discipline are inversely related. Financial slack: share of cash and marketable securities from total assets. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.

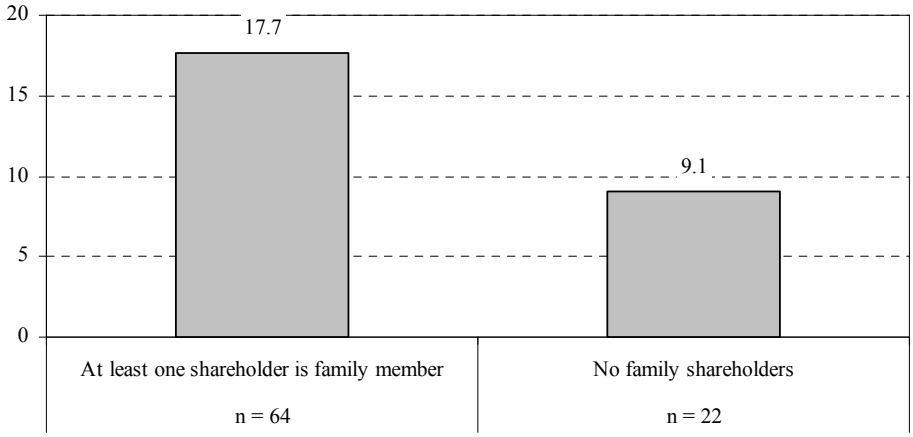


Significant difference betwen the two classes.

Thus, with a financial slack of more than 5%, tolerance of negative EBITs is significantly higher than in firms with lower financial slack. Distinguishing between family and nonfamily owned firms (Figure 19) reveals that firms with family shareholders seem to have a higher tolerance time, thus a lower profit discipline, than firms without family shareholders.

Figure 19: Mean tolerance time and family versus nonfamily shareholders

Data source: Sample Nr. 6, Table 2. The analysis includes only small to mid sized family firms, all from construction industry. Tolerance time: share of negative EBITs of all observed EBITs for one firm. Statistical test applied: Mann-Whitney-U- test. Significance level: 0.05.



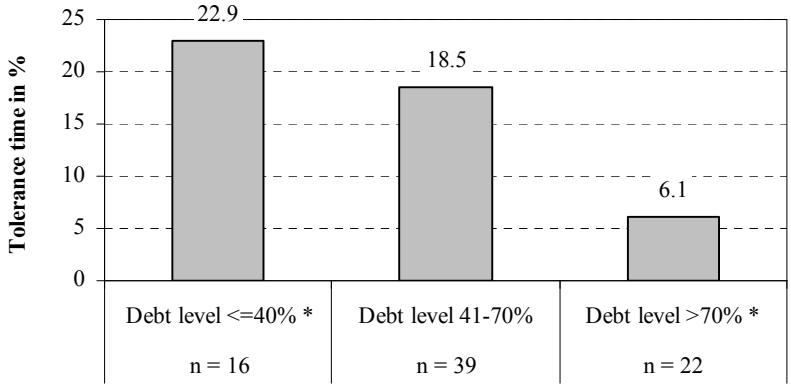
Mann-Whitney-U-test: No siginificant difference, significance level: 0.16

Although there are no statistically significant differences between family and nonfamily firms, the findings above indicate that family firms are more susceptible to financial slack, which in turn can lead to financial inertia, represented by a continued acceptance of negative financial performance of business activity.

The phenomenon of financial slack is even more perceptible when firms display low leverage levels, which spares the family not only the disciplinarian pressure of interest payments but also the healing effect of independent control. In line with above considerations, tolerance time of negative EBIT, defined as the share of the negative EBITs of all EBITs observed for one firm, increases with decreasing leverage levels, as displayed in Figure 20.

Figure 20: Mean tolerance time and mean debt level

Data source: Sample Nr. 6, Table 2. The analysis includes only family firms, all from construction industry. Tolerance time: share of negative EBITs of all observed EBITs for one firm. Statistical test applied: T-test. Significance level: 0.05.



Significant difference of tolerance time between firms with debt level <= 40% and firms with debt level >70%

However, higher tolerance towards financial losses as experienced in family firms does not necessarily indicate destructive financial inertia. The ability to weather periods with no or little financial success can be a conditio sine qua non of a long-term investment strategy of a family firm. It is reported that Weyerhaeuser, an American timberland and real estate company, sustained 40 years of losses so that the company could grow into an industrial giant (Donnelley, 1964). Please note that the importance of long-term business perspectives and investment strategies will be further discussed in chapter 6.3.6.2.

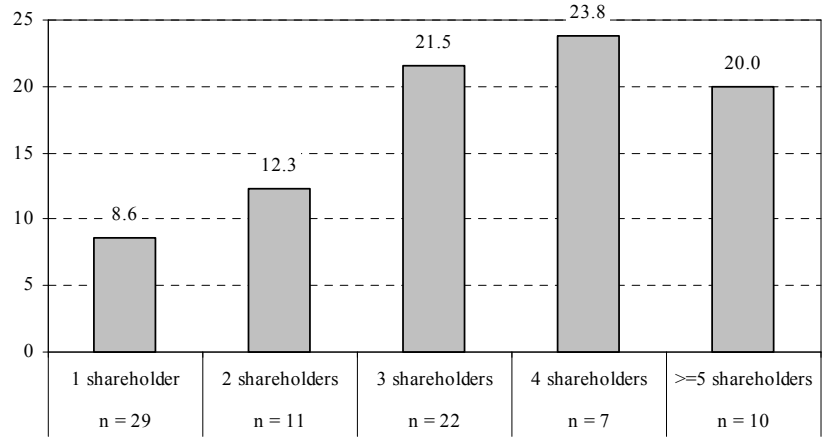
Excessive tolerance towards negative financial performance, however, can be induced by a lack of discipline and responsibility by the family members themselves. Group-think effects (Janis, 1972) are able to provide additional insight into this question. Whereas firms with one controlling owner are expected to display a higher profit discipline, sibling partnerships with 2 to 4 shareholders are expected to display a higher rivalry of interests. The profit discipline might be affected negatively as the siblings are more concerned about their own welfare than about the one of the firm (Schulze et al., 2003b). In contrast cousin consortia need to align their interests in

order to establish a course of action that assures the survival of the firm as many family members and in-laws depend on the financial success of the firm.

Therefore, sibling partnerships with 2 to 4 shareholders are expected to display a lower profit discipline, measured by increasing tolerance of negative financial outcome. Similarly, family firms in later generations, particular the third generation with 2 to 4 shareholders are expected to display a higher tolerance for negative financial outcome.

Figure 21: Mean tolerance time and number of shareholders

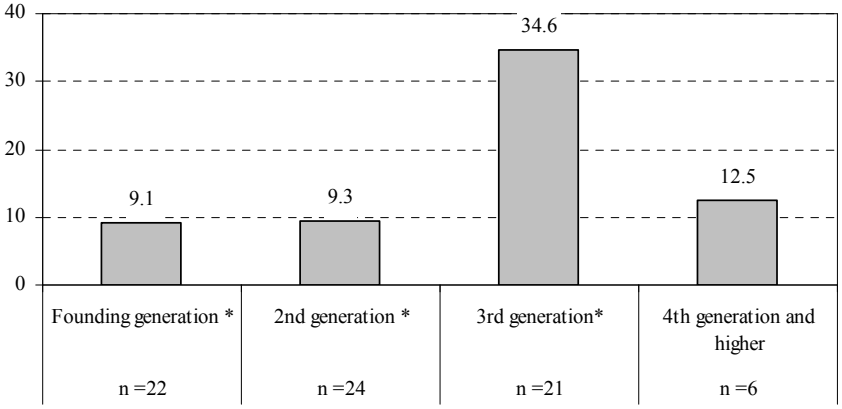
Data source: Sample Nr. 6, Table 2. The analysis includes only family firms, all from construction industry. Tolerance time: percentage of negative EBITs of all observed EBITs for one firm. Tolerance time is considered as a proxy for profit discipline. Tolerance time and profit discipline are inversely related. Statistical test applied: Mann-Whitney-U- test. Significance level: 0.05.



No significant differences

Figure 22: Mean tolerance time and generation

Data source: Sample Nr. 6, Table 2. The analysis includes only family firms, all from construction industry. Tolerance time: sahre of negative EBITs of all observed EBITs for one firm. Tolerance time is considered as a proxy for profit discipline. Tolerance time and profit discipline are inversely related. Statistical test applied: Mann-Whitney-U- test. Significance level: 0.05.



*: Significant differences between:
Founding generation and 2nd generation
2nd generation and 3rd generation

Just as found with strategic inertia, financial inertia can be explained by group-think effects.

In the extreme case, financial inertia can deprive the family firm of the necessary funds for pursuing entrepreneurial activities, as can strategic inertia (Schulze et al., 2002; Zahra et al., 2000).

5.2.6.3 Ineffective governance

The theory presented above suggests that altruism increases the need for family firms both to monitoring and to discipline principals *and* agents. Paradoxically, altruism may also make the family firm CEO loath to adopt and enforce formal governance mechanisms like boards, decision hierarchies, incentives, and rules and procedures that govern the allocation of property rights (Daily and Dollinger, 1991; Greenwald & Associates, 1994). This is because altruism creates incentives for the CEO to treat family members equally, regardless of their contribution as agents to the firm. Formal governance therefore presents the family CEO with a dilemma as the assumption behind adoption and enforcement of these mechanisms is that family agents might merit unequal, but impartial, treatment.

5.2.6.4 Misalignment of interests

According to Fama and Jensen (1985), family firms survive despite "the cost of inefficiency in risk-bearing and a tendency towards under-investment" because they are able to offset these competitive inefficiencies with the administrative efficiencies that they gain from the close alignment of interests and management "by…agents whose special relations with other decision agents allow agency problems to be controlled without separation of the management and control decisions" (Fama and Jensen, 1983b). Similarly, the incentive alignment hypothesis predicts that family CEOs have greater incentives to maximize financial value (Mc Conaughy, 2000), thereby lowering the cost of reaching, monitoring and enforcing agreements (Jensen, 1998).

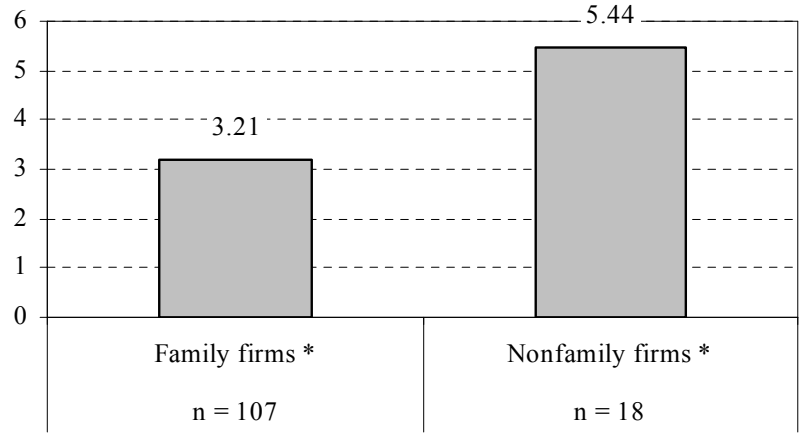
As mentioned above, this assertion has to be questioned-at least partially. The higher the levels of the CEOs' altruism (and the greater their capacity to act altruistically), the more incentive family agents have to free ride.

5.2.6.5 Ineffective information processing

Competitive forces require that firms process information in an effective manner, sorting out critical information to its future success. Many family firms have an inherent advantage, particularly in information gathering, due to their long industry tradition, relational contracts with industry representatives and long-term client contacts. In addition, family firms consider fewer information sources than their nonfamily counterparts. Asked for the number of persons consulted before an important investment decision, family firms mention on average 3.2 persons, nonfamily firms 5.4 persons (Figure 23).

Figure 23: Number of persons consulted before major investment decision

Data source: Sample Nr. 2, Table 1. Statistical test applied: T-test. Significance level: 0.05.

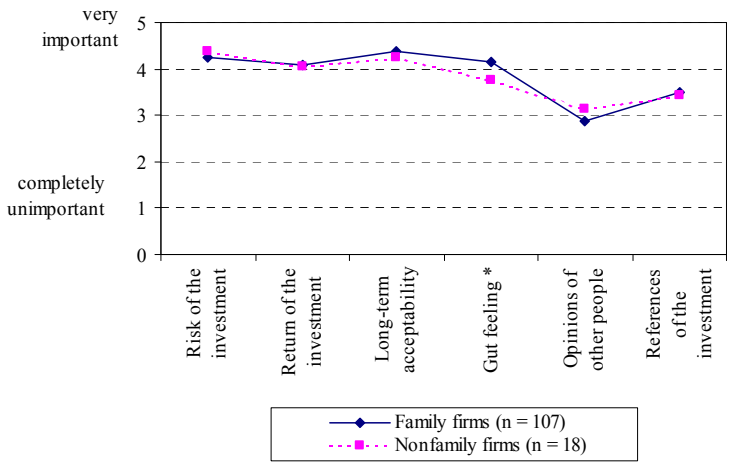


* = Significant mean difference between family and nonfamily firms

In addition, family firms were found to rather rely on information available within the firm or the family. Furthermore, their decision making was less formalized (Figure 24).

Figure 24: Importance of evaluation criteria for investment projects

Data source: Sample Nr. 2, Table 1. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



* = Significant mean difference between family and nonfamily firms

As Figure 24 displays, compared to their nonfamily counterparts family firms rather tend to base decisions on intuition and gut feeling and less on the opinions of others. While this seems to represent a fast and efficient way to gather information, these sources can also be too limited or biased by a certain belief about an investment, business strategy or even the whole economic environment.

This autonomy can be a source of creative competitive strategies based on the information gathered through strong relational ties with clients, employees and other stakeholders, for example with industry representatives.

However, the self-centered information gathering of market information can put the firm in serious danger. Over time, the governance team shows increasingly rigid mental maps and constricts information flow (Lindsey et al., 1995). As mentioned in discussing strategic inertia, sticking with an inappropriate strategy can appear safe (low risk) but is actually a high-risk decision. Under these circumstances, a lack of external monitoring (Hansen and Hill, 1991) and unbiased information can exacerbate myopia but also overoptimism regarding the outcomes of certain projects (Kahneman and Lovallo, 2003).

5.2.7 Effective monitoring in the family firm: a practical guideline

One difficulty of the traditional agency theory approach is that it seems to assume that financial return (through increasing market value and cash flow to the owners) is the ultimate goal of family business ownership (Astrachan, 2003). The discussion above showed however, that the agency relationships in family firms are at odds with this theory.

By introducing stewardship and altruism as an integral part of the characteristics of family firms, family ownership does no more appear to represent the kind of governance panacea that Fama and Jensen (1983) and others attribute to the family owner-management. As shown in above chapters, there are indications that altruism and kinship obligations could reduce some agency costs (Chrisman et al., 2004). However, the preceding chapters pointed out that some features of family firms, such as free riding, ineffective managers or the non-alignment of the interests of the non-employed shareholders with those of the top management team can increase agency costs.

Studies comparing governance and performance effects come up with a positive relation between the two (Gomez-Mejia et al., 2001). The introduction of agency cost control mechanisms on the agents can help a company improve its performance, even in the case of family owned and family managed firms (Gnan and Songini, 2003).

However, the preceding chapters made clear that effective agency cost control mechanisms should work in two directions: controlling CEOs and agents should monitor each other mutually. The subsequent subchapters will discuss how effective monitoring in the family firm could be structured.

5.2.7.1 Effective monitoring of the agents

The following reflections draw from the above discussion about the reasons for the family CEO to monitor the family agents. The suggestions are meant to be a general set-up for family firms, in which the controlling owner needs to install practicable monitoring over family agents. On the one hand, the suggestions focus on transfer of

control. On the other hand, they give advice about the use of pay incentives that can have positive performance effects even if family agents, as de facto owners, already have their personal wealth tied closely to the value of the firm.

1. Commensurate effort and transfer

For a tied transfer (as described in chapter 5.2.2.1) to be effective, the recipient must perceive that its value is commensurate with the required effort to earn it. Therefore, family firms should avoid promising transfers that are clouded by uncertainty as to whom, how much, and when the CEO will effectuate the transfer, e.g. ownership and control of the firm. Promised but cloudy transfers may have an embedded disincentive. This disincentive emanates from the fact that the share of the marginal wealth family agents generate through their own industriousness, and to which they as an owner feel entitled, may not be paid to them in proportion to how / or when it was earned.

2. Leave no space for free riding or shirking

Transfer agreements with an individual need to be tied to his personal responsibilities. There must be no space for the person to free ride with the efforts of the CEO. Similarly transfer agreements should not give other family members the possibility to free ride or shirk with the others' efforts. This implies that persons who are not actively contributing to the firm need to receive transfers in which there is no space for free riding with the industriousness of those agents still engaged in the firm. This means also that family members who are not engaged in the firm should have the possibility to leave it and get paid out. Otherwise incentive payments to agents engaged in the firm can turn into a disincentive when non-engaged agents can free ride.

3. Use money as the universal measure for the transfer

Transfer plans may not produce the desired outcomes because it may be presumed that parents are capable of distributing resources amongst the agents in a manner that optimizes family welfare. But controlling owners are capable of doing this only if

conditional transferability exists, i.e., if each agent's (e.g. child's) tastes or preferences for goods can be expressed in terms of a single commodity, like money. This is, however, hardly ever the case, as one agent might, for example, prefer power in the firm to money or inversely.

These information asymmetries make it difficult for altruistic parents to be both generous and just, and increase the risk that tied transfer plans may not only fail to motivate the beneficiary properly, but could also lead to conflict or jealousy among siblings (Schulze et al., 2003a). Nevertheless, in many cases controlling owner and agents should agree on a single commodity in order to attribute a value to different goods.

4. Keep transfer agreements stable

Similarly, family agents (e.g. non CEO family members) know that at least part of the transfers are at risk because the CEO may let a variety of factors associated with altruism and ownership (e.g. the financial needs of the firm or of other family members) influence the awards (Bergstrom, 1989).

Therefore, the effect of altruism on the amount (and the value each individual attributes to different goods) and about the time of transfer has to be minimized. Any unexpected change of transfer conditions due to altruistic behavior of the CEO damages or even destroys the confidence of family agents in the justice or equitability of transfers and, therefore, also destroys their confidence in the value of their efforts for the firm.

5. Use payment incentives if the firm should be sold

It can be expected that pay incentives be effective when CEOs declare their intentions to sell their firms but not when family agents expect that the firm will remain under family control (Schulze et al., 2003a). One can infer at least four reasons that lead to this expectation:

First, the expectation that the firm will be sold reduces information asymmetries because family agents then have less incentive to compete with each other, to squander resources, or to seek the CEO's favor (Buchanan, 1983). Second,

information asymmetries should fall because family agents have less reason to be concerned about receiving an equitable proportion of the altruist's estate when it is comprised principally of money, which is homogeneous and easy to distribute equitably. Third, reduced information asymmetries improve the ability of the CEO to craft effective incentive plans, as will the fact that the impending sale shortens the time period over which the family agents discount the value of any incentive. Finally, the anticipated sale can liberate family members whose altruistic feelings toward the family might have compelled to work for the firm (Gersick et al., 1997; Lansberg et al., 1988; Nelton, 1995) and lowers exit costs.

Schulze et al. (2003a) provides empirical evidence for this hypothesis, showing that family pay incentives have a strongly positive effect on firm growth (measured by sales growth) when those agents anticipate the family firm be sold. Thus, monetary incentives are particularly useful if the transfer happens via an upcoming sale of the firm and if the sale is known about by the agents.

6. Limit use of payment incentives if the firm remains with the family

Similarly one can infer that the effectiveness of pay incentives in firms that will not be sold depends on how much family agents know about the CEO's estate and share transfer intentions. A CEO who commits to an estate and share transfer plan reduces uncertainty regarding the value of that right. Ceteris paribus, this information should help family agents to calibrate accurately the value of their efforts and thereby improve the motivational effect of a pay incentive. Disclosure of the CEO's estate and share transfer plans should also help to reduce the amount of rivalry among family agents, which in turn should reduce information asymmetries.

However, family firm CEOs have a variety of reasons to keep this information private. For example, they may feel they need added time to assess the capabilities of different family members or fear that disclosing how the family shares will be distributed will cause jealousy in the family. There is a lot of anecdotal evidence that firms were torn apart by the ensuing conflict (Donovan, 1995; Levinson, 1971).

The result is that family firm CEOs face a peculiar dilemma: The information required to make pay incentives more effective-and thereby counteracting altruism-

induces agency problems and may expose the firm to another set of agency problems.

Schulze et al. (2003a) find evidence that pay incentives in family firms where the firm is going to remain with the family still have a positive performance effect. In comparison to the improved performance when the firm will be sold, the positive effect observed if the firms remains with the family is much smaller.

Not surprisingly, if the estate plans are not known and pay incentives are introduced, there is no or even a slightly decreasing growth effect. Thus, if the firm stays with the family, introducing pay incentives has not much of a positive effect, even if the estate plan to keep the firm is known.

7. Use payment incentives if the anticipated time of transfer is near

Furthermore, there is empirical evidence that in firms that are expected to remain in the hands of the family, pay incentives appear to influence family firm performance, when the anticipated date of transfer (e.g. retirement of the CEO) is soon (within five years). Thus, the adoption of pay incentives makes more sense if the transfer is to be soon than in the future.

8. Fit between performance incentives, sensitivity and long-term goals

Jensen and Murphy (1990) find a very low average level of pay performance sensitivity. The authors found that the average dollar change in CEO compensation per 1000 USD change in shareholder wealth is 3.25 USD (= pay performance sensitivity).

In order to avoid inertia and promote strategic renewal an increase in pay performance sensitivity can be a critical issue in family firms.

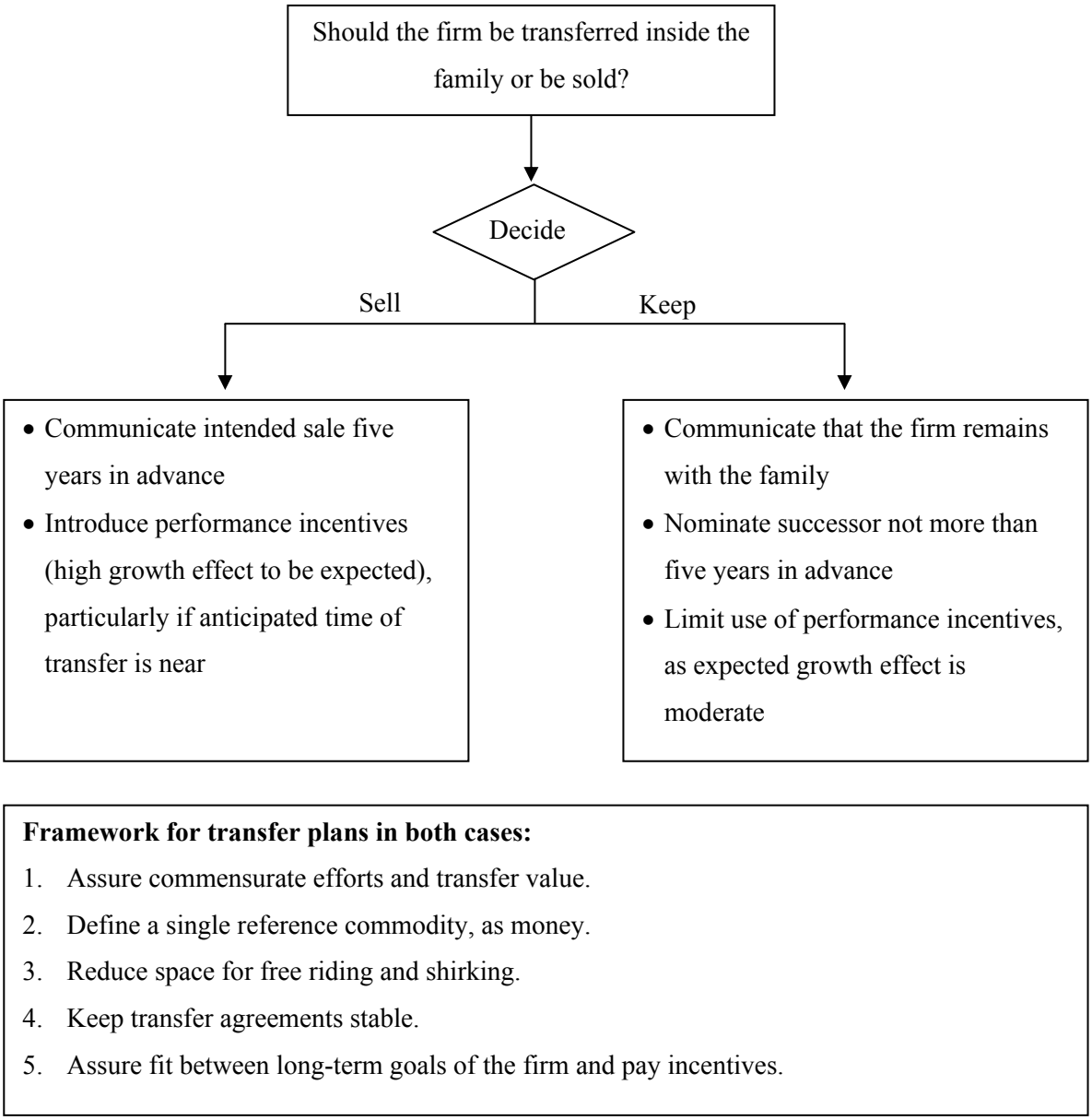
Mc Conaughy and Mishra (1996) find that increasing both long-term and short-term performance sensitivity has beneficial effects on firms with below median performance. However, among higher performance firms, increasing sensitivity has little, or even negative, impact on future performance. In these higher performing firms, increasing short-term pay performance sensitivity results in quick cash payments, which in turn causes CEOs to emphasize short-term performance to the

detriment of long-term performance. The authors find that when higher performance firms choose below optimal levels of sensitivity, their decisions are optimal and consistent with value maximization.

Apparently, firms, and particularly family firms should focus on long-term incentives. Next to this, higher performing firms need to know that increasing sensitivity can have little, or even negative, impact on future performance.

In summary, the above findings suggest how succession, transfer plans and pay incentives should be structured to mitigate the pitfalls of altruism in the family firm. Reducing the agency costs out of altruism is costly and, under some conditions, can be financed via pay incentives. The following Figure 25 should help family members to structure pay incentive programs depending on their business goals.

Figure 25: Structure of transfer plans to reduce agency costs



5.2.7.2 Effective monitoring of the principal

As shown above, there are several reasons for agents to control the principal in the family firm. Minority-majority shareholder conflicts can be avoided, predominance of self-interest of the principal can be weakened, or altruism, which reduces the CEOs ability to effectively monitor the agents (for details refer to chapter 5.2.2.2) can be kept at a reasonable level.

As agents in family firms are often minority shareholders they must be equipped with special competences to monitor the principal effectively.

1. Voting, nonvoting shares and veto rights

Studies on ownership concentration in large publicly quoted firms in industrialized countries show that on average it takes 18.56 percent of book capital to control 20 percent of the votes (La Porta et al., 1999). Countries with high (minority) shareholder protection, such as the United States of America or the United Kingdom attain levels of 20 percent, whereas countries with low shareholder protection such as Sweden or Switzerland reach 12.62 respectively 14.17 percent.

Voting and nonvoting shares are common whenever the legal framework tolerates it, in most cases to keep control within a restricted group of owners. The point made here is that agents must plan a distribution of voting rights that allows them to overrule the principal in case the mentioned problems above arise.

Veto rights can have an effect similar to that of voting rights. However, veto rights hamper fine-tuning of voting power. In addition, people equipped with a veto right can potentially hinder not only an undesired but any development of the company.

2. Adopt internal government mechanisms

Many family business practitioners and researchers propose family meetings as an effective way of mitigating (agency) problems between principals and agents (e.g. Poza, 2004).

As mentioned earlier, self-control problems that altruism and owner-control exacerbate can make it difficult for the family CEO (principal) to choose between

doing what is best for themselves, best for their family and best for the firm. This limits the family principal's ability to make impartial and thus economically rational decisions.

Internal governance mechanisms thus need to monitor the family CEO in order to assure that his decisions are as impartial as possible (Schulze et al., 2002).

Several authors have discussed the benefits of (formal) family agreements (Montemerlo and Ward, 2004) and their role to protect and preserve a family business. A family agreement regulates the relationship of a family with its business. For example, it answers questions concerning what rules would be applied for next generation family members, whether the family was committed to next-generation business involvement and ownership, or how the family would make such decisions, whether one should rely on the family's past experiences or set up clear and (even legally) binding rules, and so forth. Without a family agreement several of these questions could pull the family apart. In addition, these values have the positive effect of providing the family with a decision making framework, which can help achieve consistency and a maximum of impartiality in the decision making in private, family and business affairs.

3. Adopt external government mechanisms

Mitigating the status of inertia is hardly achievable by the family itself. Family agents can minimize the agency threats as described above by investing in the types of government mechanisms that widely-held firms use to discipline management and settle conflicts of interest among stakeholders.

Inertia can be broken up by people outside the family and company. Only a person external to the company is compromised neither by altruism (as the principal) nor anticipated inheritance (as the agents) and can take professional independent action in the sole interest of the company. In line with the above arguments, Kwak (2003) argues that the dangers of excessive family control and ownership can be held in check by good corporate governance. Independent directors, for example, can reassure investors and help families protect from themselves (Kwak, 2003). These measures include strong boards of directors, carefully designed decision-making

hierarchies and the adoption of incentive structures that encourage mutual monitoring among owner-managers (Schulze et al., 2000).

However, external governance does not necessarily curb these problems because privately held owner-managed firms often face failing capital and labor markets. If capital markets fail, the market for corporate control fails as well. Similarly, if labor markets are biased by the preference for family members this market fails. Consequently, many family firms can not take advantage of the external resources and knowledge that would be accessible in functioning external factor markets.

In addition, installing internal and external monitoring is not a universal remedy. Gomez-Mejia (2001) found that for family CEOs disciplining managers (through dismissal) when monitoring was low enhanced organizational survival, but did not do so when monitoring was high.

In sum, in family firms with low levels of monitoring, as in most family firms (Frey et al., 2004), internal and external monitoring can insure that neither party becomes excessively dominant and hinders the development of the other party or even the development of the whole firm.

5.2.8 Conclusion and limitations

This chapter empirically supports some of the anecdotal evidence brought forward in earlier family business literature. Prokesch (1991), for example, referred to the case of the Marriott Corporation, one of the best managed hotel and food services companies in the world. Willard Marriott Jr., chairman of the board and son of the corporation's founders, boasts that Marriott's endurance and success as a closely held family firm can be attributed in large measure to the "easing out of unproductive relatives". Apparently, Marriott was plagued with agency conflicts that could be resolved by effective monitoring.

The agency problems found in family firms can threaten the firm's ability to compete by engendering strategic and financial inertia, by misalignment of incentives, by ineffective governance and by ineffective information processing. However, altruism does not necessarily weaken leadership in family firms, nor must

it cause all family agents to become spoiled. As such, altruism is both a blessing and a curse because it can make even well intended founder / agents into 'bad agents', since it is their attempt to enhance family member welfare that increases the threats of hold up and moral hazard such as free riding or shirking (Schulze et al., 2002). Interestingly, while these actions are not selfish in the conventional sense-since they require that founders / managers sacrifice their own welfare for the benefit of others-the discussion helps to understand the insidious nature of the relationship between altruism and self-interest, and why it makes formal governance necessary.

Finally, the subchapters above laid the foundations for a better understanding of the subsequent chapters, in which the financial performance of family and nonfamily firms will be analyzed in depth.

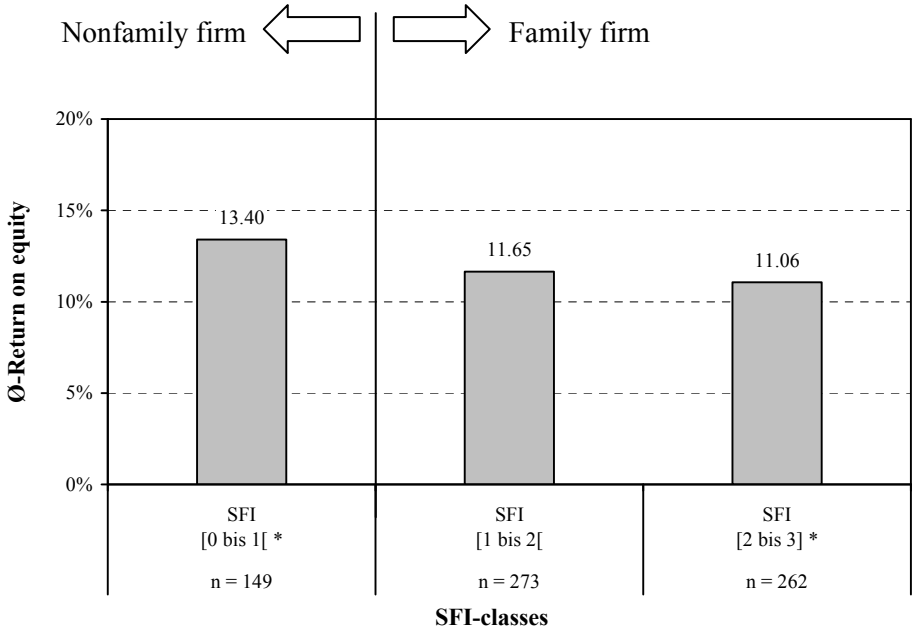
5.3 Family influence and financial performance

So far, the influence of family participation on the performance of a firm has been a moot point. Some arguments (like agency costs) played partly in favor of the family firm; some arguments, as for example managerial entrenchment, played against it. The answer about a net effect remained open.

Therefore, an analysis of the effect of family influence (as defined by SFI) on the financial performance (measured by ROE) seems appropriate (Figure 26).

Figure 26: Return on equity and three SFI classes

Data source: Sample Nr. 1, Table 1. The analysis includes both privately held family and nonfamily firms. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



Significant mean differences between SFI [0 bis 1[and SFI [2 bis 3].

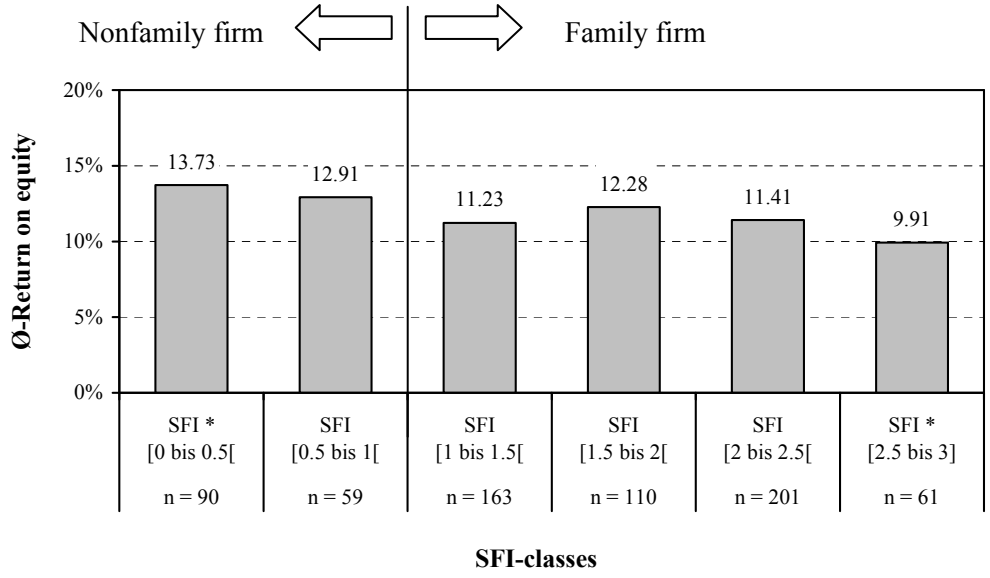
There seems to be something like a negative effect of increasing family influence on the return on equity of a family firm, as the mean ROEs are decreasing from no / low SFI to high SFI. The differences between the low / no SFI class and the middle SFI class showed no significant differences. However, the ROEs of the high SFI class were significantly lower than those of the no / low SFI class, when measured with Mann-Whitney-U-test.

Thus, "more family" does not mean higher, but rather lower performance. The presumed negative relation between SFI and ROE however backs the argument for the existence of an entrenchment effect of additional family influence in the family firm. This means that at low levels of family influence, further family influence can have a performance increasing effect. At higher levels however, further family influence has a less positive or even a negative effect on a firm's performance.

Figure 26 above does not deliver sufficiently detailed information on the position of this hypothesized turning point, above which increased family influence is expected to be harmful to the returns. In order to get a more detailed picture, a finer scale for SFI was applied, with six instead of three family influence levels.

Figure 27: Return on equity and six SFI classes

Data source: Sample Nr. 1, Table 1. SFI: Substantial Family Influence. The analysis includes both privately held family and nonfamily firms. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



* = Mann-Whitney-U-Test: Significant mean difference between SFI [0 bis 0.5[and SFI [2.5 bis 3].

The above-mentioned negative effect of increasing family influence on ROE can be outlined more precisely by applying a more distinctive view on family influence. Although the only ROE differences that proved to be significant were the ones of the lowest and the highest SFI class, there is no clear-cut negative trend from low to high SFI levels anymore (compare Figure 26 and Figure 27).

For family firms (with SFI $\geq$ 1), limited family influence (1.5 $\leq$ SFI < 2) seems to outperform higher levels of family influence. Even if the differences between the SFI classes are small and not significant the group sizes however large, they indicate that further family influence above 2 SFI harms the return on equity to be expected.

These findings could be interpreted as a lack of monitoring at the lower end (SFI 1 to 1.5) and entrenchment through consumption of private benefits (e.g. perks) at the upper end (SFI ≥ 2.5)

This finding makes allusion to the "combined argument theory" (Morck et al., 1988) who finds that the dominance of interest convergence (positive performance effect) and entrenchment theory (negative performance effect) depends on the shareholding concentration. Morck et al. (1988) find a turning point of a about 25% shareholder concentration. Mc Connell and Servaes (1990) find a maximal enterprise value with an ownership concentration of 40 to 50%.

Similarly, Shleifer and Vishny (1997) at the lower end (up to ca. 20% managerial ownership), find an increasing company value with growing managerial ownership, supporting the Jensen and Meckling (1976) model. Above this level, further managerial ownership reduces the efficacy of the corporate governance mechanisms, which constrain inept or faithless managers. Furthermore, Wruck (1989) observes differences in company value below 5% and above 25% ownership concentration.

Similarly, Tosi and Gomez-Mejia, 1994 and Gomez-Mejia et al. (2001) find that marginal returns to monitoring are a decreasing function of the level of monitoring. Tosi and Gomez-Mejia (1994) posit that increased (family) CEO monitoring was associated with improved firm performance when monitoring was low but not when monitoring was high.

The above empirical data therefore extends the combined argument theory (Morck et al., 1988), by extending it to altering family influence that goes beyond the measurement of ownership concentration.

The above findings implicitly raise two central questions: first of all, should family firms change their organizational status to nonfamily firms in order to increase profitability, and second, should family firms with strong family influence reduce their family influence at lower levels in order to reap the rewards of higher profitability? These questions will be discussed in chapter 5.7 that focuses on the life cycle of family firms.

5.4 Family ownership dispersion and financial performance

According to Jensen and Meckling (1976) shareholders normally have incentives to expropriate bondholder wealth by investing in risky, high-return projects (asset substitution). However, when Anderson et al. (2003a) test whether the presence of large undiversified shareholders mitigates diversified equity claimants' incentive to expropriate bondholder wealth (i.e. the agency cost of debt), they find reduced agency costs of debt. Because these shareholders typically have undiversified portfolios, they are rather concerned with firm and family reputation. As they often desire to pass the firm on to their descendants, they represent a unique class of shareholders, possessing the voice and the power to force the firm to meet above needs. In that sense, family firms do not really fit into the Jensen and Meckling model of the firm.

Numerous studies have analyzed the relationship of firm value, return and insider ownership. From the diversity of the results from theoretical and empirical studies (e.g. Jensen and Meckling, 1976; Demsetz and Lehn, 1985; Stulz, 1988; Morck et al., 1988; Mc Connell and Servaes, 1990) a clear conclusion as to whether and in what logic performance and managerial ownership levels are interrelated is impossible.

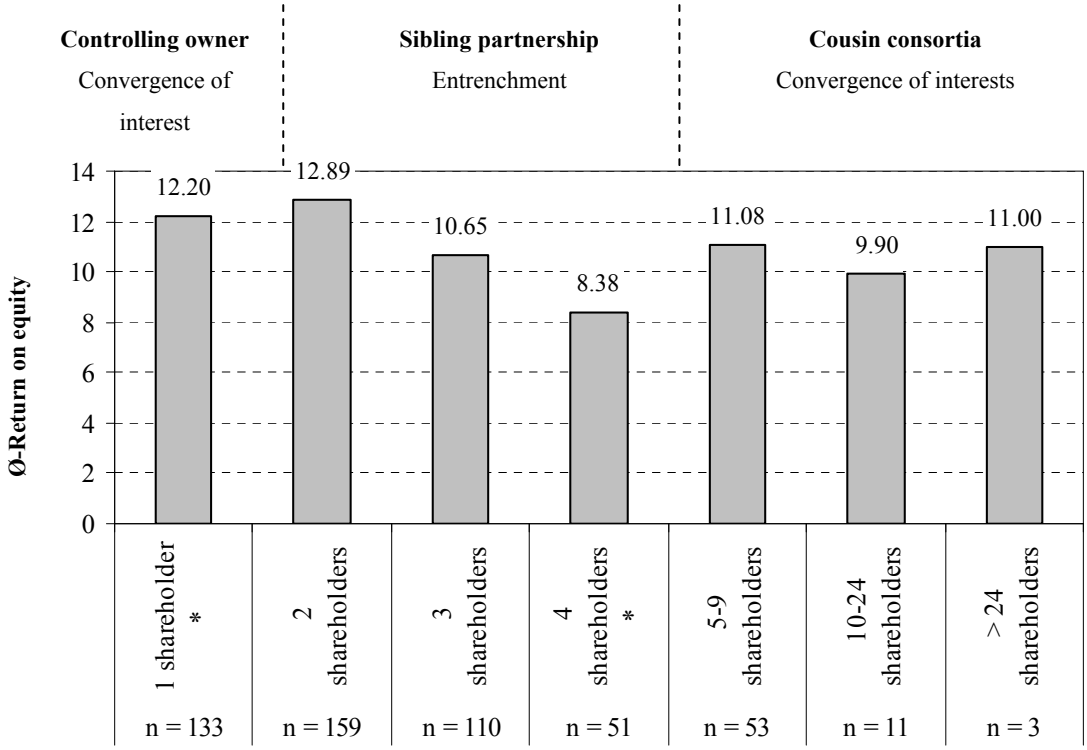
Mc Conaughy et al. (2000) present evidence that family control is associated with higher firm performance. But when they split up family control of a firm into different sub-factors, such as ownership concentration and monitoring, they find that the positive effect of family control on firm performance is *not* due to managerial ownership. Likewise, Cho (1998) discovers that managerial ownership does not explain firm characteristics such as investment and value. Too, the results presented by Mazzola and Marchisio (2002) show that ownership does not appear to affect a company's capacity to create value. Mahérault (2000) points out that this may reflect market concerns regarding insider entrenchment, given that the market for corporate control is less effective for family firms, where insiders have control over a majority of shares (Astrachan and Mc Conaughy, 2001).

Anderson et al. (2003a), who specifically focus on publicly quoted family firms, find a cut off level of 12% family equity ownership for impact. Above this turning point, more family ownership has no further lowering impact on the costs of debt financing. This connotes that further managerial ownership reduces the efficacy of the corporate governance mechanisms, already at a family ownership level of as low as 12%.

The subsequent analysis therefore investigates the existence of interest convergence and entrenchment effects in privately owned family firms depending on family ownership dispersion. Consistent with Morck et al. (1988) it is hypothesized that, especially low and especially high shareholder dispersion result in interest convergence. At medium shareholder dispersion however, family firms are expected to suffer from insider entrenchment. For family firms this implies that controlling owners and cousin consortia experience higher returns, sibling partnerships lower ones (Figure 28).

Figure 28: Return on equity and number of shareholders of family firms

Data source: Sample Nr. 1, Table 1. The analysis includes only privately held family firms. Significant difference between 1 and 4 shareholders. Statistical test applied: T-test. Significance level: 0.05.



* significant difference between 1 shareholder and 4 shareholders

The findings above confirm the results of Morck et al. (1988), Mc Connell and Servaes (1990) and Wruck (1989) who find nonlinear relations between ROE and shareholder concentration. In this, the analysis provides evidence for the combined argument theory mentioned above.

The pattern of return on equity displayed in Figure 28 can not be explained with the differing leverage levels. As outlined in Figure 7 sibling partnerships with 2 to 4 shareholders display higher leverage levels.

The interpretation rather needs to respect the characteristics of privately held family firms. The aforementioned discussion of agency issues help understand the differences displayed in Figure 28.

As outlined in chapter 5.2.2.2, controlling owners display high degrees of incentive alignment. Agency problems induced by altruism are low, as none of the shareholders can be expropriated. In addition, in fully controlled family firms profit discipline needs to be larger as the profitability of these firms needs to feed the family and its employees. Therefore, profit discipline is of crucial importance for this type of firm.

Sibling partnerships, however, are more concerned about their own welfare and that of their immediate families than they are about each other's welfare. Schulze et al. (2003b) argue that firms in the status of sibling partnership display an increased concern for their own children and the added pressure from outside family directors (and in-laws) to sustain or enhance the dividend pay out. In turn this can engender misalignment of interest, inertia, ineffective governance and ineffective information processing, as outlined in chapter 5.2.6, which are expected to lower the profitability of the firm.

Once a firm enters the stage of cousin consortium, ownership has become more dispersed. In turn, this reduces the agency costs of expropriation by majority shareholders and mitigates the double moral hazard problem experienced in the two preceding stages (for details on double moral hazard refer to chapter 5.2.2.1). In addition, due to increased liquidity of the market for these shares, exit costs of underperforming family members are lowered. If a family firm has arrived at this stage, it needs to align the interests of the family members to secure the long-term survival of the business, on which, at this stage, many family members are depending. In turn, family firms are found to snap up profitable entrepreneurial initiatives.

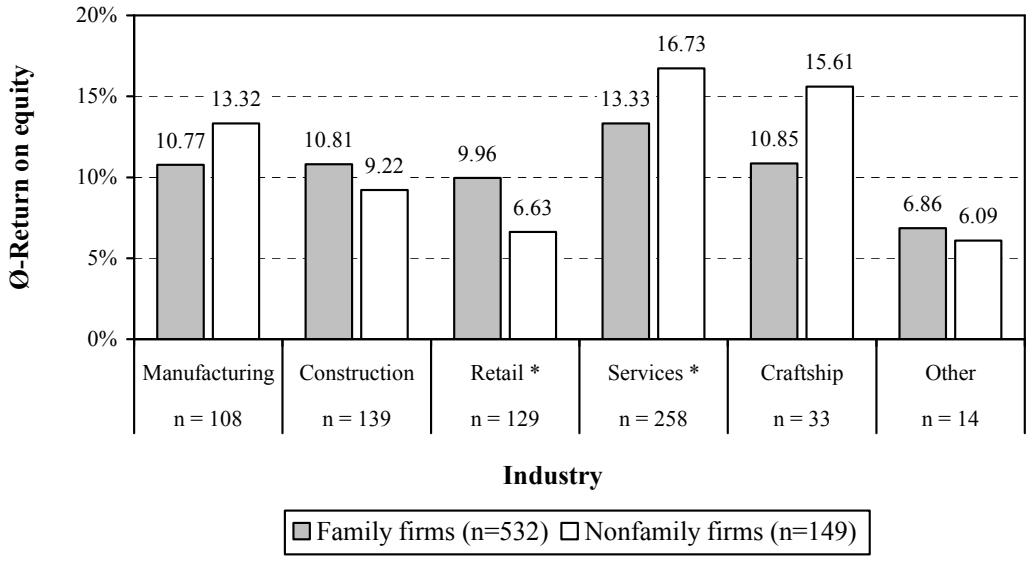
In 1964 Donnelley generally questioned the sharpness of profit discipline of family managers. Similarly De Visscher (2004) finds that many families are found to be content to run a good business without ambitious growth targets and the will to bring in outside capital and control. The above empirical results endorse the findings of Donnelley (1964) and De Visscher (2004) by stating that profit discipline alters with shareholder dispersion in family firms.

5.5 Industry and financial performance

Performance variations between different industries are well known in theory and practice, and are closely followed by commercial banks to benchmark individual firm performance (e.g. Credit Suisse, 2003). Interestingly, in certain industries family firms are significantly outperforming nonfamily firms (Figure 29).

Figure 29: Return on equity and industry

Data source: Sample Nr. 1, Table 1. The analysis includes privately held family and nonfamily firms. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



* Significant mean difference between family firms and nonfamily firms.

A significant ROE difference was found for the service and retail sector. The results for the service sector are difficult to interpret because the firms' activities in this class are very heterogeneous.

In the retail sector however, family firms are able to use their commitment and identification with the firm to their advantage. This may be due to the fact that one of the main success factors in retailing is attributed to the close, personal contact with the client (Pressey and Mathews, 1997). There is at least anecdotal evidence to this. Some of the biggest retail companies in the world such as Wal-Mart in North

America, Carrefour in Europe, are family controlled. Harrods in England, is controlled by the al Fayed family; the Loeb stores in Switzerland are controlled by the family carrying the same name. An additional example from Germany is Aldi, one of the largest and most successful supermarket chains owned and run by two brothers.

Families have also managed to become very successful in industries where identification with the family and the values it stands for are critical success factors. In private banking the Swiss families Pictet, Vontobel and Lombard and Odier, just as the French Rothschild family, have all managed to run very successful companies for generations. In this industry, long experience, personal and financial commitment liability play in favor of family firms.

Not surprisingly, most of the world's elderly firms are in very old-economy industries such as agriculture, forestry, hospitality, building and mining (Economist, 2004). These industries require long-term investment horizons to become a successful player. These long-term oriented investment opportunities correspond to the independence and survival goal of family firms. Furthermore, the availability of capital without threat of liquidating offers unique strategic opportunities with long development time (Aronoff and Ward, 1991; Kets de Vries, 1996).

In contrast to their family counterparts, nonfamily managers are most interested in firm performance during the period for which they are responsible and paid (Walsh and Seward, 1990). Similarly, Bernstein (1996) finds that the assessment of personal risk in the business context is influenced by the time horizon a manager has; nonfamily executives with an investment horizon of about five years (Booz Allen Hamilton, 2005) are unqualified to tackle investment opportunities that take years to show success. For this reason, altering, e.g. extending, the time horizon to one or even more future generations shifts the investment preferences and opportunities of family firms. Cyclical industries with widely fluctuating prices, unattractive to nonfamily investors, can be an interesting playing field for family firms, as are trading businesses such as scrap, commodities or shipping commitments (Aronoff and Ward, 1991). Often, these businesses are considered dirty, out of favor, to be avoided. They represent, however, unique opportunities for family firms presenting a

singular fit between family unique resources (Sirmon and Hitt, 2003) like patient capital and the specific requirements of the investment.

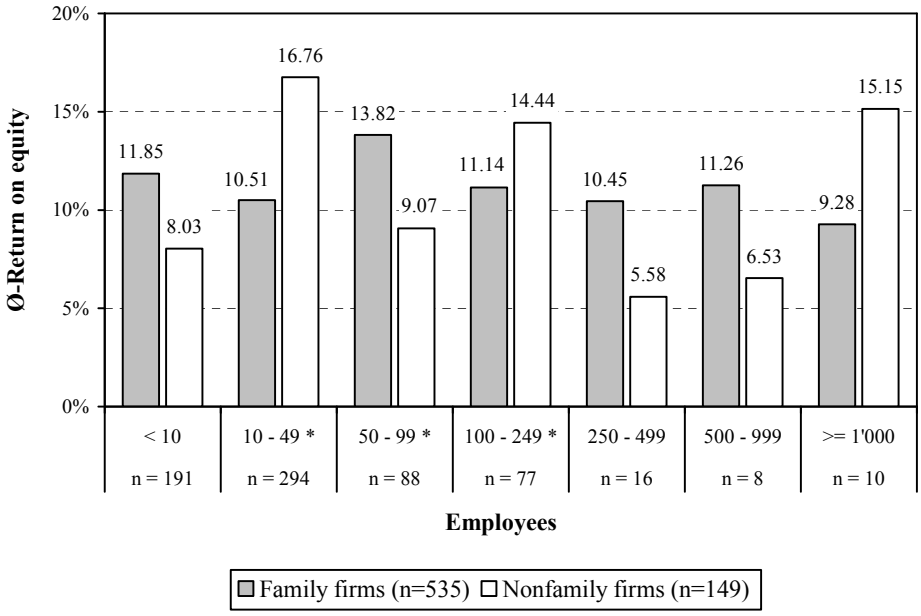
5.6 Size and financial performance

Size and the return of companies is a field in management sciences that has been widely discussed. Some theoretical studies predict a negative correlation between firm size and performance, due to the congruency of interests and motivation between the interests of the management and those of pure ownership (e.g. Mueller, 1987). Others mention the advantages of large companies regarding access to financial markets, which results in decreasing costs of capital with increasing firm size (e.g. Van Auken and Holman, 1995). Empirical studies, however, can not resolve the confusion: Hall and Weiss (1967) and Marcus (1969) find a positive correlation between firm size and returns, while Samuels and Smith (1968) and Chan et al. (1983) find a negative one.

This study goes one step further as it analyzes firm size and return on equity of family and nonfamily firms. To assure international comparability of the results the study uses the number of employees and not turnover to form the size classes (Figure 30).

Figure 30: Return on equity and firm size

Data source: Sample Nr. 1, Table 1. The analysis includes privately held family and nonfamily firms. Statistical test applied: Mann-Whitney-U-test. Significance level: 0.05.



* = Significant mean difference between family firms and nonfamily firms.

Figure 30 above displays significant differences in ROE between family firms and nonfamily firms at three different levels of size: family firms are outperforming significantly the nonfamily firms in the 50-99 employee class, and perform significantly less in the 10-49 and the 100-249 employee classes.

The analysis challenges the popular belief that smaller firms are generally more successful as family firms.

5.6.1 Family firms outperforming nonfamily firms

In the size class of 50-99 employees family firms are outperforming the nonfamily firms. The investigation also controlled for further firm characteristics via a pair wise comparison of different firm characteristics, as displayed in Table 26 and Table 27, Appendix. The analysis showed that family firms in this size class, besides variables that define a family firm (e.g. number of family members in management

and supervisory board), are older and have fewer shareholders than nonfamily firms. No significant differences were found for industry. This list is however not exhaustive.

The analysis points out that the differing family influence itself is the main element to explain the performance differences in the size range of 50-99 employees. The aligned interests of owners and managers call for less monitoring, which, in this size class, seems to make family firms particularly efficient due to reduced agency costs (Fama and Jensen, 1983). It can be assumed that in a firm employing 50-99 employees, internal monitoring (e.g. executive pay, performance of the managers) works better than in a larger firm, where expensive and complex monitoring systems need to be installed. Further evidence of a lean cost structure derives from the observation that family firms tend to have smaller management and supervisory boards, if they have a supervisory board at all (Frey et al., 2004). This stands in contrast to the administrative and governance costs incurred by family firms of the same size class.

This view is consistent with the findings of Schulze et al. (2001) who posit that firms employing internal monitoring performed significantly better than those firms without such monitoring. Apparently, despite the lean governance structures of this type of firm, internal monitoring seems to work well and needs to be considered as strength rather than as weakness for this size class of family firms.

5.6.2 Family firms underperforming nonfamily firms

Figure 30 reveals that family firms with 10-49 employees are less well performing than nonfamily firms. This performance evaluation considered several variables. In comparison to their nonfamily counterparts family firms within this size class proved to be significantly older, to have fewer shareholders and to have fewer and smaller supervisory boards. In addition, the ownership, management and supervisory board generations active in these family firms were older compared to their nonfamily counterparts (for statistical details refer to Table 26 and Table 27, Appendix). This

additional investigation beyond family firm specific characteristics only revealed dissimilarities in the way these firms are controlled.

On the average, the family control has been closely maintained for 46 years. The family firms were seldom advised by an (at least partly) independent supervisory board, did not engage qualified nonfamily managers nor open equity to nonfamily investors to foster growth. In this sense, the family stands in its own way-sacrificing better financial performance in its unwillingness to share at least some of the control to increase the profitability of the firm. Thus, family firms in the size class of 10-49 employees are particularly susceptible to inertia, ineffective governance, misalignment of interests and ineffective information processing, as discussed in chapter 5.2.6.

Figure 30 also displays a significantly lower ROE for family firms with 100-249 employees. Besides the variables defining family influence, the family firms in this size class differ significantly from the nonfamily firms only in the number of shareholders (for statistical details refer to Table 26 and Table 27, Appendix). This points to differences in the access to external resources.

As the firms in this size class have at some point decided to grow beyond the limits of a small firm, access to external resources becomes crucial (Klein, 2001). Opening capital to nonfamily investors makes sense if financial resources are too limited for the future growth of the firm. Considerations about risk diversification can lead to introducing a shareholder structure that allots risk on more shoulders than those of the family members. In addition, a larger number of shareholders also increases the liquidity of a market for corporate control of this firm. In turn, this reduces exit costs for uncommitted family members or for those whose involvement in the family firm might become a liability.

The perception of resources is however not limited to capital, but includes the human capital and management techniques that are required to run a larger business. Many families find it increasingly difficult to recruit enough qualified family members to manage their firms. In the size class of 100-249 employees these resources become of crucial importance. Professionally managing a firm of this size

requires for example a financial officer and further operating experts who can hardly all be found within the family, given that the average size of families is decreasing in Western hemisphere countries (Garrett et al., 2001) and birth rates are sinking (Goldstein et al., 2001).

A further explanation for the performance differences comes from the observation that family firms in this size class can often rely on well-running and sufficiently stable businesses that assure a reasonable income for the family members. Under these circumstances, an increase in return and financial income becomes even less important, as the members' salaries are considered to be assured by the ongoing business. Further goals, as social image, industry tradition and loyalty to long time employees gain importance. Consequently, efficiency and profit discipline of the firm suffers.

The aforementioned advantages of smaller family firms of 50-99 employees (incentive alignment of managers and owners, less formal and costly internal and external monitoring and the limited number of management and supervisory positions) can become disadvantages with the increasing complexity of the growing business. Therefore, opening up the firm to external resources, both financial and nonfinancial, is crucial for family firms (Kwak, 2003), especially in the size class of 100 to 249 employees.

5.7 Family influence and the life cycle of the firm

The above findings together with the conclusions on performance differences between family and nonfamily firms and differing family influence levels (refer to chapter 5.1 and 5.3) draw an unanimous picture regarding the question whether family influence generally hampers or fosters profitability of firms.

The empirical findings on family influence and profitability of firms as displayed in Figure 26 and Figure 27, chapter 5.3, raise the central question whether family firms should in general switch to the organizational form of the nonfamily firm in order to increase profitability?

The answer to this question is yes. The empirical data on family influence and performance provides strong evidence that privately held family firms display lower returns on equity than nonfamily firms. However, the change from the family to the nonfamily form of organization bears costs: nonmonetary goals as independence and control would need to step back for an increased profit discipline. Management structures would potentially have to be professionalized and underperforming family members would have to leave the firm. Agency conflicts would become more costly as the incentives of nonfamily managers are not aligned with the interests of the family anymore. The identification of the family with its firm might suffer as the family has to give away control over the firm. In addition, in order to increase return on equity the financial leverage and therefore also control risk might increase. Hence, many of these performance increasing measures need to be weighed against the losses in valuable goals of the family. Consequently, within the limits of the comparison family influence and firm performance, the family firm would have to change the organizational form. Considering the extended goal sets of family firms, the answer to this question can not be generalized - it depends on the importance and the attainment of the nonfinancial goals predominant in the individual family firm.

The empirical findings on family influence and profitability of firms as displayed Figure 26 and Figure 27, chapter 5.3, raise one further question. Should firms with high family influence reduce family influence in order to overcome entrenchment effects. The empirical finding of an entrenchment effect of family influence supports

the combined argument literature by Morck et al. (1988), Mc Connell and Servaes, (1990), Shleifer and Vishny (1997), Wruck (1989) Tosi and Gomez-Mejia (1994) and Gomez-Mejia et al. (2001). This literature states that high ownership control reduces firm performance.

With the empirical data available in this study, it would be over-interpreted to demand a reduction in family influence from all types of fully family controlled family firms, although Jaszkiewicz (2005) provides similar results. For example, in very small family enterprises, with less than 10 employees, with husband, wife and may be even children working in the enterprise, the presence of the family and the resources the family members provide can be a conditio sine qua non for the establishment but also for the survival of the firm.

Apparently, whether family influence is good or bad depends not only on the level of family influence. As shown in chapters 5.6 and 5.7 whether family influence is a curse or a blessing also depends on firm size and industry.

This chapter proposes that family firms have to reinvent themselves through the adaptation of family influence throughout their life cycle. The investigation refers to the theory of the life cycle of the firm (Schumpeter, 1912).

For example, studies on the significance and structure of family firms in different countries (USA: Astrachan and Shanker, 2003; Germany: Klein, 2000; Netherlands: Flören, 1998; Switzerland: Frey et al., 2004) reveal that most firms are founded as family firms, with one dominant person. In most cases, the owner and manager is one and the same, which explains the term owner-manager (Fueglistaller et al., 2004). Thus the life cycle of most firms starts in the form of a family enterprise. Under the restriction of limited financial and personal resources, the family is often the incubator and enabler of new business ideas. Hence family influence needs to be considered as beneficial to the success of these ventures.

As mentioned above, in larger size classes (e.g. 100 to 249 employees) the favorable effects of family influence as incentive alignment of managers and owners, less formal and costly internal and external monitoring and limited number of management and supervisory positions, can become disadvantages with the increasing complexity and resource requirements of the growing business. Hence,

family influence can be expected to be particularly prolific earlier in the development of the firm and when the firm is smaller and the inherent strengths of family firms can deploy a performance effects.

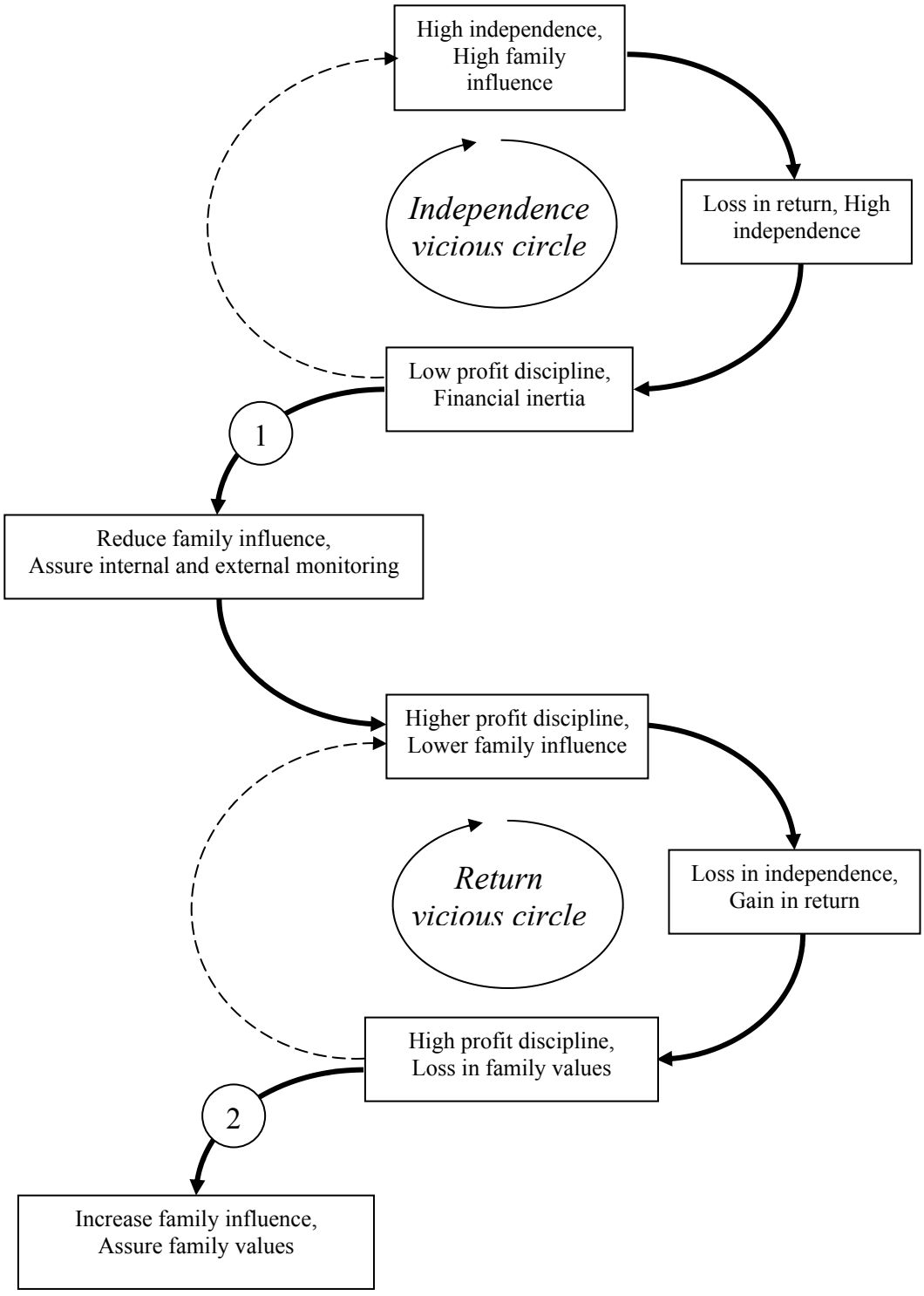
These findings give empirical evidence to Muehlebach's (2004) qualitative study on the opportunities and threats family firms are facing. Muehlebach (2004) underlines the importance of the management of family dynamics in order to make use of advantages of family involvement. For example, Muehlebach (2004) points out that family firms need to manage their familiness (as a proxy for family influence) dynamically depending on the inherent strengths of the family (firm) and the opportunities on the markets. According to Muehlebach (2004) family firms need either to increase (consolidate) or to reduce (open) family influence within management, the government board and ownership. By taking a resource based view Muehlebach (2004) postulates that a firm should open or consolidate its influence depending on the resource requirements on the product markets.

The model presented in this text is complementary to the one of Muehlebach (2004). It provides empirical evidence for the necessity for altering family influence based on the life cycle theory of the firm (Schumpeter, 1912).

Whereas the strengths of a family can be very well utilized at one moment in the life cycle of the firm, at another stage, the same strengths can become harmful. Thus, family influence is not generally good or bad but needs to be adapted dynamically throughout the life cycle of a firm.

Recognizing the pitfalls and opportunities of family influence in the different stages of development of the firm is thus of crucial importance for the successful management of a family firm. Too much or too little family influence can be harmful to the firm and induce different types of vicious circles. This is graphically displayed in below Figure 31.

Figure 31: Vicious circles and the life cycle of the family firm



As outlined in Figure 31, one of the critical issues regarding the life cycle of the family firm is the dynamic adaptation of family influence. Figure 31 displays two main pitfalls, shown as two vicious circles: the independence vicious circle and the return vicious circle.

The independence vicious circle is provoked by excessive family influence. Excessive family control, represented for example by a lack of internal and external monitoring, incompetent family managers, agency problems etc., can induce financial inertia, as described in chapter 5.2.6.2. Reducing family influence to overcome the above outlined problems conflicts with the independence goal. Even if families have the *ability* to deliberately renew and reduce ownership and management and supervisory board positions, their *will* to do so is often limited. Chapter 4.5 on loss aversion of family firms provided evidence that in family firms a loss in control and independence looms larger than a comparable loss in return. Thus, the higher value put on independence (endowment effect) than on return makes it difficult to family managers to give up at least some independence. If this step is not taken, however, family firms risk to get trapped in the independence vicious circle as displayed in above Figure 31.

Thus, high independence represented by high family influence is not generally a blessing for family firms. For example, smaller firms tend to depend on few key persons embodying critical explicit and implicit knowledge for the firm. As mentioned earlier, a strong family leader can be an asset for family firms when they are founded. But when it comes the time to pass the firm over to the next generation or to turning the company around, the same person might become a liability. In such a situation, reducing family influence and implementing internal and external monitoring mechanisms through at least partially independent supervisory boards, ownership and management teams can help break out of this vicious circle (represented by (1) in Figure 31). As Kwark (2003) notes, good corporate governance can help companies minimize the risks of family ownership while allowing them to reap the rewards.

Example for the independence vicious circle: Julius Baer Group

Bank Julius Baer, the founding company of the Julius Baer Group in Zurich, traces its origins to 1890. Since the time of Julius Baer, the Baer family has influenced the development, reputation and corporate culture of the Julius Baer Group.

The group provides asset management and investment counseling services as well as investment funds for private and institutional investors, and securities and foreign exchange trading services.

Until the beginning of 2005 the Baer family controlled 52% of the capital of the bank. With increasing size and complexity of the family (up to 100 members) and the business (151 billion CHF under management) and an underperforming share quote the pressure on the active family members rose to adjust the family participation in the firm's management and ownership. *At this point the family firm seemed to be trapped in the independence vicious circle.*

In spring 2005 certain family members sought to leave the firm and were paid out through public sale of family shares. And on September 2005 the family firm announced it had acquired the private banking arm of UBS, a large nonfamily bank. With this deal the family had to hand over 20% of its equity to UBS, while accepting that large parts of Julius Baer's board of directors were staffed with UBS people. With this step the family firm managed its way out of the independence vicious circle.

At other stages in their life cycle, family firms face another pitfall, in above Figure 31 called the return vicious circle. For example, family firms are experienced to consolidate (increase) their influence if in the eyes of the family members the implemented profit discipline excessively harms family values such as independence, the survival of the firm, the increase in family wealth etc. (represented by (2) in Figure 31). When asked about their views on private equity funding, family firms say that being a public firm or being fully controlled by a purely financially motivated investor would be incompatible with their view of doing business, which takes into account non-financial and long-term goals (Achleitner and Poech, 2004). In turn, family influence is not always a curse. As

(short-term) return is only one facet of the goal set of family firms, it can make sense to reinforce family influence in order to assure a long-term oriented, unique strategy that takes into account the other facets of that goal set of families.

Example for the return vicious circle: Vontobel Group

Just as the Julius Baer Group, the Vontobel Group is one of the main private banking and asset management firms in Switzerland that is till privately owned with 52.9 billion CHF under management. The roots of Vontobel trace back to 1924. When in 1972, Mr. Vontobel, the grandson of the founder joined the firm, the bank had still less than 100 employees. During his active life as partner the firm grew rapidly and in the 1990ies employed almost 900 persons. With his retirement Mr. Vontobel handed over the control to his son and a professional nonfamily management team.

In the late 1990ies the nonfamily managers diversified the activity of the bank, heavily invested in internet banking technology and got engaged in investment banking. But when the dotcom bubble burst the bank had to face considerable financial problems. Unfortunately the son of Mr. Vontobel did not want to take over the lead of the bank and retired. *At this point the family seemed to be trapped in the return vicious circle.*

At the age of 85 Mr. Vontobel decided to return to the bank and to lead it as an active president of the board. Today he strives to reestablish and preserve his values and the ones of his family and to pass them over to his employees and his grand children.

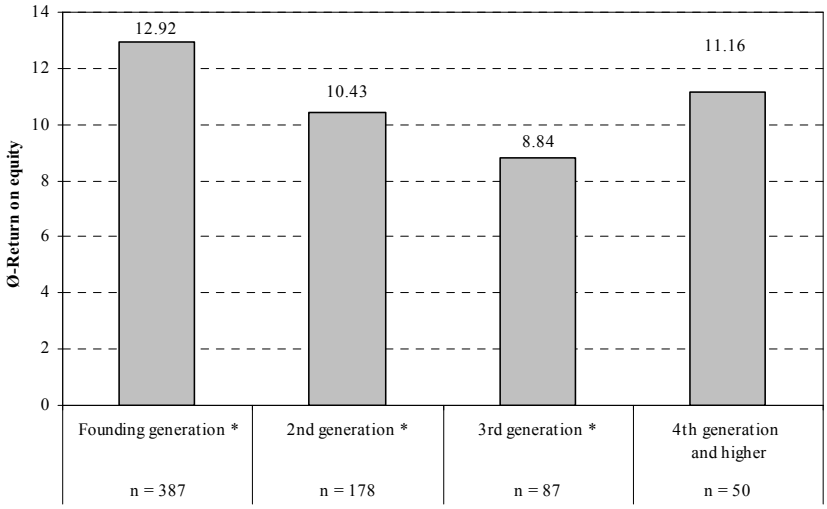
In sum, the considerations above made clear that family influence is not generally good or bad. Family influence needs to be managed dynamically throughout the life cycle of a firm in order to avoid the pitfalls of the independence or return vicious circles. Therefore, it is helpful for practitioners to establish a common understanding in their families as to where they stand in the life cycle model in Figure 31. In turn, this facilitates taking preventive actions to assure the legacy of the firm as a family firm.

5.8 Generation and financial performance

Interestingly, the analysis reveals that there are significant differences in the profitability of the family firm depending on the generation that is leading and owning the firm. Similar performance differences can be detected when analyzing the generation active in ownership, in the management and in the supervisory board (Figure 32). For the full statistical details refer to Table 28, Appendix.

Figure 32: Return on equity and ownership generation

Data source: Sample Nr. 1, Table 1. The analysis is limited to privately held family firms only. In percent. Statistical test applied: T-test. Significance level: 0.05.



* = Significant mean ROE difference between:
Founding generation and 2nd generation; Founding generation and 3rd generation.

Apparently, the founding generation is the most successful generation, followed by a decline throughout the next two generations. Literature calls this phenomenon the Buddenbrooks syndrome, an allusion to the 1901 published novel by Thomas Mann on the decline of a merchant family in Germany.

The following subchapters will review existing and new explanations for above findings.

5.8.1 Survival rates of firms

The findings above make allusion to the survival rates of family firms. Aronoff (2001) reports that 30% of family businesses make it to the second generation, 10-15% make it to the third and 3-5% make it to the fourth generation. These numbers were replicated globally and can not be questioned. Nevertheless the figures should not be over interpreted. Many family business consultants judge these survival rates as meager, particularly those of the third generation. They imply, suggest or say outright that the survival rates from one generation to the next indicates a problematic economic situation (Aronoff, 2001). But how do we know whether this rate is bad, good or just normal?

One possible way of judging is comparing it with the survival rates of publicly quotes firms. When in 1996 the Dow Jones Industrial Average (DJIA) celebrated its 100th anniversary only one single of the 30 companies originally included remained on the list. This firm is General Electric. Applying the 30% survival rate per generation over the four generations within those one hundred years one would predict that one firm would remain. Hence, the survival rates of the companies comprising the DJIA and of family businesses turn out to be the same (Aronoff, 2001). Next to the absolute level of survival rates, it seems important to notice that the rates remain constant at a level of 30% over the generations. This does not support the finding that one generation is the least successful.

Therefore, the declining return with continuing generations, as displayed Figure 32, can not be explained with survival rates.

5.8.2 Entwined finances and accounting

As shown in chapter 4.3.4 the debt levels of family firms did not change significantly from generation to generation. However, privately held family firms are known to have intertwined finances. This is seen in the vanishing boundaries between debt and shareholder capital, as outlined in chapter 4.3.2. As a consequence, financial ratios such as return on equity can be flawed. If earnings are retained in the firm for fiscal or other reasons and dividend payments are not part of the financial

policy of the firm, family firms automatically display lower returns on equity with continuing generations (Levin and Travis, 1987). This supports the finding by Jaskiewicz et al. (2005) that family firms have high levels of earning retention and below average dividend payment.

5.8.3 Profit discipline and financial slack

The present study delivers empirical evidence to the anecdote that descendant controlled firms, in particular third generation firms, are less profitable than founder controlled firms. These results are consistent with the findings by Mc Conaughy and Phillips (1999) who consider that this is consistent with a life-cycle view of firms. Founder controlled firms are exploiting new ideas and technologies through investments in capital equipment and research and development. According to Mc Conaughy and Phillips (1999) firms in second and later generations are rather exploiting their established positions in the market.

In particular, the third generation might be more interested in profiting from the wealth, which the preceding generations have built up. Lack of ambition might be one reason for the decline with the third generation, as the wealth and social status acquired by the first and second generation do not immediately require further efforts in these directions.

The present analysis argues that slack of financial resources provides additional insight into financial behavior of third generation family firms. Slack is potentially utilizable resources that can be diverted or redeployed for the achievement of organizational goals. These resources vary in type (e.g. social or financial capital) and form (e.g. discretionary or nondiscretionary). It is argued that financial slack reduces the likelihood of efficient leverage of these resources (George, 2005; Baker and Nelson, 2005; Starr and Macmillan, 1990). The claim is that resource constraints alter the behavior by which resources are garnered and expended, forcing managers to improve allocative efficiency.

Slack is used to stabilize a firm’s operations by absorbing excess resources during periods of growth and by allowing firms to maintain their aspirations and internal

commitments during periods of distress (Cyert and March, 1963; Levinthal and March, 1981; Meyer, 1982). Financial slack provides that cushion of actual or potential financial resources that allows an organization to adapt successfully to internal pressures for change in policy as well as to initiate changes in strategy (Bourgeois, 1981). Through this dual internal and external role, slack influences performance.

The present text assumes that the profit discipline of the third generation is lower than in the first and second generation as in the third generation the family can live on the financial slack accumulated by the preceding generations.

Profit discipline is measured by tolerance time, which is defined as the share of negative EBITs of all observed EBITs for one firm. For example, if a firm displays a tolerance time of 20%, 1 out of 5 EBITs observed for this firm is negative. Tolerance time is inversely related to profit discipline and is expected to be an indicator of a family's will and ability to assure the profitability of the firm. This means that a tolerance time of 50% indicates a lower profit discipline than a tolerance time of 20%.

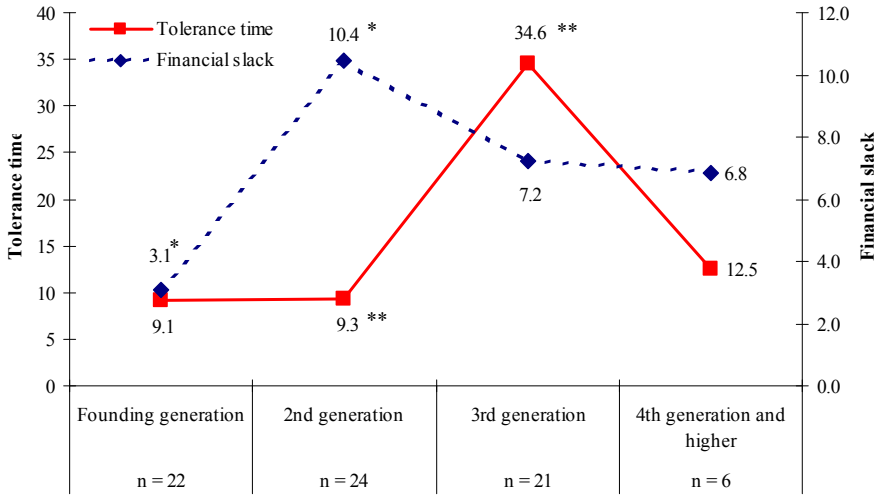
Financial slack is measured by the share of cash and marketable securities from total assets (Mc Conaughy and Mishra, 1999).

As hypothesized, tolerance time (as a proxy for profit discipline) is highest in third generation family firms, affected by the financial slack the preceding generations have accumulated (Figure 33). This finding provides further evidence for the finding that the third generation earns lower ROEs.

The availability of cash and marketable securities, the dashed line in Figure 33 can help explain this issue: whereas the first and second generations are accumulating cash, the third generation uses the funds to live on it, which is represented by an increasing propensity to tolerate negative financial performance.

Figure 33: Mean financial slack and mean tolerance time for different generations

Data source: Sample Nr. 6, Table 2. The analysis includes only privately held family firms, all from construction industry. Financial slack: share of cash and marketable securities as a percentage of total assets. Tolerance time: the share of negative EBITs of all observed EBITs for one firm. Tolerance time is considered as a proxy for profit discipline, in the sense that the higher the tolerance time, the lower the profit discipline. Statistical test applied: Mann-Whitney-U- test. Significance level: 0.05.



*: Financial slack: significant difference between founding and 2nd generation.

**: Tolerance time: significant difference between 2nd and 3rd generation.

The empirical findings above provide further evidence to the results by George (2005) who finds that financial performance of privately held firms decreases with increases in financial slack at later stages in the development of the firm.

Figure 33 raises the question of how the third generation spends the accumulated funds. It could be hypothesized that the family spends more on the consumption of perks and amenities.

In order to test this hypothesis, 64 family entrepreneurs in the Swiss construction industry were questioned regarding their consumption of perks. The size of the firms ranged from 15 to 220 employees. The respondents indicated that they make use of different types of perks: construction for private housing, wine, clothing, travel, allowances for cars, telephone and information technology. These perks are used mainly for private purposes but are booked into company accounts (= individual financial gains).

The empirical findings do not support the hypothesis that later generations, and particularly the third generation, increasingly consume perks. The data rather supports the findings of Casson (1999) and Chami (1999) who propose (following Becker 1974, 1981) that founding families view their firms as an asset to bequeath to family members or their descendants rather than as wealth to consume during their lifetimes, independently of the generation to which they belong.

In sum, the third generation displays a lower profit discipline than the two preceding generations. This inclination of the third generation to tolerate negative financial performance is alimented by the funds which the preceding generations have accumulated. However, the investigation revealed that the third generation did not divert these funds to increased use of perks. These findings provide evidence supporting the assumptions of Schulze et al. (2002) and Zahra et al. (2000) who mention that financial inertia can deprive the family firm of the necessary funds for pursuing entrepreneurial activities.

5.8.4 Family conflicts and group think effects

A further explanation for lower returns with changing generations can be found in family conflicts and group think effects. The growth of the business is normally accompanied by the growth of the family tree, with several branches and differing levels of interests in the business. For example, one part of the family might still be

interested in the firm, while another wants to be paid out. In line with the discussion on group think effects and capital structure (see chapter 4.3.3.3) it can be argued that larger groups, as found in cousin consortia or third generation family firms, are shown to produce more inequality in contributions to group discussion (Mc Cauley, 1998). Therefore, decision making in larger groups can be characterized by a rivalry of minority interests. Consequently, decision making in larger groups requires coalition forging and interest bargaining that can result in risk averse behavior as shown in collaborative groups (Ranft and O'Neill, 2001). Early group think theorists called this phenomenon cautious shift (Nordhoy, 1962).

Stoner (1968) found that group decisions tend to be more cautious on items for which widely held values favored the cautious alternative and on which subjects considered themselves relatively cautious. Correspondingly, third generation family firms, particularly if they comprise also non active family members and extended family branches, are experienced to share cautious values as preserving family wealth and income from the family business. For larger families with a dispersed shareholder structure as found in many third generation family firms it can therefore be crucial to separate from inactive and overcautious family members in order to regain the capacity to act (Prokesch, 1991).

5.8.5 Culture as a curse

It can be hypothesized that with subsequent generations, culture and values embodied by the family become an important source of informal family influence. Astrachan et al. (2002) posit that culture (represented by values) is one of three dimensions which characterize a family firm-for details refer to chapter 3.1.4.

However, anchoring values in an organization takes time. Klein (1991) finds that core values of key personnel (e.g. key personnel who have led the firm for more than 10 years) usually form part of the culture of their organizations. Hence the continuity in the staffing of top management positions in family firms offers a unique setting for the growth of strong enterprise cultures.

According to Carlock and Ward (2001) core family values are the basis for developing a commitment to the business. In light of this view, families that are highly committed to the business are highly likely to have a substantial impact on the business. Stavrou et al. (2005) provide empirical evidence to this by finding a significant relationship between family CEO personality and business culture in family firms. It can therefore be concluded that culture is formed by the leading persons' beliefs and understandings about what is important. In addition, Stavrou et al. (2005) find that personality and culture have an impact on succession success. For example, the authors find that succession success is positively influenced by collaborative family and cooperative business cultures.

If a culture is strongly influenced by one or a few persons as in many paternalistic family firms, culture can be considered as being provided just as another resource provided by the family. This resource can be a blessing, as it provides strong informal ties, a sense of belonging and a guideline for efficient entrepreneurial action (Haugh and Mc Kee, 2003). Just as strong personalities and charismatic leaders can be an advantage to the evolution of the firm at one point in the life cycle of a firm (Bogod, 2004), the same person and the culture he imposes on the firm can hinder the evolution of the firm. For example, if the culture imposed by the personality of a strong leader represents "the good old times" and he is not able to take the necessary entrepreneurial actions anymore (e.g. invest in new technology), his presence and the culture he imposes on the firm can become a curse. It is hypothesized that business cultures reigning in third generation family firms are particularly susceptible to being influenced by traditional and partly outdated values. What could be called "the shadow of the founder" and the fact that anchoring new values in firms takes time hinder the evolution of new values established by the third generations. If personalities influence business cultures through the values they represent, just as with resources (Sirmon and Hitt, 2003), shedding of outdated values and culture are just as important in family firms as resource shedding as a whole. For the emancipation of the third generation family leaders from their family successors and the evolution of their firms, the old culture needs to be partly replaced in order to assure the firm's capacity to perform.

5.8.6 Conclusion and limitations

In sum, the reasons explaining the diminishing returns of family firms with subsequent generations are far from simple or straightforward.

The survival rates of family firms in different generations do not provide much additional insight as they are constant throughout the three generations.

The mixing of business and private finance can cause financial ratios, such as return on equity, to be distorted. This distortion can be caused, for example, by private assets that are booked into company accounts. Similarly, if earnings are retained in the firm, family businesses automatically display lower returns on equity with subsequent generations.

The investigation showed that the third generation displays a lower profit discipline than the two preceding generations. This inclination of the third generation to tolerate negative financial performance is possible because of the funds the preceding generations have accumulated. However, the study showed that the third generation did not divert these funds to increase the consumption of perks.

Studying family conflicts provided additional insight. If in the growing family tree certain family members need to be paid out, or if the firm has to finance the lifestyle of progressively more family members, conflicts within the family are predetermined. In consequence, larger groups of persons, such as are found in third generation cousin consortia, are expected to take less risky entrepreneurial decisions (cautious shift) in order to safeguard the financial benefits they receive from the family firm.

Finally, strong family cultures that have grown over generations can become a curse for family enterprises. This can harm third generation firms and entrepreneurs if the culture is based on the “the good old times” or “the shadow of the founder”. This can hinder the evolution of new values by later generations.

In total, none of the above explanations is solely responsible for the performance differences found. The explanations derive from the accounting, the socio-psychology and the finance body of knowledge and show strikingly that financial issues in family firms can not be explained by purely applying one single theory.

The issue of generation and performance is a good example to show that family business research is a multi-disciplinary field.

5.9 Conclusion and outlook

The preceding chapters investigated the financial returns of family firms. Even though monetary returns are only one facet of a complex set of goals of family firms that include nonmonetary goals, this investigation was able to reveal how this goal set affects financial return.

Privately controlled family firms were found to perform less well in terms of return on equity. The discussion on the reasons for the difference in return on equity revealed that family firms face agency cost as well, despite a close relation of principals and agents in one family. Family firms were found to be plagued with conflicts that are costly to mitigate. Altruism can induce a double moral hazard problem that hampers the efficiency of governance structures, especially in the firm's life stages of controlling owners and sibling partnerships. Family firms do not display zero agency costs, as hypothesized by earlier studies. The conflicts family firms face can result in financial and strategic inertia, ineffective governance structures, misalignment of interests and ineffective information processing. The text proposed practical guidelines to overcome these problems, especially the incentive problems occurring in the succession process within family firms.

In addition, the performance difference of family and nonfamily firms could be partly explained by lower leverage levels, by the prevalence of nonfinancial goals such as independence, by conservative financial reporting and by a lower profit discipline of family firms.

However, the investigation went beyond a simplistic comparison of family and nonfamily firms. It was found that low family influence reduces performance due to a lack of monitoring. Financial performance was the highest when the family had an influence of 2 SFI (refer to chapter 5.3). Beyond this turning point additional family

influence entrenched the profitability of family firms, due to consumption of private benefits of control as for example perks.

Ownership dispersion proved to have a performance impact also in family firms. Whereas controlling owners and cousin consortia display higher returns on equity, sibling partnerships, in particular, seem to suffer from costly agency conflicts. This finding provides evidence in the discussion of changing agency conflicts with continuing evolvement of the family firm.

In addition, family firms were found to outperform their nonfamily counterparts when the family firms had up to 10 or 50 to 99 employees. In the other size classes (11 to 49 and 100 to 249 employees) the analysis revealed just the opposite results. It was found that the cost efficient governance structures of family firms with 50 to 99 employees could help explain these differences. For family firms with 11 to 49 employees the study showed a lack of external and internal control and monitoring, which can induce a decrease in financial performance. In turn, for firms with 100 to 249, family firms displayed insufficient access to external financial and human resources, which hampered the growth of the family firms.

The analysis of firm size and of family influence on financial performance provided the basis for the model of the dynamic adaptation of family influence throughout the life cycle of the firm. Based on life cycle theory and the empirical findings presented above, the model postulates that family firms are facing two types of pitfalls, the independence vicious circle and the return vicious circle. In order to overcome these pitfalls families need to establish a common understanding of where they stand in the model. Accordingly, family influence needs to be increased or reduced. In sum, the model shows that family influence is not generally good or bad, but can become a blessing or a curse depending on the firm's situation in the life cycle.

Additionally, the investigation finds that family firms are particularly successful in industries where personal commitment, family values, and long-term business perspective are of crucial importance. Family firms are found to outperform their nonfamily counterparts in industries in which they can bring into play these values to their advantage such as in retailing, forestry, mining, land development but also private banking.

Furthermore, the discussion provided evidence that third generation family firms perform less well. The explanations draw from a wide body of research and underline the importance of a cross-disciplinary approach for research on family firm finance. First, entwined private and business finances can cause debt and equity levels to be distorted. In addition, the lack of a dividend policy in preceding generations can cause equity levels to rise at high levels, especially in later generations. The third generation was found to display a lower profit discipline. Funds accumulated by the preceding generations are spent but not squandered on perks. Furthermore, group think effects in larger groups of people often found in third generation families tied together in their firm can cause family firms to follow inappropriate and less risky business strategies. Such behavior can deprive the family firm of the necessary entrepreneurial activities. Finally, culture in third generation family firms can become a curse and hinder the evolution of a new culture based on the values of the generation overtaking the firm.

In sum, privately held family firms display financial characteristics that call for specialized research in finance. The empirical results also demonstrate that to interpret the results correctly as they apply to family firms one must also consider concepts of finance, accounting and socio-psychology specifically adapted to family firms. Such an integrative view is of particular importance in deriving management advice to practitioners.

Considering the nonmonetary goal sets of family firms and their financial performance raises the question how family firms need to be valued. The subsequent chapter will investigate this issue in detail.

6 Value and valuation of the family firm

Whereas the preceding chapter investigated the financial return of family firms, the present chapter investigates how financial and nonfinancial rewards affect the value of family firms.

Recent academic literature presents evidence of specific characteristics of family businesses regarding value and valuation (Morck et al., 1988). Mc Conaughy et al. (2001), for example, report that firms controlled by the founding family have greater value, are operated more efficiently and carry less debt than other firms. In another study, Mc Conaughy et al. (1998) present evidence that family relationships provide incentives that are associated with better firm performance. And the latest academic research points in the same direction by saying that when family members serve as CEO, performance is better than that with a CEO from outside the family (Anderson and Reeb, 2003b).

The present chapter works in two directions. First of all, it will investigate whether publicly quoted firms are outperforming their nonfamily counterparts on the Swiss stock market and what factors determine the outperformance.

Subsequently, the text will investigate the value of privately held firms. It will be questioned what determines the value of a privately held firm, in particular if it is not for sale but should rather be handed over to a next generation.

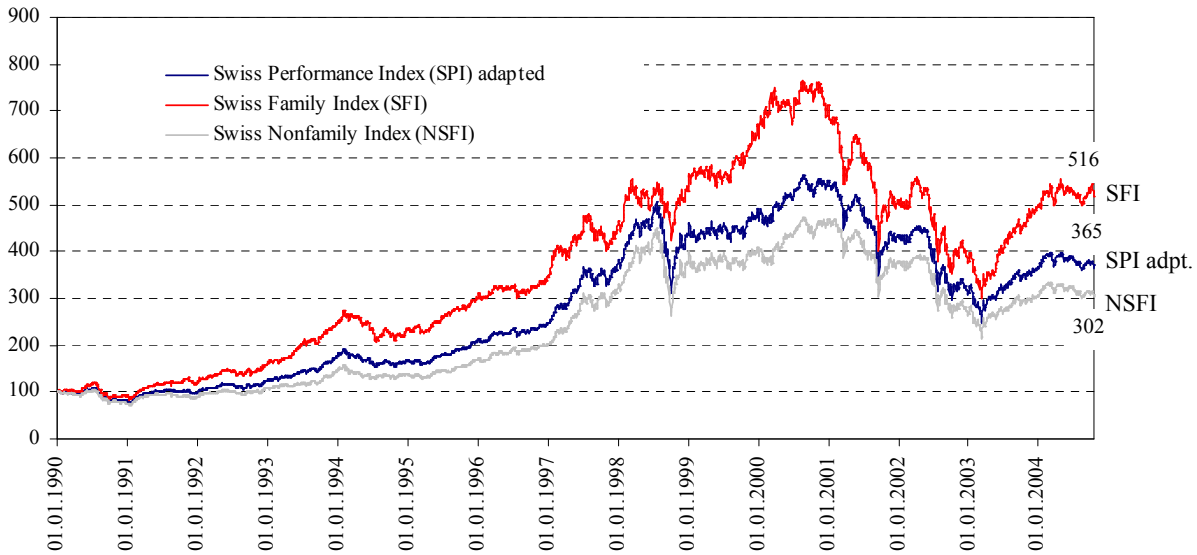
6.1 The value of publicly quoted family firms

In April 2004, Newsweek (2004) reported on new research carried out by Thomson Financial, showing that family companies were "outperforming their rivals" on all six major stock indices in Europe, from London's FTSE to Madrid's IBEX (Bogod, 2004).

A similar study was performed by Zellweger and Fueglistaller (2004b), who compared the performance of publicly quoted Swiss family firms and Swiss nonfamily firms (Figure 34). In line with the definition by La Porta et al. (1999) they considered a firm a family business when 20% of the voting rights are controlled by a single shareholder or a group of shareholders. To control 20% of the voting rights of a listed Swiss company, an average of 14.2% of the equity is needed (La Porta et al., 1999). Of the 270 publicly quoted companies 38% of the companies could be considered as family controlled.

Figure 34: Swiss Family Index and Swiss Nonfamily Index

Data sample: Sample Nr. 5, Table 2. For details on the construction of the indices refer to Table 33, Appendix.



As above Figure 34 displays, within the period of 14 years, the family firms outperformed their nonfamily counterparts by 214 index points (Figure 34). For the same sample Zellweger et al. (2005) found a market-adjusted abnormal return of 3.04% per annum for the family firms, for the nonfamily firms they found a market-adjusted abnormal return of -1.90%.

The above data gives further evidence to the findings by Morck et al. (1988), who found that Tobin's Q measure of firm value increases when the founding family holds one of the top two positions in firms incorporated after 1950. In addition, Anderson and Reeb (2003b) found that investors tended to value family firms more highly: the average Tobin's Q, the market value of a company's assets divided by their replacement cost, was 10% higher for this group. Also, earlier studies by Mc Conaughy et al. (2001) report that firms controlled by the founding family have greater value than nonfamily controlled firms. Similarly, Hasler (2004) found for the German stock market that family firms were outperforming their nonfamily counterparts.

The above findings taken together draw a spectacular picture of the stock performance of family firms. All this raises one central question: Why are family firms so successful on the stock market, or in other words, what do family firms have that nonfamily companies lack?

Family firms have been found to display specific factors that can potentially increase the riskiness of an investment in a family firm. For example, the risks and costs of agency effects introduced by altruism, financial and strategic inertia, ineffective information processing or ineffective governance all can cause investors to demand excess returns of an investment in family firms. The impact of those factors on financial market performance is however hardly quantifiable.

Therefore, the following subchapters will draw from financial market data knowledge and literature to explain the outperformance. The first explanation, discussed in chapter 6.1.1, draws from a recently discovered financial market anomaly called the analyst forecast dispersion effect. It will be analyzed how the information setting, e.g. influenced by stable operating profits of family firms, affect stock market performance. Chapter 6.1.2 discusses the impact of market illiquidity

of shares due to the presence of controlling blockholders. Chapter 6.1.3 analyzes the impact of instantaneous risk induced by the long-term investment horizon of family firms. Chapter 6.1.4 investigates whether the outperformance is a manifestation of a size effect (Fama and French (1992, 1995).

6.1.1 Information setting and the dispersion effect

Recent studies by Scherbina (2001), Diether et al. (2002), Dische (2002a), Ciccone (2003) as well as Baik and Park (2003) have uncovered an anomaly in the cross section of stock returns based on analyst forecast dispersion. The essence of these studies is that firms with low dispersion in earnings forecast – measured as the normalized standard deviation of analyst forecasts – earn higher subsequent returns in the stock market than firms with a high dispersion. This result is troublesome, as it not only violates but contradicts standard risk / reward assumptions that are the foundation of modern academic finance theory.

Recently, two theories to explain the pattern of returns found in the data have been proposed.

Diether et al. (2002) favor a behavioral theory that is based on the idea that short-sale restrictions often found in real world markets keep the investors with the most negative estimates of a firms earnings from selling the stock. Therefore, the investors with the most positive estimates drive up the value of the stock. Since the uncertainty surrounding the future earnings of a company dissolves when the actual earnings are finally released, the stock then drops because the investors with the highest prior estimates are most likely to be disappointed and start to sell. Therefore, the higher the dispersion in consensus estimates, the lower the subsequent returns of a stock.

In a recent article, Johnson (2004) presented an entirely new approach to the explanation of the dispersion effect. Although he states that Diether et al. (2002) may well be right in their interpretation of the anomaly since short-sale constraints, heterogeneous information, and investor biases are certainly important features of

real markets and undoubtedly affect price formation, he demonstrates an explanation which has no need for assumptions about market frictions or irrationality. Since the two explanations refer to completely different mechanisms, it cannot be ruled out that both mechanisms contribute their part to the anomaly, as Johnson explicitly states.

Johnson (2004) presents a model in which he distinguishes between two components of the total uncertainty that investors face. The stochastic evolution of the underlying value itself is primitive to the economy so that it is independent of the informational environment. This variability is referred to as fundamental risk. In contrast, the uncertainty about the current value of that process is determined purely by the informational setting and therefore referred to as parameter risk. Johnson (2004) considers forecast dispersion to be a form of idiosyncratic risk that proxies for parameter risk but not for fundamental risk.

On the question of why firms should differ in their degree of parameter risk, Johnson (2004) states: "At least two distinct factors are involved. First, some businesses are inherently harder to assess than others. Second, firms, being themselves the source of most of the relevant information, can choose how much of it to provide. In both respects, parameter risk clearly goes well beyond uncertainty about current accounting earnings. But even on this one dimension, firms range from predictable, simple, and transparent to unfamiliar, complex, and opaque. While substantial cross-sectional variation in parameter risk is thus to be expected, from the point of view of financial theory, there is no obvious reason why agents should care about it. Almost by definition, the noisiness of signals has no direct connection to the riskiness of a firm's cash flow. Nor would it seem likely to have a systematic, nondiversifiable character." Johnson takes the view that analyst forecast disagreement is likely to be a manifestation of nonsystematic risk relating to the unobservability of a firm's underlying value.

The Johnson (2004) model has the stunning implication that raising the uncertainty about the underlying asset value of a levered firm while holding asset risk premium constant – therefore adding idiosyncratic risk – lowers its expected returns. The

reason is that more unpriced risk raises the option value of the equity claim, which again lowers its exposure to priced risk.

Johnson's model (2004) is built around the empirical findings of Ackert and Athanassakos (1997), Diether et al. (2002), Dische (2002b), Ciccone (2003) and Baik and Park (2003) – all of whom found that firms with a high dispersion in consensus estimates earn comparatively low subsequent returns. These authors find that dispersion is a measure of idiosyncratic risk.

Given these theoretical underpinnings it is of interest to analyze whether family firms also display lower forecast dispersion. If this is so, this would have two implications. First, it would provide an insightful explanation to the excess stock returns of family firms. Second, it would extend the theory about dispersion anomaly by an additional element, namely earnings per share variance as an easily observed predictor for analyst forecast dispersion and hence future stock performance.

6.1.1.1 Sample description and data collection

The sample consisted of publicly listed family and nonfamily firms from Switzerland and Lichtenstein quoted on the Swiss stock exchange. In line with the definition by La Porta et al. (1999) a firm was considered as a family business when 20% of the voting rights are controlled by a single shareholder or a group of shareholders. Of the 270 publicly quoted companies 38% of the companies could be considered as family controlled.

In addition, to be included in the sample of this study, earnings estimates from at least three analysts must be reported in Institutional Brokerage Estimate System (IBES) for a firm in the month prior to the considered one. To satisfy this criteria the sample was reduced to 140 firms.

The time horizon ranged from March 1987 until September 2004. The last possible month to begin to track the performance of a stock over 12 months was hence September 2003. The stocks were assigned to their respective portfolios for the period of March 1987 until September 2003; the study therefore covered 198 months and consisted of 17'875 monthly observations for individual stocks. Daily security

returns were obtained for all stocks from Datastream International. The earnings estimates and return data were then merged.

The dispersion of analyst consensus is defined as the standard deviation of earnings forecasts scaled by the absolute value of the mean earnings forecast and is obtained on the first trading day each of each month. The mean earnings-per-share estimate for the following fiscal year is obtained on the first trading day each month as well and represents the consensus forecast.

The individual stocks were then assigned to five portfolios based on the dispersion of consensus in ascending order. P1 represents the portfolio with the smallest dispersion and P5 represents the portfolio with the biggest dispersion.

Each stock with its earnings for subsequent periods of up to twelve months was treated as a discrete item in every month for the time period covered and sorted in the portfolio with respect to its consensus dispersion on the first trading day of the particular month. Therefore, overlapping time periods were used. For each respective month, the Portfolios P1, P2, P4 and P5 carried the same number of stocks. Portfolio P3 carried a slightly larger number of shares since the remaining shares were placed in it.

The dispersion data is skewed right with most of the effect taking place in the P5-portfolio as can be seen in the higher number for mean dispersion in Portfolio P5 compared to median dispersion as dispersion can not become smaller than zero but can easily exceed 100 for the most opaque firms in the market.

6.1.1.2 Hypotheses

The basic assumption of this text is that the strive of family firms for survival, independence and continuity (Ward, 1997: Spremann, 2002) fosters a transparent information setting that is characterized by less variance in operating profits and earnings per share which in turn reduces analyst forecast dispersion. To test whether these assumption are true, the following hypotheses need to be tested.

Hypothesis 3:

Family firms display less variance in operating profits than nonfamily firms.

Hypothesis 4:

Family firms display less variance in earnings per share than nonfamily firms.

Hypothesis 5:

Family firms display a lower analyst forecast dispersion than nonfamily firms.

Hypothesis 6:

Variance in operating profit and variance in earnings per share are significantly positively correlated.

Hypothesis 7:

Variance in earnings per share and analyst forecast dispersion are significantly positively correlated.

Hypothesis 8:

Firms with lower analyst forecast dispersion display abnormal positive returns.

6.1.1.3 Empirical results

The mean of normalized EBIT standard deviation for all family firms amounts to 99% whereas the one of the nonfamily firms is 695%. This difference proved to be significant as displayed in below Table 8.

Table 8: Variance in operating profits of family and nonfamily firms

Data source: Sample Nr. 3, Table 1. The table reports a T-test on equality of means of normalized EBIT standard deviation of family and nonfamily firms. The investigation analyzed 140 firms quoted on the Swiss stock market. Only stocks with coverage of at least three analysts are included in the sample to assure consistency with the sample in the dispersion analysis. Normalized standard deviations are obtained from the reported EBITs in the period 1987 to 2004.

	Levene's Test for Equality of Variances		**T-test for Equality of Means**						
	F	Significance	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the	
								Lower	Upper
Equal variances assumed	4.421	0.036	-1.18	442.00	0.239	-5.96	5.05	-15.89	3.97
Equal variances not assumed			-2.28	350.68	0.023 *	-5.96	2.62	-11.11	-0.81

*. Significance level 0.05

The analysis of the stability of operating profits of family firms included in the S&P 500 delivered comparable results (refer to Table 29, Appendix). Hence,

Hypothesis ***3*** is accepted.

Financial transparency and the lower variance in operating profits further led to the hypothesis that family firms display lower variance in earnings per share than nonfamily firms. For the same sample of 140 family and nonfamily firms it could be demonstrated that the mean standard deviation of earnings per share of family firms in the period from 1987 to 2003 was 218% whereas the mean standard deviation in the same period for nonfamily firms was on average 367%. A comparison of means showed that these differences were significant (Table 9).

Table 9: Variance of earnings per share of family and nonfamily firms

Data source: Sample Nr. 3, Table 1. The table reports a T-test on equality of means of normalized earnings per share (EPS) standard deviation of family and nonfamily firms. The investigation analyzed 140 firms quoted on the Swiss stock market. Only stocks with coverage of at least three analysts are included in the sample to assure consistency with the sample in the dispersion analysis. Normalized standard deviations are obtained from the reported EPSs in the period 1987 to 2004.

	Levene's Test for Equality of Variances		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	10.3	0.002	-1.9	138.0	0.054	-2.386	1.227	-4.811	0.039
Equal variances not assumed			-2.4	89.9	0.019 *	-2.386	0.995	-4.363	-0.408

*. Significance level 0.05

The above empirical results clearly support Hypothesis 4 that family firms can not be considered as opaque, at least to what the stability of their financial performance concerns. In addition, Göcmen and Meyer (2004) provide additional evidence to this finding by stating that family firms display a high continuity of net income.

There is a monetary reason that motivates such behavior: Drastic changes in net income can have a direct impact on family wealth, knowing that on average 69% of the family estate is invested in the firm (Forbes Wealthiest American Index, 2002). In the eyes of the family firm a sustainable business strategy is therefore not only desirable with regard to the firm but also the family and its wealth.

In addition, the longer time horizon which family businesses are known to have (Kets de Vries, 1996) and their goal of passing the business on to heirs does not allow the managers to follow a strategy that aims at maximizing shareholder value only within the short period the actual management is in charge at the expense of the subsequent generation.

This empirical finding is not only good news for the family that strives to limit its financial risks. The stability of operating profits and earnings per share provide a

transparent information setting for investors who need to forecast future performance.

Hypothesis 5 could be verified as well, the analyst forecast dispersion in family firms was found to be smaller than in nonfamily firms. The comparison of the median and mean dispersion figures provided in Table 10 for family firms and Table 11 for nonfamily firms shows that dispersion in family firms is lower. This holds true in all but two years (1996 and 2000) when looking at median numbers and in 10 out of 17 years when looking at mean numbers. Therefore, the analysis provides evidence that family firms exhibit lower forecast dispersions.

Operating profit variance, measured in terms of standard deviation of EBIT, and earnings per share variance, measured in terms of standard deviation of earnings per share, correlate on high positive level. The correlation level amounts to 0.79 (Spearman's Rho) (for statistical details refer to Table 30, Appendix). Hence Hypothesis 6 is verified.

Hypothesis 7 hypothesized a positive correlation between earnings per share variability and analyst forecast dispersion. The analysis provided significant positive correlation at the 0.56 level (Spearman's Rho) (for statistical details refer to Table 31, Appendix).

Just as experienced in the US stock market, the dispersion effect could also be confirmed for the Swiss stock market. Firms with lower analyst forecast dispersion displayed positive abnormal excess returns. Hence Hypothesis 8 is verified. For statistical details refer to Table 12.

Table 10: Descriptive statistics of analysts' forecasts-family firms only

Data sample: Sample Nr. 3, Table 1. Descriptive Statistics of analysts' forecasts for all Swiss family controlled firms covered by at least three analysts in the period of 1987 to 2003. Consensus forecasts for the next fiscal year are obtained from the IBES historical database on the first trading day each month. The median number of analysts per covered firm is shown, followed by the median and mean dispersion in consensus forecast.

Year	No. Of Firms	Median no. of Analysts	Median Dispersion						Mean Dispersion					
			Total	P1	P2	P3	P4	P5	Total	P1	P2	P3	P4	P5
1987	20	4	19.0	5.0	9.6	19.0	27.3	59.5	28.8	4.7	9.8	19.2	29.3	89.5
1988	24	5	14.5	3.6	7.9	14.1	22.7	39.3	24.2	3.9	8.0	14.4	23.8	75.3
1989	33	5	9.6	3.2	6.2	9.6	13.8	29.2	13.7	3.2	6.3	9.5	14.3	35.5
1990	36	6	10.8	5.7	7.5	10.8	15.6	30.5	19.0	5.2	7.5	10.8	16.3	57.8
1991	36	6	10.6	4.1	6.6	10.6	22.1	34.1	29.9	3.9	6.7	11.6	22.0	114.0
1992	33	8	15.1	4.3	9.0	15.1	24.1	62.7	36.6	4.4	8.8	15.0	25.9	137.1
1993	36	9	14.3	4.4	6.8	14.3	22.4	40.3	29.7	4.2	7.3	13.9	22.4	105.0
1994	36	10	12.8	4.7	7.0	12.8	19.1	36.5	18.8	4.6	7.2	12.7	20.1	50.3
1995	39	11	11.7	4.5	6.7	11.7	16.2	29.9	15.5	4.3	7.0	11.5	17.0	38.7
1996	40	12	9.9	3.6	6.0	9.9	15.4	33.7	23.4	3.5	6.1	10.1	16.1	88.5
1997	41	12	9.3	3.3	5.6	9.3	15.4	27.9	16.1	3.3	5.8	9.5	15.8	47.9
1998	39	9	8.8	3.7	5.7	8.8	13.5	20.6	15.9	3.4	5.8	8.9	13.5	49.6
1999	41	8	8.2	3.5	6.1	8.2	11.8	23.4	18.7	3.4	5.9	8.3	12.1	67.0
2000	44	8	9.9	3.9	7.3	9.9	14.4	22.1	18.3	4.0	7.1	10.0	14.6	58.5
2001	48	7	12.0	4.5	8.0	11.1	17.2	38.4	21.0	4.5	8.6	12.9	20.7	60.8
2002	46	7	14.3	5.2	9.6	14.3	33.8	72.4	33.4	5.2	9.5	15.1	34.1	108.6
2003	40	6	13.7	4.6	7.8	13.8	26.9	85.7	34.1	4.4	7.8	15.0	26.8	122.2
Average	37	8	11.7	4.3	7.0	11.1	17.2	34.1	23.4	4.1	7.4	12.3	20.3	76.8

Table 11: Descriptive statistics of analysts' forecasts-nonfamily firms only

Data sample: Sample Nr. 3, Table 1. Descriptive Statistics of analysts forecasts for all Swiss nonfamily controlled firms covered by at least three analysts in the period of 1987 to 2003. Consensus forecasts for the next fiscal year are obtained from the IBES historical database on the first trading day each month. The median number of analysts per covered firm is shown, as is the mean and median P/E followed by the median and mean dispersion in consensus forecast.

Year	No. Of Firms	Median no. of Analysts	Median Dispersion						Mean Dispersion					
			Total	P1	P2	P3	P4	P5	Total	P1	P2	P3	P4	P5
1987	35	7	21.9	5.4	11.3	21.9	34.6	47.7	24.7	5.4	10.9	22.8	35.3	50.0
1988	39	6	18.8	4.3	11.9	18.3	37.9	52.2	26.1	5.0	11.6	20.7	36.8	56.9
1989	47	6	12.2	3.9	7.1	12.2	23.2	42.1	18.8	4.0	7.7	12.2	24.0	47.4
1990	49	8	11.5	4.3	7.9	11.5	28.6	41.4	19.5	4.2	7.8	12.0	27.1	47.1
1991	50	8	17.0	4.7	8.9	17.0	31.5	46.4	28.8	4.4	9.1	17.1	32.3	82.2
1992	50	9	19.6	5.6	9.5	19.6	40.1	73.9	46.4	5.4	9.7	20.4	38.4	168.0
1993	52	11	21.1	4.3	11.8	21.1	35.0	70.7	41.3	4.5	11.3	21.3	35.6	137.9
1994	50	12	14.6	4.2	8.3	14.6	34.0	52.5	33.1	3.9	8.6	16.5	33.1	108.7
1995	56	12	12.4	4.1	6.6	12.4	23.0	55.4	31.6	3.7	7.2	12.1	24.0	113.8
1996	60	13	9.8	3.6	5.9	9.8	20.3	38.4	22.3	3.4	5.8	10.6	21.0	73.3
1997	67	11	11.5	3.8	6.6	11.5	18.8	35.0	18.9	3.6	6.7	11.6	19.3	54.6
1998	71	8	9.3	3.8	6.3	9.3	13.8	25.8	14.2	3.6	6.5	9.5	14.2	38.1
1999	71	8	9.8	3.4	6.3	9.8	15.1	26.8	17.6	3.4	6.4	9.7	14.8	54.5
2000	78	8	9.5	4.1	6.8	9.5	14.1	28.2	16.3	3.9	6.8	9.6	14.6	47.6
2001	87	8	12.2	4.6	8.5	12.1	17.9	46.3	23.4	4.7	8.7	13.2	21.0	71.2
2002	83	7	16.5	4.7	11.1	16.5	28.5	56.3	32.4	5.1	10.9	16.9	29.5	101.3
2003	80	7	17.8	5.6	10.4	17.8	33.4	97.4	45.4	5.2	10.8	18.0	36.1	162.3
Average	60	8	12.4	4.3	8.3	12.4	28.5	46.4	27.1	4.3	8.6	15.0	26.9	83.2

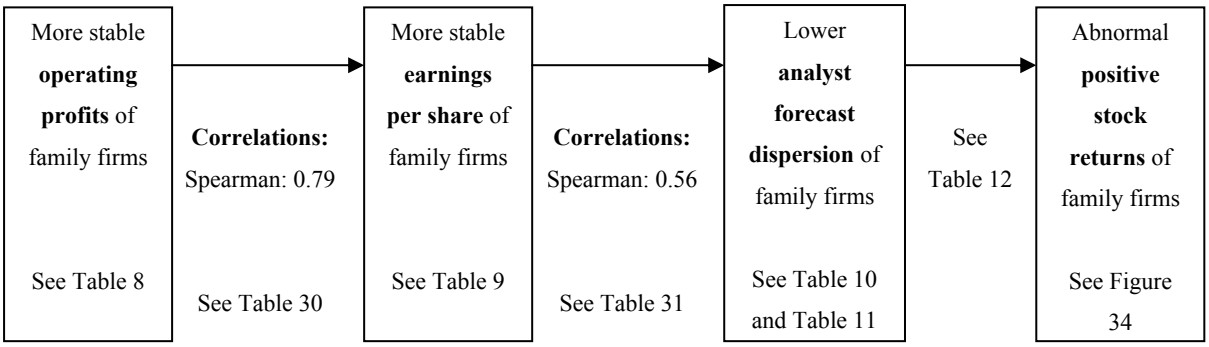
Table 12: Abnormal returns of portfolios formed by consensus dispersion-full sample

Data sample: Sample Nr. 3, Table 1. The table reports market adjusted abnormal monthly and cumulative percentage returns for portfolios based on consensus dispersion. Market adjusted abnormal returns are actual returns less the return of an index that is constructed of all Swiss firms that are represented in the IBES-database on a monthly basis. The consensus dispersion is based on the most recent consensus each month. The sample includes all firms listed on the Swiss stock market covered by at least three IBES analysts in the time period 3/1987-9/2003, which contains 198 monthly observations. Stocks are ranked in ascending order into five equally weighted portfolios for each respective month, where P1 represents the portfolio with the smallest dispersion in consensus, P5 the one with the biggest dispersion. T-statistics are reported in parentheses.

Dispersion Portfolio	Average Monthly Returns					Cumulative Monthly Returns				
	[0,1]	[1,3]	[3,6]	[6,9]	[9,12]	[0,1]	[0,3]	[0,6]	[0,9]	[0,12]
P1 (most favorable)	0.2775	0.4029	0.3583	0.3640	0.1958	0.2775	1.0832	2.1582	3.2503	3.8378
	(2.28)	(4.85)	(5.21)	(4.98)	(2.77)	(2.28)	(5.24)	(7.28)	(8.41)	(8.57)
P2	0.3410	0.2592	0.1258	0.1118	0.0724	0.3410	0.8593	1.2366	1.5722	1.7893
	(2.58)	(2.73)	(1.57)	(1.36)	(0.87)	(2.58)	(3.71)	(3.55)	(3.58)	(3.40)
P3	0.0860	0.0857	0.1925	0.0682	0.0890	0.0860	0.2573	0.8347	1.0394	1.3064
	(0.60)	(0.87)	(2.45)	(0.87)	(1.13)	(0.60)	(1.03)	(2.37)	(2.37)	(2.54)
P4	-0.3860	-0.4395	-0.4747	-0.2216	-0.2298	-0.3860	-1.2650	-2.6890	-3.3537	-4.0432
	(-2.22)	(-3.48)	(-4.21)	(-1.93)	(-2.05)	(-2.22)	(-3.96)	(-5.30)	(-5.09)	(-5.02)
P5 (least favorable)	-0.3293	-0.3190	-0.2262	-0.3311	-0.1386	-0.3293	-0.9674	-1.6459	-2.6394	-3.0551
	(-1.51)	(-2.04)	(-1.79)	(-2.69)	(-1.13)	(-1.51)	(-2.46)	(-2.78)	(-3.44)	(-3.43)
P1-P5	0.6068	0.7219	0.5845	0.6952	0.3344	0.6068	2.0506	3.8041	5.8897	6.8928
	(4.85)	(8.15)	(8.12)	(9.68)	(4.72)	(4.85)	(9.22)	(11.46)	(13.68)	(13.78)

In sum, the analysis provides a framework with which to explain the abnormal stock returns of family firms. Family firms display more stable operating profits and earnings per share than nonfamily firms which helps to understand the lower analyst forecast dispersion of family firms. Based on the anomaly literature of Johnson (2004) and Diether et al. (2002), who find a relation between analyst forecast dispersion and abnormal stock returns, the present text provides a framework for the understanding of the outperformance of family firms on the stock exchange (Figure 35).

Figure 35: Information setting and the outperformance of family firms



6.1.1.4 Conclusion

To date there is little empirical research which studies how stability of earnings and differences of opinion affect asset prices. Since many of the theoretical papers that incorporate differences of opinion produce conflicting theories, the debate can be resolved only with a careful empirical investigation. This section of the text takes a step in this direction by probing Swiss stock market data from the period of 1987 to 2004 for dispersion anomalies.

The analysis revealed that earnings per share variance is a good indicator of analyst forecast dispersion. It could be shown that firms with stable earnings per share tend to have lower analyst forecast dispersion and positive abnormal stock returns. This phenomenon has two implications.

Firstly, applied to family firms that display lower operating profit variance, lower earnings per share variance and lower shareholder dispersion, it delivers a convincing explanation to the outperformance of family firms, at least on the Swiss stock market. Apparently, family firms are considered as transparent firms that foster a transparent information setting nurtured by stable operating profits and earnings per share that positively affect analyst forecast and finally stock returns.

Secondly, the findings extend the dispersion anomaly literature by a further, empirically tested element, namely the stability of operating profits and the stability of earnings per share that affect analyst forecast dispersion.

In sum, these findings stand in strong contrast to standard financial literature that states that reducing the uncertainty about the returns to be expected from an asset-therefore reducing the risk of the investment-needs to reduce the subsequent return. The findings are challenging the capital asset pricing model (CAPM, Ross, 1976) with its sole risk factor β and the arbitrage pricing theory with its several risk factors that dominate the financial asset pricing literature.

Until the present it has not been clear whether these results really contradict the findings of the equilibrium theories or whether the anomalies cancel each other out in the long-term view, therefore supporting the equilibrium hypothesis (Fama and Mac Beth, 1973). With the present study we can counter this argument as the anomalies were observed over a period of 16 years.

The study supports the findings of Diether et al. (2002) who suggest that analysts' forecast dispersion is a proxy for differences of opinion among investors and not for risk, since the relation between future returns and dispersion is negative. We deliver additional insight into this by stating that these differences in opinion are positively affected by the variance of past earnings per share.

6.1.2 Illiquidity and risk premia

The hypothesis on the relationship between stock return and stock liquidity is that return increases in illiquidity, as proposed by Amihud and Mendelson (1986 and 1991). The positive return-illiquidity relationship has been examined across stocks in a number of studies. The illiquidity measure often employed in illiquidity studies is the daily ratio of absolute stock return to its dollar volume, averaged over some period. It can be interpreted as the daily price response associated with one dollar of trading volume, thus serving as a rough measure of price impact. There are finer and better measures of illiquidity, such as the bid-ask spread (quoted or effective), transaction-by-transaction market impact or the probability of information based trading. These measures, however, requires microstructure data that is not available in many stock markets.

In addition, Amihud et al. (1999) find that the number of shareholders is negatively related to market liquidity, which in turn negatively affects stock returns. The analysis by Zellweger and Fueglistaller (2004b) revealed that the mean free float of the family firms quoted on the Swiss stock exchange was 41.3%. The remaining 58.7% were closely held by the family blockholders. It is therefore assumed that the number of shareholders of family firms is smaller, which negatively affects market liquidity of theses shares. In addition, family investors are found to provide patient capital to their firms, which is financial capital that is invested without threat of liquidation for long periods (Dobrzynski, 1993). Hence trading volume is expected to be limited, at least for these block holdings.

In line with above rationale on liquidity and stock performance, it could be hypothesized that family firm investors require a premium for the lower liquidity of their shares.

6.1.3 Long-term perspective and riskiness of investment projects

As mentioned above, a positive characteristic to family firms' finances is patient capital, which differs from the typical financial capital due to the intended time of investment (Teece, 1992; Dobrzynski, 1993). Many firms try to develop long-term, relationally based investors, but are unable to do so because many international financial markets are not characterized by this investment strategy (Reynolds, 1992). However, firms with patient capital are capable of pursuing more long-term oriented, creative and innovative strategies (Kang, 2000; Teece, 1992).

The long-term perspective has an impact on the investment strategies of family firms: longer holding periods give an investor the possibility to accept higher risks, as the marginal risk of an additional holding period is falling with the continuing holding period (Hull, 2003). Whereas investment projects for the longer run are commensurate to the longer planning horizon of family firms, they collide with the desire of shorter term oriented investors for positive returns even in the shorter run. In other words, even if the normalized annual risk falls with continuous investment horizon, the instantaneous risk (Duffee, 1999), the risk of default in the short run, persists.

Hence, it could be argued, that shareholders investing in family firms need to be remunerated with abnormal positive returns for the potential risk of a loss in the short run, induced by a long-term oriented investment behavior.

6.1.4 Firm size

The above investigation on the Swiss stock market did not explicitly control for firm size. However, firm size and stock market performance are known to be negatively related as observed by Fama and French (1992, 1995).

As below Table 13 displays, family firms tend to be smaller in terms of market capitalization. However, a T-test on equality of means of market capitalization of family and nonfamily firms did not display any significant differences.

Table 13: Market capitalization of family and nonfamily firms

Data sample: Sample Nr. 5, Table 2. T-test on equality of means for family and nonfamily firms.

		Market capitalization in '000 CHF				
	n	Mean	Standard Error of Mean	Maximum	Minimum	Significance
Nonfamily firms	128	4'887'555	1'655'295	138'565'210	6'175	0.253
Family firms	91	2'357'296	1'191'052	106'800'223	12'500	

Hence, the answer whether the outperformance of family firms is explained by a size effect can not be answered at this point and needs to be further investigated.

6.1.5 Conclusion and outlook

In sum, the study finds three noteworthy explanations for the excess stock market performance of family firms on the Swiss stock market: first, lower analyst forecast dispersion induced by a specific information setting nurtured by more stable operating profits and earnings per share; second, a reward for investors for the lower market liquidity of these shares; and third, a compensation for the instantaneous default risk induced by riskier investment projects commensurate with the longer holding period of family firms.

After having analyzed the stock market performance of publicly quoted family firms, the following chapter will examiner the valuation of privately held firms.

6.2 The value of privately held family firms

Whereas the valuation of publicly held firms is greatly assisted by the capital market, the valuation of privately held family firms remains a challenge. This chapters intends to work out what is of value in privately held family firms and whether market value incorporates these items.

Even though the term value is often employed in literature and common language, there is no single accepted definition of value. This confusion is rooted in the different ways in which the term value is defined (Klein, 2004). In a first step this chapter will therefore investigate what is of value in privately held family firms and which definition of value is adapted to privately held family firms.

Value can not only be understood as outcome variable of the value creation process. In contrast, values can also be considered as input variables, such as culture, power and experience (Astrachan et al., 2002; Klein, 2004), which affect the resource (re)combination process within the family organization.

In general, for economic sciences with focus on valuation issues, the main interest is put on the objective value. To have an objective value an asset has to be valuable to more than two persons and for more than one moment in time (stability condition) (Spremann, 2002). According to Spremann (2002) the financial value of an asset is the use of the asset measured in monetary terms because of its characteristics and due to its significance for a larger number of persons.

In the finance field Rappaport (1986) operationalized value by referring to the financial outcome of the company. In a recent paper on a firm's value, Villalonga and Amit (2004) define value by Tobin's Q measured as the ratio of the firm's market value to its total assets at replacement costs. Anderson and Reeb (2003b) employ Tobin's Q for the external value and return on assets as the primary performance measure. This last way of looking at value reflects the financial business development and its pecuniary effect on the firm's outcome (Meyer, 2002) and has a long-standing tradition in management science. For example, one of the most important asset pricing models, CAPM, refers back to the works by Markowitz (1954 and 1959) and Tobin

(1958) who laid the foundations for the development of CAPM by Sharpe (1964), Lintner (1965), Mossin (1966) and Black (1972).

In contrast, microeconomic theory posits that the value of an asset equals its marginal price. Therefore, the value of the good is defined by the value of the next best alternative (Mankiw, 2004).

In the psychological field, however, value refers to a core concept rooted in one's personality in early years, stable over time and situations, leading to beliefs and guiding action (Rokeach, 1973; Rosenkind, 1981; Klein, 1991).

In the family firm, value can also have a sociological dimension. In this type of firm, values direct and legitimate managerial decision making. The shared values of a sense of belonging, honesty, loyalty, trust and respect within a family firm are collectively referred to as embodying a family culture (Haugh and Mc Kee, 2003).

The following text raises several questions on the appropriateness of the above definitions of value for privately held family firms.

Firstly, the approach typically taken by practitioners engaged in financial valuation assumes that a hypothetical buyer will be purchasing the firm. As such, this supposedly *objective* valuation is geared toward what a buyer's expectations would be regarding the riskiness of the firm's cash flows. To complete a transaction, a buyer and seller ultimately have to agree on the valuation or purchase price. Market transactions validate the methodology used to determine the firm's value.

However, valuation methodologies and market prices often fail to consider the value of a firm to an individual who is not offering the firm for sale but intends to keep the firm in the hands of family for the succeeding generations (*subjective* value). If family shareholders tend to prefer strategies that result not only in the maximization of shareholder wealth (similar to dispersed shareholders of nonfamily firms) but also in the maximization of their private benefits (Maury and Pajuste, 2005; Atanasov, 2005; Lyagoubi, 2003), value and valuation should not exclude the nonfinancial dimensions of value as they are essential to the assessment of subjective value. Similarly, Neely and Adams (2001) state that business performance is itself a multi-faceted concept and asks for performance measurement systems that take more than only the economic

criteria into account. This call is based on the assumption that the output of the economic organization is not merely monetary.

This text agrees with Klein (2004) who assumes the nonfinancial output of company to be more important for long-term oriented and personally engaged shareholders than for the anonymous shareholder with a short-term investment perspective.

Therefore, particularly family firms with less dispersed ownership structure are more likely to concentrate on relevant nonfinancial outcome. This nonfinancial value might be affected by the subjective needs, preferences and beliefs of the entrepreneurs and their families. With the concept of "family value" Spremann et al. (2001) take a step in this direction, considering the survival of the firm as the ultimate goal of family firms. Spremann et al. (2001) find that family values are characterized by concentrated ownership, illiquidity of shareholdings, minimization of shortfall risk, long investment horizon and independence.

Secondly, subjective value is difficult to measure as it is biased by the individual's goal set and is, therefore, idiosyncratic. The difficulty lays not only in the sheer diversity of individual goal sets but also in the nature of the goals. Goals are often grounded on values, e.g. independence and control over the firm, and are thus difficult to measure and to convert into monetary units.

Thirdly, while values are rather stable, it is unclear whether the value an individual is attributing to his firm is stable or changes over time as emotions do (Klein, 1991). For example, it is questionable whether family harmony (e.g. quarrels leading to lower, harmony to higher values) or also the age of the person (e.g. increasing emotional ties with the firm with increasing age) affect the idiosyncratic valuation of the firm. Thus, value as considered by the individual entrepreneur might not satisfy the stability condition set up by traditional finance researchers.

Fourthly, the concept of the next best alternative might be a comprehensible concept in microeconomics; in the case of a firm owned for generations by the same family a next best alternative to ownership and control might simply not exist. In other words, the monetary exit costs paid by the family can be very high due to failing or inefficient capital and labor markets (Schulze et al., 2000). Nonmonetary exit costs can be high as well, if exiting the family firm induces for example a loss in social prestige (Ehrhardt

and Nowak, 2003b). Therefore, for many family firms a corresponding next best alternative to the present situation is not conceivable. In addition, a next best alternative can be very diverse for different individuals. For example, a co-owner / manager of a family firm could perceive the continuation of the firm as the next best alternative to its sale even though the firm does not perform at all. A financially motivated sibling, on the other hand, could consider the sale of the equity stake at the highest price as the next best alternative.

Fifthly, as mentioned earlier, financial value is not the main goal to many family entrepreneurs not only because they strive for nonfinancial goals. As family entrepreneurs consider their firms as an asset to pass on to their relatives in the future, they will hardly ever be able to capitalize on an increase in firm value. In many cases family entrepreneurs financially profit only from higher dividends (Schulze et al., 2003a) and other individual gains, like amenities and perks.

Finally, well-introduced valuation techniques such as capital asset pricing model (CAPM) assist greatly in the process of valuation (Ross, 1976). The assumptions behind CAPM, as constant risk aversion, diversified investment, minority shareholders / price takers, liquidity of markets, inexistence of information asymmetry and irrelevance of time horizon, however, display shortcomings for the valuation of family firms, be they quoted or unquoted (for details refer to Table 24, chapter 6.3.1).

In sum, a valuation methodology for privately held family firms, and particularly for those that are not for sale, requires an understanding not only of standard valuation methodology, but also of how to quantify, in monetary units, the owner's own preferences regarding monetary and nonmonetary goals.

The subsequent chapters will first discuss the importance of monetary value as perks and other financial gains and their impact on the financial value of privately held family firms. Then, the text will investigate the nonmonetary values the entrepreneurs derive from their firms by introducing the concept of total value.

6.2.1 Individual financial gains

Even if Mc Conaughy (2000) finds that family CEOs have lower levels of compensation and require fewer compensation-based incentives than nonfamily CEOs there is evidence that family firms have sources of monetary gains other than salary. Today, there is at least some empirical evidence of the existence of such individual financial gains as perks and perquisites in family firms (Morck et al., 1988; Johnson et al., 1985; Maury and Pajuste, 2005; Atanasov, 2005; Lyagoubi, 2003). However, these funds have not yet been systematically considered as an integral part of value.

Little is known about the monetary compensation of family entrepreneurs, the exact total amounts the family entrepreneurs are drawing from their firms, or for what purposes they are using these funds. In particular, it is of interest to make transparent the individual financial gains, e.g. perquisites that are mainly for private purposes but are accounted for in the firm's bookkeeping. Franks and Mayer (1997) consider that tax system induced advantages of business expenses over private expenses might need to be considered when analyzing private benefits. Franks and Mayer (1997) however do not provide any model of analysis nor empirical data on the subject.

Through the control the family entrepreneurs can exercise over their firms, family firms are hypothesized to display higher individual financial gains than nonfamily firms.

The analysis below on 59 Swiss privately held firms confirms above hypothesis: individual financial gains in family firms in the given sample were on average 26'722 CHF annually, which amounts on average to 31% of cash flow. For nonfamily firms these figures were significantly lower (Table 14).

Table 14: Annual individual financial gains in family and nonfamily firms

Data sample: Sample Nr. 6, Table 2. Statistical test applied: Monte Carlo p values <= 0.05. Individual financial gains (IFG): benefits and consumption that is mainly for private purposes but is accounted for in the firm's bookkeeping.

	Family firms	**Nonfamily firms**
Mean sales volume in CHF	1.27 Mn	1.5 Mn
Mean Cash Flow in CHF	86'200	78'600
Mean IFG in CHF	26'722 *	7'786 *
Mean IFG in % of Cash Flow	31% *	10% *
Std. Dev. of mean IFG in % of Cash Flow	149% *	4% *
N	45	14

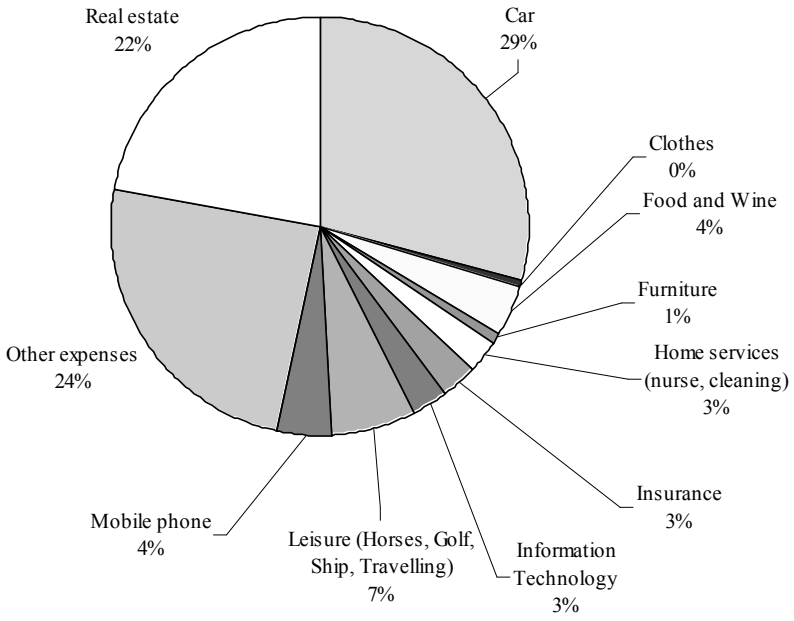
* Significant difference between family and nonfamily firms.

The standard deviation of individual financial gains of 149% for the family firms is significantly higher compared to the nonfamily firms. For the family firms, there were companies that displayed individual financial gains of three times cash flow. On the other extreme, certain family firms displayed a negative cash flow but still took out individual financial gains at the level of twice the absolute cash flow amount.

The individual financial gains are used for many purposes and mainly consist of perquisites (Figure 36), such as car allowances, real estate investment, telephone expenses, insurance costs, food and wine, leisure activity.

Figure 36: Individual financial gains and their utilization

Data sample: Sample Nr. 6, Table 2. Mean sales volume of firms: 7.2 Mn CHF. No statistical test applied. Individual financial gains (IFG): benefits and consumption that is mainly for private purposes but is accounted for in the firm's bookkeeping.



As all firms are from construction industry, real estate investment make up the largest parts of individual financial gains. This provides evidence to the argument by Himmelberg et al. (1999) that assets with a high specificity, e.g. real estate, are more difficult to monitor in comparison to purely monetary flows. Therefore, construction industry might be particular susceptible to the use of individual financial gains.

The present chapter hypothesizes that there are two ways how individual financial gains affect firm value: first, through a tax effect that derives from the allocation of individual financial gains to private or business accounts, and second through an agency effect.

6.2.1.1 Tax effect

The allocation of benefits and expenses in private or company accounts raises the question about a tax effect of such behavior. It is hypothesized that the acquisition of certain goods in the name of the company, even if their use is mainly private, provides monetary gains to the family in the form of a tax shield.

It would be inappropriate to add individual financial gains directly to the entity value of the firm. Because traditional valuation methods already account for all cash flows deriving from the business (as discounted cash flow method), adding individual financial gains directly to the entity value of the firm would mean counting these cash flows twice. Therefore, only the tax effect of individual financial gains has an impact on entity value. Entrepreneurs have the possibility to earn a positive tax shield through the allocation of individual financial gains on company accounts as this lowers the earnings tax burden of the firm.

Due to this tax shield controlling managers of family and privately held firms have an incentive to pay individual financial gains with company money. This annual tax shield from consumption allocation can be defined as follows:

Earnings tax **before** deducing individual financ. gains — Earnings tax **after** deducing individual financ. gains

$$TS_{annual} = CE * ETR - (CE - IFG) * ETR$$

$$TS_{annual} = IFG * ETR \qquad \textbf{Formula 1}$$

With: TS: Tax shield, CE: Company earnings, ETR: Earnings tax rate, IFG: Individual financial gains.

For the group of 59 analyzed small to mid sized privately held firms introduced in Figure 36 with a mean sales volume of 7.2 Mn CHF this annual tax effect amounted on average to 7’482 CHF (Table 15).

Table 15: Market value and individual financial gains of privately held firms

Data sample: Sample Nr. 6, Table 2. Mean sales volume of firms: 7.2 Mn CHF. Mean cash flow: 126'500. All firms are from construction industry. For the determination of costs of capital refer to Table 32, Appendix.

Individual financial gains	A	26'722 CHF
Earnings tax rate (source: Table 32)	B	28%
Estimated entity value Assumptions for cost of capital based on data available: - Mean cash flow: 126'500 CHF - WACC: 8.55% (source: Table 32) - Growth rate: 0.88% (source: Table 32) => Cost of capital: 7.67%	D	1'629'726 CHF
TS_{annual}	E = A * B	7'482 CHF
TS_{total} Assumption: discounted with 7.67%	F = E / 7.67%	97'549 CHF
Impact of TS on entity value	G = F / D	6.0%

By letting a certain part of their private expenses run through company accounts, shareholder value is therefore not destroyed but created and transferred to the owners, e.g. family members.

In addition, the tax effect derived from individual financial gains adds an extrinsic dimension to the question of why family business managers run their businesses at lower salary levels. Based on the assumptions regarding the costs of capital stated in Table 32 the tax effect amounts to 6.0% of the entity value of these firms. Hence, whether family managers compared to nonfamily managers are worse off due to lower salary levels therefore depends not only on the wage difference. As shown above this tax effect can be considerable and might well offset the lower wages.

Besides the assumptions regarding the costs of capital, the following limitations need to be considered regarding this tax effect.

Firstly, the size of the tax effect depends on the legal framework since it determines the kind of items and their maximum value that can be acquired via company accounts.

Secondly, it remains open at this point at what rate the individual financial gains should be discounted. Even though in above example the same discount rate was applied as for the cash flows of the firms, it might be possible to apply a lower discount rate for the individual financial gains. Given that the entrepreneur has the liberty to allocate private consumption to company accounts even if the firm displays negative cash flows, the discount rate might be lower as these cash flows are less risky.

In sum, above discussion provides additional insight into the importance of tax issues in family firms, which Aronoff and Astrachan (1996) and similarly Hoy and Verser (1994), consider as one of the biggest disincentives to growth for the family business. According to above empirical findings whether tax issues generally hamper the growth of family firms can be questioned. Heritage taxes might indeed hamper the growth of firms as passing the firm over to a subsequent generation gets increasingly expensive. However, by allocating individual financial gains to company accounts the owners earn a tax shield which derives from the fact that taxable income is reduced. Hence, the consumption of perks does not necessarily destroy shareholder value but rather create it to the extent of the tax shield introduced above.

6.2.1.2 Agency effect

There is also an agency implication related to the allocation of private consumption to company accounts as other (family) shareholders, trade creditors, banks and further financial claimants are expropriated. In financially healthy companies such behavior does not endanger the claims and contracts of the other stakeholders. However the above analysis revealed that some firms exhibited individual financial gains even if their firms displayed negative financial performance. For one firm these individual financial gains even amounted to twice the negative cash flow amount. Hence, consumption of private goods can become abusive if the family finances a lifestyle at the costs of the other financial claimants and stakeholders.

The above findings for privately held firms are in line with the conclusions presented by Morck et al. (1988) for publicly held firms who suggest that founders may be able to extract more from their firms than nonfounder executives. Latest research on

tunneling of private benefits by large blockholders (Atanasov, 2005; Maury and Pajuste, 2005) support the Fama and Jensen (1983) view that majority-owned firms cannot persist as publicly traded corporations if the expropriating activities of controlling blockholders are not legally restricted.

In this context Johnson et al. (1985) find higher positive excessive returns at the sudden death of a founder compared to the sudden death of a non-founder. Moreover Johnson et al. (1985) report that where the CEO was also the founder, the share price (adjusted for general market movements) increased approximately 3.5% while for non-founder deaths, the share price changes were not statistically significant. The authors reason that the positive excess returns are a market response which anticipates that cashflows formerly going to the founder will accrue to the outside shareholders. Similarly, Slovin and Sushka (1993) report a stock price increase of 3.01% on average in the first two days after the announcement of the death of inside blockholders. The unexpected death leads to expectations of change in internal or external control that will improve the firm's operating performance (Halpern, 1999).

The illustrated empirical results provide additional evidence to the cited research and support the conclusion that inside blockholders, even if they are family members, do not generally behave in a manner which maximizes the wealth of all shareholder. These findings are an indication of the existence of agency costs in family and closely held firms (Schulze et al., 2003a and 2003b).

6.2.1.3 Conclusion and outlook

To conclude, the discussion on the allocation of individual financial gains revealed two main effects. On the positive side, the allocation of private goods in company accounts can be rational as it provides a tax shield deriving from a reduced income to be taxed. The size of this tax shield depends on the tax regime. For the sample analyzed, consisting of small and mid sized Swiss family firms in the construction industry, this tax shield amounted to 6.0% of the estimated entity value for these firms. On the negative side the consumption of private goods in the name of the company needs to be considered as an agency cost which the noncontrolling financial claimants have to bear.

Hence in the eyes of the shareholder, tunneling private expenses through company accounts does not necessarily reduce shareholder value. Shareholder value is rather created to the extent of the tax shield introduced above.

The above chapter on the tax effect of consumption allocation revealed a monetary benefit the family managers derive through the control over their firms. The subsequent chapter strives to shed light particularly on the nonmonetary values the entrepreneurs derive respectively attribute to their firms.

6.2.2 Total value

In sum, considerations regarding the question of what is of value in the family firm, investigated in the introduction to chapter 6.2, revealed that other values than financial value are predominant in a family firm's management decisions. Those values could include profitability, low debt level, family wealth, survival and independence respectively control of the business (Spremann et al., 2001).

Therefore, to advance in the field of valuation and value management in family firms and privately held firms in general, a specific valuation technique is required that accounts for above-described specificities and is able to measure "total value".

Total value is introduced as a multi-faceted concept to describe the main references for entrepreneurial activity in the family firm and stands in contrast to the mono-dimensional traditional financial value often considered as the main goal for managerial activity. It is a monetary amount that typifies the individual subjective goal set of the person. Total value is defined as follows:

Total value is the *subjective monetary value* an individual manager is attributing to his firm and indicates the value for which he would sell it today to a third independent investor.

The importance of such a measure can be illustrated with an experiment on which 59 managers of privately held firms in the Swiss construction industry participated. The analysis of their financial statements revealed that the mean return on equity was 3.3%

(Data source: Sample Nr. 6, Table 2). This ratio is barely above the internal rate of return of the 10 year Swiss treasury bond, which in September 2005 was at 2.8% (Data source: Neue Zürcher Zeitung, www.nzz.ch), and below average market risk premium (μ_m-i) of 4% to 6% for publicly quoted firms (Copeland et al., 2000, with comparable values for Switzerland).

The same entrepreneurs were interrogated about their willingness to sell their firms at market prices, which would give them the opportunity to invest the money in more profitable and seemingly less risky assets.

For each firm an entity value was calculated by discounting the cash flows, as proposed by Damodaran (1999), using a capitalization rate of 7.67% (refer to chapter 6.2.3.2 and Table 32 in the Appendix for the details on the discount rate applied).

Although the estimation of the discount rate represents a certain limitation to the precision of the entity values calculated, the so derived firm values represented prices at which the market for corporate control would have value the firms.

The mean objective entity value of the firms amounted to 1.63 Mn CHF. All of the 59 firms analyzed were privately held firms and had from 9 to 210 employees and a mean sales volume of 7.2 Mn CHF. The entrepreneurs were questioned in qualitative interviews as members of focus groups with 7 to 12 entrepreneurs who meet five times a year to exchange management and business related experience.

None of the 59 controlling owners was willing to sell its firm for the price at which the market for corporate control valued them. All of them mentioned that the market value calculated was below the total value they would assign to their own firms.

Although there are some limitations to this proceeding (e.g. methodology of valuation, flawed answers by groupthink effects (Janis, 1972), raised awareness for the concept of total value through discussion) this preliminary survey delivered three noteworthy results.

First, the answers show that valuation methods used to calculate an objective market price hardly reflect the subjective value an entrepreneur assigns to his firm. The entrepreneurs' understanding of value was not well reflected in the market prices calculated by the traditional valuation method.

Second, the discussion revealed that the respondents did not show much interest in the discussion about the correct valuation technique and the resulting value of their firms. Therefore, this investigation delivered further evidence that financial value in the traditional sense is not a main goal to family entrepreneurs. Capitalizing on an increase in firm value was not of interest to them because most of them considered their firms as an asset to bequeath to future generations (Casson, 1999; Chami, 1999; Becker, 1981).

Third, the investigation revealed that in most cases the entrepreneur's subjective value was higher than the objective price calculated with traditional valuation techniques. Lovallo and Kahneman (2003) have analyzed comparable manifestations of what they call overoptimism. The authors find that managers display overoptimism regarding the appraisal of risky projects. The authors find that humans and particularly managers tend to overestimate the positive outcomes and values of some risky projects. According to this overoptimism bias, it is not surprising that entrepreneurs overvalue their firms if it should be sold, in particular if they feel reliable for it as in the case of owner managers of family firms.

The concept of total value strives to fill the gap between objective price and individual value. In this sense, the following chapters try to provide additional insight into where this overoptimism in the valuation of firms derives from.

6.2.2.1 Model

Total value (TV) is defined as the market value of the company (MV) plus emotional value (EV). The market value of a firm represents the reward for the monetary achievements of the entrepreneur. In contrast, if the entrepreneur particularly aspires towards the achievement of nonmonetary goals, emotional value is interpreted as a compensation of the entrepreneur for his efforts to attain these nonmonetary business goals. Hence total value is considered as the sum of these financial and emotional efforts and achievements.

$$TV = MV + EV \qquad \textbf{Formula 2}$$

With:

TV: Total subjective value to the owner

MV: Market value, defined as the objective price the market for corporate control values a firm

EV: Emotional value and costs of the firm to the owner

Market value of a company is either available on a public market for the respective firm or can be calculated by applying well researched valuation techniques. Within the above model total value is indicated by the entrepreneur. Emotional value is considered as a residuum that is priced as the difference between total value and market value.

Emotional value can be smaller or larger than 0. An emotional value smaller than 0 indicates that the price the entrepreneur assigns to his firm (total value) is smaller than the market price he would attain on the market for corporate control. Under this condition, the entrepreneur has an incentive to sell the firm.

If MV > EV + MV **Formula 3**

Then Sell the company, as EV < 0

It is hypothesized that in most cases managers of privately held firms will overestimate the value of their firms. This overestimation of value might be a manifestation of insider knowledge the entrepreneurs have which outsiders lack. Lovallo and Kahneman (2003) provide a further explanation to this by stating that individuals tend to be overoptimistic with regard to the valuation to their proper achievements. In line with the observations by Lovallo and Kahneman (2003) the model of total value argues that this overoptimism bias can be measured by emotional value.

Hence, it is hypothesized that emotional value in most firms is larger than zero. An emotional value larger than zero indicates that the entrepreneur assigns a higher value to his firm than could be achieved on the market for corporate control. Under this condition, the entrepreneur has an incentive to keep the firm.

If MV < EV + MV **Formula 4**

Then Keep the company, as EV > 0

The above introductory remarks raise the question about the influencing variables and the possible forecast of total value and emotional value. Answers to these questions not only provide insight into the entrepreneurs' real rationales and decisions but help determining offer prices and price ranges for financial market transactions when firms are involved that are strongly dominated by individual persons or groups of persons (e.g. a family) with emotional ties to their firm.

Therefore, the following subchapters address the significance, the influencing variables and the possible forecast of total value and emotional value. Chapter 6.2.2 investigates total value. Chapter 6.2.3 focuses on emotional value.

6.2.2.2 Development of hypotheses for total value

As introduced above, total value is defined as the subjective value the entrepreneur assigns to his firm. If entrepreneurs indicate that they follow a complex set of goals dominated by the strive for independence and the will to assure the survival of the firm (Ward, 1997; Spremann 2002) it is hypothesized that family firms will particularly price results assuring the independence and the survival of their firms. As firms with higher economic income (e.g. cash flow) but also larger and older firms are less likely to default (Cantor and Packer, 1995) entrepreneurs are expected to price these variables with total value. It is therefore hypothesized that total value rises in the three dimensions of firms size, firm age and cash flow. This leads to the following hypotheses:

Hypothesis 9:

Total value increases with the sales volume of the firm.

Hypothesis 10:

Total value increases with the firm's age.

Hypothesis 11:

Total value increases with the cash flow of the firm.

In many privately held firms and particularly family firms one can observe emotional attachments between the governing persons and their firms (Sharma and Manikutty, 2005). Sharma and Manikutty (2005) argue that these emotional ties are growing over time, take a long time to establish and are particularly nurtured by the past success of the firm.
On the positive side, such emotional attachments assure the commitment of the person for his firm (Levinson, 1971). On the negative side, these attachments can lead to emotional entrapment and path dependencies which in turn result in inertia, for example toward divestment of unsuccessful activities in a timely manner (Sharma and Manikutty, 2005). Such emotional attachments might therefore cause a bias to overestimate the value of an activity beyond its financial value, supposedly represented by a higher total value. As such emotional attachments take time to establish and are growing over time it is hypothesized that total value rises with the age of the entrepreneur.

Hypothesis 12:

Total value increases with the age of the entrepreneur.

If one reconsiders the definition of family influence (the share of the family in ownership, management board and supervisory board) it can be expected that family firms with high family influence tend to display stronger emotional attachments between the family and the firm. It is hypothesized that firms with high family involvement tend to display higher emotional attachments to their firms (Sharma and Manikutty, 2005). Consequently, family firms with high family influence are expected to display higher total values than firms with lower family influence.

Hypothesis 13:

Total value is higher for family firms with high family influence.

Habbershon (2005) finds that multi-generational family firms often undertake initiatives to assure their entrepreneurial legacy for the coming generations. If family members derive reputation from the fact that the firm has been managed by the own family for generations and if reputation can be considered as a private benefit of control (Ehrhardt and Nowak, 2003b), family firms are expected to value this legacy. This leads to the hypothesis that families having managed to preserve the legacy of the founder, for example through active contribution of a descendant of the founder in the firm, will display higher total values.

Hypothesis 14:

Total value is higher if descendants of the founder still are active in the firm.

Jensen and Meckling (1976) predicted higher firm values for firms in which ownership and management are controlled by one single person or a small group of persons with aligned incentives. As outlined in chapter 4.3.3, even when the ownership is closely held in a small group of people, e.g. a family, costly agency conflicts may arise. Only in the status of controlling owner, incentive alignment is assured and the entrepreneur has the possibility to freely allocate his resources according to his specific goal set without fear of causing agency costs for example due to altruism (Schulze et al., 2003b).

In contrast, if sibling partners with 2 to 4 shareholders display increased concern for their own children and other nonfamily members (e.g. in-laws, Schulze et al., 2003b), family conflicts arise regarding the allocation of resources (e.g. funds) but also with respect to the strategic direction of the company. The rivalry of interests requires that the siblings grant concessions at the expense of their individual goal sets in order to assure the continuity of the firm.

Hence, whereas the controlling owner has the liberty to lead his firm according to his idiosyncratic goal set, siblings need to make concessions in this respect. Consequently,

total value is expected to be lower for sibling partnerships than for firms with a controlling owner.

Answering this hypothesis also has explicative power about the limited growth ambitions of family firms. De Visscher (2004) finds that many families are found to be content to run a good business without ambitious growth targets and the will to bring in outside capital and control. With regard to above arguments, controlling owners might not be willing to grow their firms beyond that level and share their power for example with siblings as this would cost them total value.

Hypothesis 15:

Total value is higher for firms in the state of controlling owner than for firms with sibling partnership.

By indicating a subjective value of their firms the concept of total value assumes that entrepreneurs specify the compensation for monetary and nonmonetary efforts and achievements of their activity. Whereas market value compensates the entrepreneurs for their monetary success, emotional value might be interpreted as a manifestation, in monetary units, for the emotional gains and costs the entrepreneur considers he is bearing through his commitment for the firm.

One might argue that past negative experiences (e.g. stress) do not affect behavior in the present, as they are considered as sunk cost. However, it is expected that with total value managers indicate compensation for both - their achievements *and* their efforts to reach theses achievements.

Within the concept of total value, the achievements are expected to be compensated by market value. This is due to the fact that market value is strongly affected by economic income as cash flow (Copeland et al., 2002). Hence, total value is expected to rise with economic income (refer to Hypothesis 11).

In contrast, efforts to reach these achievements are not priced by the market but are expected to be priced by the entrepreneurs and incorporated within total value. For example, the stress to build up the firm, the efforts to assure its growth or the pressure to turn it around are not incorporated in market value. Similarly, conflicts within the

firm (e.g. within the family) are not priced by the market but might represent difficult moments for the entrepreneur, and are therefore priced in total value. Furthermore, entrepreneurs might consider the advantages his past efforts represent for the new owner who will not have to undertake these efforts anymore. Hence, it is expected that the stronger these subjectively felt efforts have been, the higher is total value.

If above considerations on total value hold true, it can be hypothesized that entrepreneurs who consider their activity as troublesome and consider themselves as rather unhappy display higher total costs for which they require compensation. In contrast, in the case of the sale of the firm, happy people are expected to require lower compensation than rather unhappy people.

To measure happiness the entrepreneurs were interrogated about their individual happiness as evaluated by themselves. This procedure follows the literature by Frey and Stutzer (2000 and 2001), Oswald (1997) and Myers and Diener (1996) who have examined economic performance and happiness. This stream of research has validated the procedure to directly ask individuals about their individual happiness. The question these authors propose and which the entrepreneurs were asked in present study is: "Taken all together, how would you say things are these days-on a scale from 1 to 10, 1 being completely unhappy, 10 completely happy-how happy are you?"

Hypothesis 16:

Total value is lower for people who consider themselves as rather happy.

6.2.2.3 Data, measures and methods for total value

The investigation of above hypotheses relies on Sample Nr. 7, as outlined in Table 2. The data set consists of 958 questionnaires originally sent to 10'000 entrepreneurs in Switzerland. The return rate of 9.58% is slightly below the 10-12% return rate typical for studies which target executives in upper echelons (Koch and Mc Grath, 1996).

The dependent variable, total value was asked for in the questionnaire with the following question: "Which value, in monetary terms, do you personally attribute to

your firm? Put in other words, which amount of money would an independent investor have to pay you today to buy your firm?" The respondents indicated values ranging from 10'000 to 52 million CHF.

The empirical analysis included 8 independent variables. Sales volume was indicated in categories and had therefore to be codified in dummy variables (≤ 2 mio CHF, 2 ≤ 10 mio CHF, 10 ≤ 50 mio CHF, > 50 mio CHF). Cash flow, age of the firm, age of the respondent and number of shareholders are metric variables. Family influence was measured by substantial family influence as defined in chapter 3.1.4. The variable indicating whether a descendant of the founder was still active in the firm is (0/1) codified. Number of shareholders was also indicated as a metric variable. Happiness was measured on a scale from 1 to 10 and was also considered as metric.

6.2.2.4 Results for total value

Hypothesis 9 and Hypothesis 10 are verified. Oneway anova test for the means of total value report that total value increases in the sales volume and the age of the firm (Table 16). Hypothesis 11 was also verified (Table 16). Total value increases in the cash flow of the firm. Further evidence derives form the correlation analysis reported in Table 18.

Hypothesis 12 is verified as well (Table 17). Total value increases significantly with the age of the entrepreneur. This can be due to the aforementioned emotional attachments or the fact that older people tend to manage larger firms.

Hypothesis 13 which hypothesized that total value is higher for family firms with high family influence in comparison to firms with low family influence is only partially verified (Table 17). In addition, it could not be shown that family firms display higher total values than nonfamily firms, even when controlling for size. This experiences further evidence when analyzing the correlation between the generation active in the firm and total value which does not show any significant correlation (Table 18). Apparently, family influence, be it measured by Substantial Family Influence or the active generation, is not a main variable affecting total value in this sample.

However, if descendants of the founder are still active in the firm, total value is higher. Hypothesis 14 is therefore verified (Table 17). Apparently, firms in which a

descendant is still active are regarding this characteristic as valuable. This provides additional evidence to the fact that in firms with active descendants of the founder, the subjectively felt achievements and efforts are priced significantly higher compared to firms with no legacy of the founder.

Hypothesis 15 is verified as well (Table 17). As expected controlling owners are attributing higher values to their firms than sibling partners do. Additional evidence derives from the correlation analysis reported in Table 18.

Hypothesis 16 is verified as well. As expected, rather unhappy people tend to display stronger overvaluation of their firms than rather happy people (Table 17). This result provides evidence that entrepreneurs indeed price emotional, nonmonetary factors when valuing firms. In particular, the statistical details provide evidence that entrepreneurs who subjectively feel unhappiness, interpreted as a manifestation of stress, efforts and conflicts in the firm and possibly also in private life, strive to get compensated for their unhappiness.

Additional evidence is provided in the correlation analysis provided in Table 18.

Table 16: Total value: descriptive statistics and comparison of means-full sample

Data sample: Sample Nr. 7, Table 2. The data includes family and nonfamily firms, besides for the test on family influence in which only family firms are included. The table reports descriptive statistics and T-tests. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

Descriptive statistics

	Total value
Minimum	10'000
Maximum	52'000'000
n	544
Mean	7'069'436
Standard deviation	9'452'174

Sales volume

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. <=2 Mio. CHF	123	777'341	1'149'809	1-2	0.000 **
				1-3	0.000 **
				1-4	0.000 **
2. 2 <= 10 Mio. CHF	213	4'786'667	5'892'731	2-1	0.000 **
				2-3	0.000 **
				2-4	0.000 **
3. 10 <= 50 Mio. CHF	177	12'525'706	10'680'224	3-1	0.000 **
				3-2	0.000 **
				3-4	0.014 *
4. >50 Mio. CHF	28	18'226'786	14'994'483	4-1	0.000 **
				4-2	0.000 **
				4-3	0.014 *

Cash Flow

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. <=50'000 CHF	97	1'849'722	3'158'533	1-2	0.987
				1-3	0.001 *
				1-4	0.000 **
2. 50'001 - 100'000 CHF	64	2'227'083	3'076'316	2-1	0.987
				2-3	0.041 *
				2-4	0.000 **
3. 100'001 - 400'000 CHF	170	3'803'401	4'412'120	3-1	0.001 *
				3-2	0.041 *
				3-4	0.000 **
4. > 400'000 CHF	205	11'498'452	9'942'894	4-1	0.000 **
				4-2	0.000 **
				4-3	0.000 **

Age of the firm

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. <= 25 years	139	3'859'878	7'103'353	1-2	0.000 **
				1-3	0.014 *
				1-4	0.000 **
2. 26 - 50 years	131	8'082'443	10'066'704	2-1	0.000 **
				2-3	0.992
				2-4	0.791
3. 51 - 75 years	89	7'314'045	8'854'939	3-1	0.014 *
				3-2	0.992
				3-4	0.398
4. >= 76 years	117	9'608'547	9'861'136	4-1	0.000 **
				4-2	0.791
				4-3	0.398

Table 17: Total value: comparison of means-full sample

Data sample: Sample Nr. 7, Table 2. The data includes family and nonfamily firms. The table reports descriptive statistics and oneway Anova tests for total value and other variables. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

Age of the entrepreneur

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. up to 40 years	87	3'883'103	6'645'732	1-2	0.002 **
				1-3	0.000 **
2. 41 - 60 years	339	7'365'142	9'740'930	2-1	0.002 **
				2-3	0.050 *
3. 61+ years	91	9'616'593	9'993'360	3-1	0.000 **
				3-2	0.050 *

Low and high family influence (only family firms)

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. SFI [1; 2[low family influence	157	6'234'713	11'556'044	1-2	0.069
2. SFI [2; 3] high family influence	223	7'980'045	8'448'309		

Descendants of the founder in the firm

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. Yes	294	7'878'605	9'533'188	1-2	0.050 *
2. No	225	6'226'947	9'480'515		

Number of shareholders

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. 1 shareholder	142	8'573'732	10'994'467	1-2	0.017 *
2. 2 - 4 shareholders	273	6'281'403	8'223'417		

Subjective happiness

	n	Mean	Standard deviation	Pair wise comparison	Significance
1. Rather unhappy	8	4'575'000	6'770'894	1-2	0.330
				1-3	0.035*
2. Undecided	13	2'434'615	3'030'497	2-1	0.330
				2-3	0.739
3. Rather happy	70	2'194'000	2'247'049	3-1	0.035*
				3-2	0.739

Table 18: Total value: descriptive statistics and correlations

Data sample: Sample Nr. 7, Table 2. The table represents descriptive statistics and Pearson correlations for different variables. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

		Mean	Standard deviation	n	1 Total value	2 Sales 2-9 Mio CHF	3 Sales 10-49 Mio CHF	4 Sales 50+ Mio CHF	5 Cash flow	6 Age of the firm	7 Age of the respondent	8 Substantial family influence	9 Descendants of the founder still active?	10 Number of shareholders	11 Happiness	12 Individual financial gains in % of cash flow	13 Generation
1	Total value	7'069'436	9'452'174	544	1												
2	Sales 2-9 Mio CHF	0.340	0.474	940	-0.197 **	1											
3	Sales 10-49 Mio CHF	0.307	0.462	940	0.400 **	-0.479 **	1										
4	Sales 50+ Mio CHF	0.107	0.310	940	0.275 **	-0.249 **	-0.231 **	1									
5	Cash flow	493'390	611'833	536	0.582 **	-0.155 **	0.383 **	0.264 **	1								
6	Age of the firm	53.3	44.4	859	0.218 **	0.040	0.131 **	0.252 **	0.169 **	1							
7	Age of the respondent	50.3	10.3	894	0.196 **	0.016	0.188 **	0.070 *	0.165 **	0.206 **	1						
8	Substantial family influence	1.731	0.897	767	-0.023	0.114 **	0.059	-0.180 **	-0.060	0.132 **	-0.022	1					
9	Descendants of the founder still active?	0.566	0.496	897	0.086	0.061	0.134 **	-0.016	0.060	0.222 **	0.133 **	0.362 **	1				
10	Number of shareholders	42.9	375.2	850	0.005	-0.010	-0.051	0.166 **	0.114 *	0.129 **	-0.010	-0.190 **	-0.065	1			
11	Happiness	7.763	1.938	890	0.034	-0.024	0.071 *	0.075 *	0.110 *	0.070 *	0.037	-0.026	0.030	0.025	1		
12	Individual financial gains in % of cash flow	5.108	9.998	556	-0.144 **	0.063	-0.114 **	-0.123 **	-0.165 **	-0.080	-0.002	0.023	-0.045	-0.059	-0.021	1	
13	Generation	2.0	1.2	389	0.048	-0.019	0.041	0.133 **	0.074	0.768 **	-0.223 **	0.220 **	0.403 **	0.095	0.032	-0.153 *	1

An ordinary least square regression for total value showed that only happiness, firm age and cash flow have a significant impact on total value.

Table 19: Linear regression for total value

Data sample: Sample Nr. 7, Table 2. The table represents descriptive statistics and ordinary least square regression model for total value. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Descriptive statistics

		Mean	Standard dev.	N
Dependent variable	Total value	5'938'936	7'387'368	376
Independent variables	Happiness	7.718	1.956	376
	Age of the firm	50.8	38.2	376
	Cash Flow	467'163	549'120	376

Model

	B	Std. error	Beta	T	Significance
Fix term	3'326'861	1'190'717		2.793999	0.005**
Happiness	-368'355	143'842	-0.098	-2.561	0.011*
Age of the firm	26'606	7'390	0.138	3.600	0.000***
Cash Flow	8.784	0.516	0.653	17.039	0.000***

R	0.682
R2	0.465
R2 corr	0.461
Standard error	5'425'669
Change in R2	0.465
Change in F	107.730
Change in significance of F	0.000***
Durbin-Watson	2.028

An example should facilitate the interpretation of the above results of the regression: If the happiness of the manager increases by 1 point, total value is expected to decrease by 368’355 CHF. If the age of the firm increases by 1 year, total value increases by 26’606 CHF. And if cash flow rises by 1 CHF, total value is expected rise by 8.784 CHF.

6.2.2.5 Conclusion and limitations for total value

Total value represents the subjective value the firm has in the eyes of the entrepreneur. It was shown that total value increases with the firm's cash flow and the age of the firm but decreases with the entrepreneur's happiness. These three variables are significant in a linear regression model to predict total value for a specific firm respectively for a specific entrepreneur.

Apparently, the entrepreneurs not only consider the economic income - measured by the cash flow - when valuing their firms. It was shown that total value rises with the age of the entrepreneur as the emotional attachments rise with age and time spent in the firm. In addition, it could be shown that entrepreneurs are less likely to overprice their firms if they are rather happy. This finding provides evidence to the interpretation that emotional value can be considered as a recompense for experienced unhappiness induced by the commitment and the efforts for the firm.

The analysis also showed that total value rises with the sales volume of the firm as the likelihood of default of the firm decreases with increasing age (Cantor and Packer, 1995). In addition, the analysis revealed that total value increases if a firm is fully controlled by a single entrepreneur compared to a firm that is controlled by siblings. These differences are supposed to occur due to the rivalry of the individual goal sets amongst the siblings which induce that the siblings have to grant concessions at the expense of their individual goal sets in order to assure the continuity of the firm.

The empirical analysis provided only limited evidence that family firms with high family influence display higher total values than family firms with lower family influence. The empirical results therefore do not fully support the conclusion that with growing family influence the emotional attachments to the family's firm are rising. However, the fact that a descendant of the founder was still active in the firm had a significantly positive impact on total value. In sum, family specific factors do not display strong significant impact on the subjective valuation of a firm in the sample analyzed.

The text revealed that entrepreneurs value both, their monetary achievements and their nonmonetary efforts to attain these achievements. For both elements the entrepreneurs require compensation, as displayed by total value.

One limitation to above analysis is that the statistical analysis could be enhanced in order to further validate the findings. In particular, tests on robustness of the results, on nonlinearity of the variables and on causality would further corroborate the results.
Whereas the valuation of the monetary success by investors has been widely discussed in the literature on valuation (e.g. Copeland et al., 2002) the gains the entrepreneurs derive from nonfinancial values remain a source of challenge. This value is captured by emotional value which will be discussed in the next chapter.

6.2.3 Emotional value

Within the concept of total value, the market value of a firm represents the reward for the monetary achievements of the entrepreneur. In contrast, emotional value compensates the entrepreneur for his success regarding his nonmonetary goals.
If a firm is not for sale, the model of total value predicts that emotional value is larger than zero as the entrepreneur also derives nonmonetary benefits from his firm. Therefore, the relation between emotional value, market value and total value can be rewritten as follows:

$$EV = TV - MV \qquad \textbf{Formula 5}$$

Emotional value is thus considered as a residual claim. Whereas market value is influenced by some financial measures, as for example the present value of some future economic income (Pratt et al., 1996), emotional value is supposed to be affected by the achievements and efforts the entrepreneur subjectively considers as unpriced or not sufficiently priced by the market. For example, the entrepreneur might consider that his predominant business goals as the survival and the independence of the firm are not sufficiently priced by the market. Whereas the impact of capital structure on firm value in monetary terms remains a source of challenge in management sciences (refer to chapters 2.1 and 2.2 for a literature review), high equity levels are mostly considered as valuable by most entrepreneurs as they assure the independence of the firm and reduce control risk for entrepreneurs (Mishra and Mc Conaughy, 1999).

Emotional value is considered as a compensation of the entrepreneur for positive and negative aspects of his activity. Emotional value therefore consists of emotional gains and emotional costs.

On the one hand, emotional gains are nonfinancial gains the entrepreneur experiences from his efforts for the firm, as for example social prestige and reputation (Ehrhardt and Nowak, 2003b). It is expected that if the firm is sold, entrepreneurs will try to get compensated for the induced loss in emotional gain.

On the other hand, emotional costs are nonfinancial costs the entrepreneur experiences through negative aspects from his efforts for the firm. For example, these emotional costs can derive from the pressure to assure the survival of the firm or the responsibility for employees. It is anticipated that if the firm is sold, entrepreneurs will try to get compensated for these emotional costs they had to bear during their commitment for the firm.

Emotional gains and costs can therefore not be charged against each other in the sense that emotional costs are reducing emotional gains. Emotional costs and emotional gains are expected to be additive in the sense that with emotional value the entrepreneur prices both, the loss of emotional gains induced by the sale of the firm *and* a compensation for experienced emotional costs in the past.

$$EV = EG + EC \qquad \textbf{Formula 6}$$

With: EV: Emotional value; EG: Emotional gains; EC: Emotional costs

In line with the model of total value outlined in formula 3 and 4, emotional value can be larger or smaller than 0. It is expected that in most cases managers will overprice their firms and emotional value will be larger than 0. In this case, entrepreneurs have no incentive to sell their firms.

It is expected that emotional value can also be smaller than 0, if entrepreneurs want to sell their firms, even at a lower price than market value. In this case the entrepreneurs do not derive any emotional gains from their firms anymore and don’t even require a compensation for their efforts and commitment to the firm. It is expected that emotional value displays negative valuation when entrepreneurs want to exit the firm.

6.2.3.1 Development of hypotheses for emotional value

As outlined above, emotional value is considered as the difference between total value and market value. In the case that a company is not for sale, emotional value is expected to be larger than zero. This hypothesis is in line with the prediction by Lovallo and Kahneman (2003) that managers tend to display "overoptimism" and overestimate the value of their risky projects. Lovallo and Kahneman (2003) find that managers make decisions based on delusional optimism rather than on a rational weighting of gains, losses, and probabilities.

Hypothesis 17:

Total value is larger than market value.

In contrast to what the market for corporate control prices, the entrepreneurs are expected to price other measures of business success. For example, it is hypothesized that emotional value rises with the firm's size. As measures of size represented by sales volume and number of employees are often published by privately held firms while profit is kept secret, size is expected to affect the entrepreneur's reputation and therefore might positively affect emotional value. In addition, if entrepreneurs are striving to assure the survival of their firms (Spremann, 2002), size but also age of the firms are expected to positively affect emotional value as larger and older firms are less likely to default (Cantor and Packer, 1995).

Hypothesis 18:

Emotional value rises with the sales volume of the firm.

Hypothesis 19:

Emotional value rises with the age of the firm.

Emotional value is expected to be higher in family firms. The fact that two social systems, namely the family and the business, are falling together in the family firm raises the complexity of social relations between the family members. Frequently,

family business founders have a deep emotional attachment to the enterprise (Halter et al., 2005). In this case the enterprise is often considered to be part of the family (Müller-Tiberini, 2001). These emotional attachments take time to establish (Sharma and Manikutty, 2005) but are also expected to survive as long as there are still descendants of the founder active in the firm.

Hypothesis 20:
Emotional value is higher if there are still descendants of the founder in the firm.

As mentioned above, emotional value is a manifestation, in monetary units, for the emotional gains and costs the entrepreneur considers he is bearing through his efforts for the firm. Whereas market value is strongly affected by economic income as cash flow (Copeland et al., 2002) efforts to reach these achievements (the stress to build up the firm, the efforts to assure its growth or the pressure to turn it around) are not priced by the market: However, they are expected to be priced by the entrepreneurs and incorporated within emotional value. Hence, it is expected that the stronger these subjectively felt efforts have been, the higher is total value.
If above considerations on emotional value hold true, happy people are expected to require lower extra payments in addition to market value in the case of the sale of the firm as they face lower emotional costs from their activity. They consider themselves as sufficiently compensated with the market value of their firms. In contrast, rather unhappy entrepreneurs might require higher compensation for this unhappiness, reflected by a higher emotional value.
Again, to measure happiness the entrepreneurs were asked about their individual happiness as evaluated by themselves. This procedure follows the literature by Frey and Stutzer (2000) and Oswald (1997). The question these authors have validated to asses the personal happiness of an individual and which the entrepreneurs were asked in present study is: “Taken all together, how would you say things are these days-on a scale from 1 to 10, 1 being completely unhappy, 10 completely happy-how happy are you?”

Hypothesis 21:

Emotional value is lower for people who consider themselves as rather happy.

Emotional value is expected to price the efforts to attain the predominant business goals in privately held firms, as for example the survival of the firm. If this interpretation holds true, entrepreneurs who consider that the survival of the firm is a challenging task, will display higher emotional values. In this respect entrepreneurs were interrogated concerning the competitiveness of the industry they are active in. In line with above considerations, it is hypothesized that the emotional cost the entrepreneur strives to be compensated for is larger in highly competitive industries, as the struggle for the survival of the firm is considered to be harder.

Hypothesis 22:

Emotional value is higher for firms in competitive industries.

6.2.3.2 Data, measures and methods for emotional value

The investigation of above hypotheses relies on Sample Nr. 7, as outlined in Table 2. The data set consists of 958 questionnaires originally sent to 10'000 entrepreneurs in Switzerland. The return rate of 9.58% is slightly below the 10-12% return rate typical for studies which target executives in upper echelons (Koch and Mc Grath, 1996). This is due to the length of the questionnaire and the financial questions, for example regarding the cash flow and total value, which less entrepreneurs are ready to answer.

The dependent variable, emotional value was calculated as outlined in formula 5, as total value minus market value. Whereas total value was indicated by the respondents themselves, market value was calculated. This represents a challenge as for privately held firms, and therefore most family firms, no market exists that would indicate a price. Hence market values need to be approximated using some valuation method.

"Value today always equals future cash flows discounted at the opportunity cost of capital." This statement by Brealey and Myers (2000) still holds true. Even though many other valuation methods were introduced, discounted cash flow method is still

the most popular. Pratt et al. (1996) summarize: “Regardless of what valuation approach is being used, in order for it to make rational economic sense from a financial view, the results should be compatible with what would result if a well-supported discounted economic income analysis were carried out.”

In order to discount the cash flows provided by the entrepreneurs a cost of capital had to be derived. A discount rate can be divided into the following two elements (Pratt et al., 1996). First, a risk free rate which is the amount that an investor feels certain of realizing over the holding period. This includes a rental rate for forgoing the use of funds over the holding period, and the expected rate of inflation over the holding period. Second, a premium for risk including the systematic risk, which is the risk that relates to movements in returns on the investment market in general, and unsystematic risk, the risk that is specific to the subject investment. Unsystematic risk is however not reflected in the CAPM discount rate, as it should be diversified.

As one can assume the same risk-free rate for public and private companies, the subsequent discussion will focus on the risk premium exclusively. The following elements are the most popular to reflect risk in the discount rate of privately owned companies (Khadjavi, 2003):

1. A basic equity risk premium over the risk-free rate selected as the base,
2. An element reflecting the size effect,
3. One or more coefficients modifying the basic equity risk premium based on industry or other characteristics expected to affect the degree of risk for the subject investment (e.g. beta in CAPM),
4. A final adjustment reflecting judgments about investment-specific risk for the subject investment not captured by the first three elements (unsystematic risk).

The basic formula of cost of (equity) capital in CAPM was derived by Sharpe (1964), Lintner (1965), Mossin (1966) and Black (1972) based on portfolio theory established by Markowitz (1954 and 1959) and Tobin (1958). Its central equation states:

$$\mu_k = i + \beta_k (\mu_m - i)$$

With:

μ_k : Expected return of security k,

β_k : Beta, systematic nondiversifiable risk of security k,

μ_m : Expected return of the market portfolio,

i: Risk free rate.

The specific requirements for discount rates for privately held firms to represent risk as outlined above can be incorporated in above formula.

The equity risk premium over the risk free rate is reflected by $\mu_m - i$ in above formula. Whereas this risk premium for publicly quoted shares amounts to 4 to 6% (Damodaran, 2005, with similar values for Switzerland: Spremann, 2002), the risk premium for privately owned firms needs to reflect the specific risks of this type of firm.

For example, it needs to incorporate a premium for nonmarketability. This premium for nonmarketability is estimated to be 60% of the long-term stock market return which amounts to 8% for Switzerland (Khadjavi, 2003; Zimmermann, 1996). Hence the adapted market return for privately held firms amounts to 12.8% (8% + 4.8%), the adapted risk premium to 12.8%-2.5%, 2.5% being the long-term Swiss treasury bill rate (NZZ, 2005).

In addition, the cost of capital needs to be adapted for a size effect (Fama and French, 1992). Ibbotson Associates (1995, cited after Khadjavi, 2003) estimated size premia for mid-caps (capitalization between \$617 and \$2'570 million) = 1.3%, small caps (capitalization between \$149 and \$617 million) = 2.1% and micro caps (capitalization below \$50 million) = 5.5%. Size premia are in addition to the basic equity risk already modified by the effect of the beta. As all firms analyzed in the sample can be considered as micro caps, a size premia of 5.5% was applied.

In addition, as postulated by Khadjavi (2003) the discount rate of privately owned companies must also respect further characteristics as for example incorporated in beta. As beta differs between industries, industry betas were incorporated in the calculation of market value.

Kahdjavi (2003) asks for further adaptations to the risk premium for other investment-specific risks. For example, a correct estimation of cost of capital must also

incorporate the higher debt levels of smaller firms (Pichler, 2004). In addition, it must respect the tax shield of interest payment on debt. Furthermore, the cost of capital needs to be adapted for differing costs of debt amongst industries and firm sizes (Scherr et al., 1990).

Below calculation of cost of capital is based on a model proposed by Damodaran (2005) adapted for size premia and the considerations outlined above.

$$\text{Wacc} = \text{Debt level}\ (1-t)\ c_d + \text{Equity level}\left[\text{size premia} + i + \beta\ (\mu - i)\right] \qquad \textbf{Formula 7}$$

With:	Explanation	Data source
Equity level	Equity from total assets	Swiss National Census, 2002. For details see Table 32.
Debt level	Debt from total assets	Swiss National Census, 2002. For details see Table 32.
Wacc	Weighted average cost of capital	Calculated according to above formula 7.
t	Tax rate	28% for Swiss small and mid sized firms.
c_d	Cost of debt	= i + basis spread
i	Risk free interest rate	Long term Swiss treasury bond rate: 2.5% (source: NZZ, 2005).
Basis spread	Spread on risk free interest rate	Depending on industry. For details see Table 32.
Size premia	Reflecting the higher default risk of privately owned firms	5.5% for micro caps (source: Ibbotson, 1995).
β	Beta, systematic nondiversifiable risk of security k	Industry specific betas (source: Dow Jones Stoxx 600 Europe Index). For details see Table 32.
μ	Expected return of the market portfolio	Long term return of Swiss stock market: 8% (source: Zimmermann, 1996). Plus premium for nonmarketability: 4.8% (source: Khadjavi, 2003). In total: 12.8%.

As no data for future cash flows were available, the weighted average cost of capital was considered as a capitalization rate. As a growth rate the long-term GDP growth rate of the Swiss economy was applied. This growth rate amounts to 0.88% (Swiss Federal Bureau of Statistics, 2005). The entity value of the firm is therefore calculated as follows:

$$\text{Entity value} = \frac{\text{Cash flow}}{\text{Wacc} - g} \qquad \textbf{Formula 8}$$

With:

Cash flow:	Cash flow,
Entity value:	Value of the firm as opposed to equity value,
Wacc:	Weighted average cost of capital,
g:	Long term growth rate, proxied by the long-term Swiss GDP growth rate: 0.88% (source: Swiss Federal Bureau of Statistics, 2005).

There are certain limitations to above methodology. For example, cash flows could be erroneously indicated by the entrepreneurs. In addition, the adaptations for size and illiquidity might imply some overlap meaning that correction for size might imply also a correction for illiquidity and vice versa.

However, betas, credit spreads, debt and equity levels are industry and country specific where needed. In addition, market returns, risk free interest rates and premia for firm size and illiquidity of shares are all retrieved from reliable sources which provide the fundamentals for the valuation of privately held firms in theory and practice. Considering these limitations, the entity values can be considered as fair proxies for prices paid on the market for corporate control.

The costs of capital per industry are indicated in Table 32 in the Appendix and are calculated by applying Formula 7 and 8 stated on the preceding pages.

For the subsequent analysis, negative market values due to negative cash flows were deleted in order to avoid misinterpretation. Emotional value (EV) was then calculated according to the formula EV = total value - market value. Emotional value was subsequently probed with correlation analysis and linear regression to determine variables affecting it. The next chapter presents the empirical results for the hypotheses and displays a linear regression model for emotional value.

6.2.3.3 Results for emotional value

Below Table 20 indicates the descriptive statistics for total value, market value and total value.

Table 20: Descriptive statistics for total -, emotional - and market value

Data sample: Sample Nr. 7, Table 2. To calculate market value for each firm an industry specific cost of capital was applied as outlined in Table 32. Total value was indicated by the respondents. Total value = market value + emotional value.

Full sample	N	Minimum	Maximum	Mean	Standard deviation
Total value	386	10'000	52'000'000	6'248'808	7'853'493
Market value	491	1'036	38'942'976	5'814'641	6'517'106
Emotional value	386	-24'034'771	34'674'330	637'949	6'257'583

Only for the cases where emotional value > 0	N	Minimum	Maximum	Mean	Standard deviation
Total value	200	50'000	52'000'000	8'487'000	9'154'366
Market value	200	0	27'184'466	4'139'756	4'998'266
Emotional value	200	5'423	34'674'330	4'347'244	6'103'284

Only for the cases where emotional value > 0	N	Minimum	Maximum	Mean	Standard deviation
Market value in % of total value	200	0.00	99.60	49.33	27.87
Emotional value in % of total value	200	0.40	100.00	50.67	27.87

T-test on equality of means of total value and market value showed that market value is significantly lower than total value (Table 21). Hence Hypothesis 17 is verified. As expected the entrepreneurs did overvalue their firms. This result provides further empirical evidence to the overoptimism bias found by Lovallo and Kahneman (2003).

The analysis also showed that this overvaluation is considerable. In the case that the entrepreneurs indicated a total value larger than market value (hence emotional value is larger than 0) emotional value was on the average just as high as market value (Table 20).

As indicated in below Table 21, emotional value rises with the firm's size and age. Hypothesis 18 and Hypothesis 19 are thus verified.

Hypothesis 20 could not be verified (Table 21). Apparently, the legacy of the family does not influence descendants to apply significantly higher emotional values. This provides additional evidence to the observations made for total value that family

specific factors do not have a strong significant on subjective valuation of the firms by the entrepreneurs.

Hypothesis 21 predicted that emotional value is lower for people who consider themselves as rather happy. This hypothesis can be accepted (Table 21). Apparently, unhappy people consider that they need to get compensated for their unhappiness in the case of the sale of the firm.

Hypothesis 22 that emotional value is higher for firms in competitive industries experiences only limited empirical support (Table 21). Apparently, competitiveness of industry has only limited explicative power for the size of emotional value.

As introduced, above the analysis also includes a linear regression for emotional value. Table 22 indicates the descriptive statistics and correlations for different variables with emotional value.

Table 21: Emotional value: descriptive statistics and comparison of means-full sample

Data sample: Sample Nr. 7, Table 2. The data includes family and nonfamily firms. The table reports descriptive statistics and T-tests. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

Total value and market value

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. Total value	396	6'189'242	7'831'612	1-2	0.023*
2. Market value	396	5'469'171	6'437'767		

Sales volume

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. < 2 Mio. CHF	90	-580'977	1'365'408	1-2	0.001**
				1-3	0.02*
				1-4	1
2. 2 - 9 Mio. CHF	157	1'012'437	4'961'706	2-1	0.001**
				2-3	0.978
				2-4	0.967
3. 10 - 49 Mio. CHF	130	1'608'336	8'219'897	3-1	0.02*
				3-2	0.978
				3-4	0.921
4. >=50 Mio. CHF	16	-1'612'011	12'939'559	4-1	1
				4-2	0.967
				4-3	0.921

Age of the firm

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. <= 25 years	104	-459'787	5'037'221	1-2	0.322
				1-3	1
				1-4	0.02*
2. 26 - 50 years	103	1'043'575	6'427'959	2-1	0.322
				2-3	0.528
				2-4	0.818
3. 51 - 75 years	74	-375'069	5'525'050	3-1	1
				3-2	0.528
				3-4	0.058
4. >=76 years	90	2'167'417	6'941'640	4-1	0.02*
				4-2	0.818
				4-3	0.058

Descendant still active in the firm?

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. No	164	207'083	6'395'750	1-2	0.172
2. Yes	222	1'076'481	5'852'985		

Happiness

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. Rather unhappy (1-5)	49	2'816'910	8'346'390	1-2	0.01 *
2. Rather happy (5-10)	346	370'917	5'818'008		

Competitiveness of industry

	N	Mean	Standard Deviation	Pairwise comparison	Significance
1. Low	9	-1'064'936	4'222'699	1-2	0.999
2. Neutral	33	-856'169	4'372'188	1-3	0.396
3. High	157	1'240'377	6'570'405	2-3	0.078

Table 22: Emotional value: descriptive statistics and correlations-full sample

Data sample: Sample Nr. 7, Table 2. The table represents descriptive statistics and Pearson correlations for different variables. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

		Mean	Standard deviation	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14
					Emotional value	Dummy sales 2-9 Mio CHF	Dummy sales 10-49 Mio CHF	Dummy sales 50+ Mio CHF	Age of the firm	Age of the respondent	Descendants of the founder still active?	Numer of shareholders	Founder or successor?	Happiness	Competiti-veness of industry	Return on sales in %	Cash Flow	Individual financial gains, in % of cash flow
1	Emotional value	637'949	6'257'583	386	1													
2	Dummy sales 2-9 Mio CHF	0.340	0.474	940	0.0356	1												
3	Dummy sales 10-49 Mio CHF	0.307	0.462	940	0.0972	-0.4787 **	1											
4	Dummy sales 50+ Mio CHF	0.107	0.310	940	-0.0769	-0.2493 **	-0.2312 **	1										
5	Age of the firm	53.29	44.44	859	0.1278 *	0.0398	0.1311 **	0.2515 **	1									
6	Age of the respondent	50.3	10.3	894	0.0876	0.0156	0.1883 **	0.0703 *	0.2056 **	1								
7	Descendants of the founder still active?	0.566	0.496	897	0.0706	0.0607	0.1343 **	-0.0160	0.2221 **	0.1330 **	1							
8	Numer of shareholders	43	375	850	0.0397	-0.0096	-0.0515	0.1665 **	0.1287 **	-0.0099	-0.0650	1						
9	Founder or successor?	1.701	0.458	855	0.0966	0.0995 **	0.2018 **	0.0896 **	0.5480 **	0.0401	0.2282 **	0.0514	1					
10	Happiness	7.763	1.938	890	-0.0923	-0.0236	0.0708 *	0.0747 *	0.0704 *	0.0374	0.0297	0.0252	0.0412	1				
11	Competitiveness of industry	4.242	0.872	425	0.1348	-0.0537	0.0343	-0.0315	0.1719 **	-0.0101	0.1219 *	0.0076	0.1461 **	-0.087	1			
12	Return on sales in %	6.107	10.559	531	-0.2126 **	0.0792	-0.2109 **	-0.1001 *	-0.1246 **	-0.0862	-0.0389	-0.0388	-0.1479 **	0.066	-0.136 *	1		
13	Cash Flow	493'390	611'833	536	-0.1567 **	-0.1549 **	0.3826 **	0.2640 **	0.1693 **	0.1645 **	0.0605	0.1136 *	0.1011 *	0.110 *	-0.146 *	0.386 **	1	
14	Individual financial gains, in % of cash	5.108	9.998	556	-0.0290	0.0632	-0.1141 **	-0.1231 **	-0.0798	-0.0023	-0.0452	-0.0589	-0.0926 *	-0.021	-0.036	0.001	-0.165 **	1

Based on the findings of the above correlation analysis a linear regression model was developed. The dependent variable is emotional value, the sole significant independent variables were happiness and age of the firm.

Table 23: Regression analysis for emotional value-full sample

Data sample: Sample Nr. 7, Table 2. The table represents descriptive statistics and linear regression for emotional value. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$.

Descriptive statistics

		Mean	Standard deviation	N
Dependent variable	Emotional value	562'704	6'035'668	370
Independent variables	Happiness	7.716	1.969	370
	Age of the firm	50.9	38.3	370

Model

	B	Std. error	Beta	T	Significance	
Fixed term	2'670'038	1'303'096		2.049	0.041	*
Happiness	-407'990	157'457	-0.133	-2.591	0.010	*
Age of the firm	20'458	8'097	0.130	2.527	0.012	*

R	0.182	
R2	0.033	
R2 corr	0.028	
Standard error	5'951'171	
Change in R2	0.033	*
Change in F	6.276	
Change in significance of F	0.002	**
Durbin-Watson	2.070	

How to read above table: If happiness grows by 1 point emotional value is expected to fall by 407’990 CHF. If the firm ages one year emotional value is expected to increase by 20’458 CHF.

As expected, whereas age of the firm displays positive valuation, happiness displays a negative one. Clearly, above model only describes 3.3% of the variance of emotional value. However R squares at these levels are not uncommon in longitudinal studies in social sciences (Schulze et al., 2003b).

6.2.3.4 Conclusion and limitations for emotional value

The above empirical analysis on emotional value revealed that entrepreneurs of privately held firms subjectively price emotional factors when valuing their firms. In particular, age of the firm positively affects the emotional value entrepreneurs are attributing to their firms. Entrepreneurs might price the lower likelihood of default of an older firm (Cantor and Packer, 1995). This is in line with the observation that the survival of the firm is one of the predominant business goals in privately held firms.

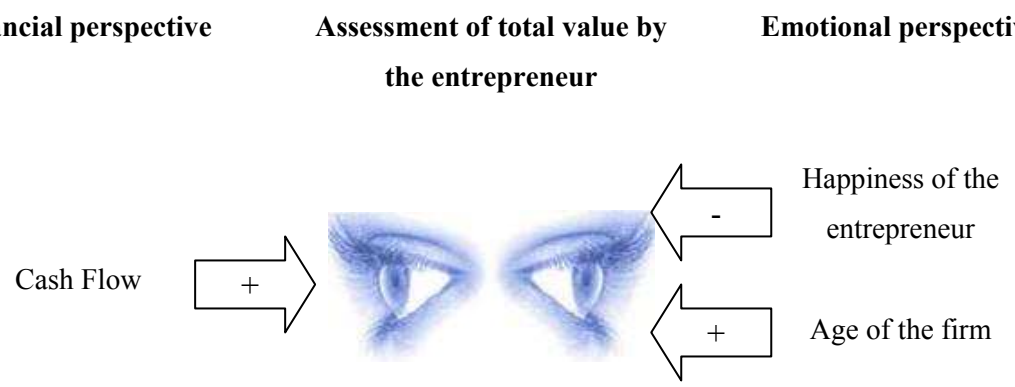
The empirical investigation also revealed that happiness negatively affects emotional value. This is in line with the interpretation that managers require a compensation for their subjectively felt (un)happiness. Apparently, rather unhappy entrepreneurs experience higher emotional costs than rather happy entrepreneurs. These managers require compensation to this subjectively felt unhappiness which results in higher emotional values if their firm is sold. Managers who indicate that they are rather happy require less compensation for their happiness but are rather satisfied with market price. These results provide further evidence to the findings by Lovallo and Kahneman (2003) who find overoptimism for managers who have to value risky assets. However, this overestimation of value could also be affected by insider knowledge the entrepreneurs have which outsiders lack or that is not respected in the present study.

Further research is needed on the cases where emotional value is negative. In particular, it would be insightful to investigate whether these firms have a higher likelihood to being sold by their entrepreneurs as predicted by the model of total value. In contrast, negative emotional value could also be an indication of illiteracy with valuation techniques.

6.2.4 Conclusion

The above findings provide evidence that in contrast to market value that particularly prices economic income (Brealey and Myers, 2000; Pratt et al., 1996), the entrepreneurs also price subjective goals as for example the survival and the independence of their firms but also emotional factors as happiness. These findings are illustrated in below Figure 37.

Figure 37: Variables affecting total value



Family firm specific variables in the sample examined have only limited explicative power for the size of emotional value and total value. Whereas family influence and the generation active in the firm do not show any significant relation with neither total nor emotional value, the fact that a descendant of the founder is still active in the firm positively affects total value. Hence the legacy of the family (Habbershon, 2005) represented by the presence of a descendant of the founder plays a role to explain the overestimation of firm value by entrepreneurs.

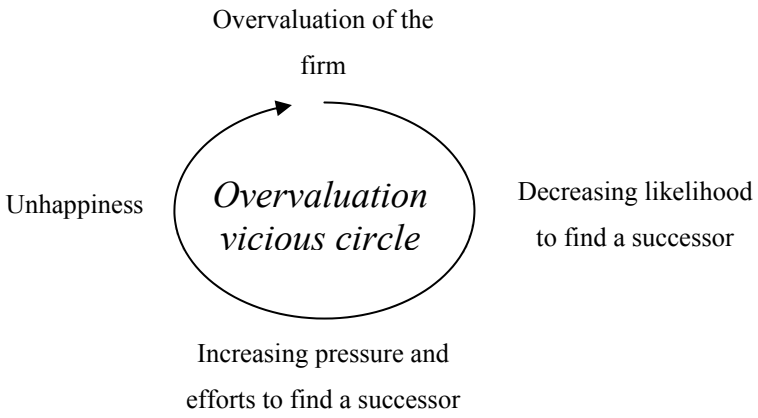
With regard to the research by Lovallo and Kahneman (2003) the preceding chapter on emotional value tried to provide additional insight on the overoptimism bias. The overestimation of the firm value by the entrepreneurs is considerable and on average amounts to roughly 100% of market value if a firm is not for sale. The present text however argues that overoptimism can not be simply considered as irrational behavior due to a psychological bias to overestimate one's own achievements. It needs to be understood in the light of valuable nonfinancial goals for entrepreneurs.

Under the condition that a firm is sold, the entrepreneur will not be able to capitalize on total value-unless a buyer prices the nonfinancial goals just as the seller does. The discrepancy between what is considered as valuable by the market for corporate control and what is considered as valuable by the entrepreneur helps to understand why many successions are failing. If entrepreneurs display high emotional values even a very lucrative and tempting offer by some investor may not compensate the entrepreneur for all the value he strives to be compensated for in the case of a sale. In the logic of the entrepreneur putting down a seemingly tempting offer can be considered as rational.

However, high total and emotional values are not always a blessing. The overestimation of value, hence the gap between market value and total value should not widen too much. A manager who excessively overvalues his enterprise in comparison to its market value, for example if the firm is strongly underperforming in financial terms, can put the firm in danger and inhibits a turnaround which ultimately could save the firm. Similarly, if the entrepreneur excessively prices his firm but has to sell it as he reaches for example the age of retirement prevents a timely succession.

In this context the model of total value can help understanding how succession is impeded due to overvaluation. Overvaluation might set off a vicious circle in the following manner. Overpricing the firm's value reduces the likelihood to find a buyer or successor. Consequently, the likelihood of a timely exit of the entrepreneur is diminishing. In turn this raises the pressure to find a successor and the entrepreneur will increasingly make efforts in this direction. As a result the efforts undertaken potentially induce unhappiness given the fact that the entrepreneur wants to retire. Finally and as shown above the increasing unhappiness positively affects overestimation of firm value (Figure 38).

Figure 38: Overvaluation vicious circle



The above considerations could initiate further research. For example, the model outlined in chapter 6.2.2.1 could be further validated through the analysis of total and emotional value of firms that have been privately owned and are finally sold or go public.

The preceding chapters on total and emotional value provided insight into the real rationales of managers of privately held firms. The proposal of a subjective approach to measure the true value of a firm can help to explain the essence of entrepreneurial activity and exit as it changes the scope of analysis from a supposedly objective valuation that is geared toward what a buyer's expectations would be to an individual perspective, typical for most entrepreneurs who are not offering the firm for sale, but rather intend to keep the firm in the hands of family for the succeeding generations.

A benefit of the above-outlined and further research is to quickly and concisely rate the likelihood of a desire to sell and the accurate price to compensate market and emotional value of the owners of privately held firms. These considerations enable brokers and underwriters to recognize the likelihood of a desire to sell and to identify opportunities to add significant value to firms in which emotional value start to fall at low levels. It also helps those desiring to make acquisitions determine accurate offer prices as well as offer ranges.

6.3 Cost of capital of family firms

The above chapters on emotional and total value showed that the realizable value for a firm on the market for corporate control and the unrealizable value the entrepreneur attributes to his firm are diverging. As the value of an asset (e.g. a firm) is determined by the opportunity cost of the production factors (e.g. capital) servicing it (Copeland et al., 2000), the overestimation of value by the entrepreneur raises the question about the costs of capital the entrepreneurs implicitly assign to their firms.

Cost of capital is of crucial importance in management sciences as it assists in valuing firms. Researchers have intensively analyzed the subject of costs of capital (e.g. Fama and French (1999), for publicly quoted firms; Heaton (1998), for privately owned firms). Costs of capital allow managers to evaluate the cost of their decisions. As such, cost of capital helps determining an adequate return to assure short- and long-term business survival (Adams et al., 2004). Therefore, the cost of capital serves as a performance benchmark (opportunity cost) and as an investment criterion (hurdle rate).

As capital exists in the form of equity or debt, the costs of these two sources of funding are discussed separately.

6.3.1 Cost of equity

As family firms are known to be averse to external equity financing (Achleitner and Poech, 2004) - not only because of the associated costs but also due to the loss in control - the most important market for equity is the family itself.

Hence, the costs of the equity provided to the privately held family firm are primarily determined by the family and not by the capital market. If costs of equity capital are in part discretionary to the shareholders it can be assumed that the cost of capital of privately held family firms are either above or below the market price for an investment with comparable risk / return profile. The level of the costs of capital however depends on the requirements, subjective needs and preferences of the shareholders, e.g. the family. For example, if funds are abundantly available within the family, capital is not a limited resource and therefore does not have to satisfy

anonymous shareholder demands. Costs of capital therefore might be lower than the opportunity cost of capital on the market for funding. Similarly, if shareholders primarily strive to increase their wealth, they will look for highly profitable investment projects to increase shareholder value and apply higher costs of capital to value their investment projects.

This concept of a discretionary cost of capital stands in contrast to the external demands by market driven shareholders for risk equivalent returns. The idea of risk equivalent returns is however only applicable if there exists such an equivalent-risk asset (Brealey and Myers, 2000). As many family shareholders consider their investment as an asset to bequeath to the next generation (Casson, 1999; Chami, 1999) an alternative investment opportunity with equivalent characteristics is hardly conceivable to family members.

There is empirical evidence that privately held family firms might be able to apply lower costs of equity capital. Poutziouris (2001) finds for example that privately owned family firms strongly stick to the pecking order theory of financing. With this result he implicitly provides evidence for the argument that family firms prefer family and firm internal equity financing as it is the cheapest source of capital. KPMG (2004) report similar findings by saying that family firms are found to deliberately restrict their sources of funding to the family.

The above considerations and empirical evidence challenge the Capital Asset Pricing Model (CAPM) which posits that the cost of capital depends on the characteristic of the investment, not whence the investment capital flows (e.g. from a family) (Mc Conaughy, 1999). CAPM displays, however, some crucial shortcomings to determine the costs of equity capital of privately held firms. Table 24 below displays these shortcomings and their impact on the costs of equity capital of privately held family firms.

Table 24: Shortcomings of CAPM and the impact on costs of capital

Adapted from Copeland and Weston, 2002. Copeland and Weston (2002) further mention the inexistence of a riskfree asset and the inexistence of a market portfolio as a precondition of CAPM. These elements are neglected as they are irrelevant to this discussion.

Assumption of CAPM	**Critique regarding the appropriateness of the assumption for family firms**	**Influence on the cost of capital of privately held family firms**
1. Constant risk aversion	Family firms display loss aversion regarding investment decisions associated with control risk. See chapter 4.5.	+ , as profitable investment projects are not followed in order to avoid control risk.
2. Diversified investment	Family investors have tied a large amount of their fortune to their firms. Their investment is thus undiversified. See chapter 4.3.1.	+ , as the undiversified investment is more risky than a diversified one.
3. Minority shareholders / price takers	Family firms have a strong preference for control, particularly ownership control (Ward, 1997).	- , as majority shareholders earn a control premium.
4. Liquidity	The market for corporate control, even in the case of publicly quoted family firms, is less liquid. See chapter 6.1.2.	+ , as the illiquidity of the asset reduces its value.
5. Inexistence of information asymmetry	Agency costs are lower in family firms but not zero. See chapter 5.2.	- , as family firms face lower agency costs than nonfamily firms.
6. Irrelevance of time horizon	The longer time horizon of family firms reduces annualized normal risk of an investment and cost of capital. See chapter 6.3.6.	- , as the lower annualized normal risk reduces the costs of capital.

The above considerations point in diverse directions with regard to their effect on costs of equity capital. To tackle this challenge some researchers, as for example De Visscher et al. (1995), have proposed adapted versions of CAPM:

$$\mu_k = i + \beta_k (\mu_m - i)(1 + IP)(1 - FE)$$ **Formula 9**

With:

μ_k: Expected return of security k,
β_k: Beta, systematic nondiversifiable risk of security k,
μ_m: Expected return of the market portfolio,
i: Risk free rate,
IP: Illiquidity premium,
FE: Family effect.

De Visscher et al. (1995) adapt the traditional form of CAPM (Sharpe, 1964; Lintner, 1965; Mossin, 1966; Black, 1972 and Ross, 1976) for an illiquidity premium (IP) and a family effect (FE). FE can range from 0 for a contentious, restless or litigious group, to 1, for a family that is perfectly dedicated. However, De Visscher et al. (1995) themselves note that the term family effect is problematic, especially if a family is perfectly dedicated. In this case, FE and therefore cost of equity would approach 0.
Even though Mc Conaughy proposes that (1-FE) should be replaced by (FE), it does not solve the central shortcomings of CAPM for family and privately held firms outlined above.
Today there is no convincing asset pricing model available for privately held firms and thus most family firms. However, as shown above, there is strong empirical evidence that privately held family firms are able to apply lower costs of equity capital.

6.3.2 Cost of debt

Anderson et al. (2003a) report that founding family ownership is related, statistically and economically, to a lower cost of debt financing. The authors test the hypothesis of Jensen and Meckling (1976) who observed that shareholders normally have incentives to expropriate bondholder wealth by investing in risky, high-return projects (asset substitution). Therefore, bondholders, anticipating such incentives, demand higher rents, resulting in a higher cost of debt capital. However, when Anderson et al. (2003a) test whether the presence of large undiversified shareholders mitigates diversified equity claimants' incentive to expropriate bondholder wealth (e.g. the agency cost of debt), they find reduced agency costs of debt. Because these shareholders typically

have undiversified portfolios they are concerned with firm and family reputation and often desire to pass the firm on to their descendants. Family shareholders represent a unique class of owners, possessing the voice and the power to force the firm to meet the above needs.

In addition, Tosi and Gomez-Mejia (1994) and Gomez-Mejia et al. (2001) find that high family ownership does not lead to further reduced costs of debt financing. These authors state that marginal returns to monitoring are a decreasing function of the level of monitoring. Tosi and Gomez-Mejia (1994) posit that increased (family) CEO monitoring is associated with improved firm performance when monitoring is low but not when monitoring is high.

This connotes that debt holders consider that families have the power to force the firm to follow their survival and sustainability needs even with much less than a majority ownership. The efficacy of family involvement seems to suffer beyond the turning point of 12% family ownership which indicates that bondholders expect a less favorable effect of family involvement, probably due to a less efficient management, when families are more concerned with firm and family reputation, succession planning and the preservation of family wealth than with maximization of the financial value of the firm.

Furthermore, if families are found to pledge personal collateral to secure business loans (Ang et al., 1995), costs of debt can be lower compared to unsecured business loans.

Hence there is evidence that family firms face lower costs of debt capital than their nonfamily counterparts.

6.3.3 Relation between cost of equity and cost of debt

Traditional finance researchers consider that an equity investment is in general riskier than a debt investment as the equity investment does not promise contractually future cash flows, as the debt investment does (Mc Conaughy, 1999).

However, the considerations above raise questions about the relation between costs of debt and costs of equity of family firms. The reduced costs of debt financing stand in contradiction to the low debt levels of family firms.

There are several reasons that clarify the lower leverage levels despite lower costs of debt financing of family firms compared to nonfamily firms.

First, the above cited studies (e.g. Anderson et al., 2003a) on the costs of debt financing might be affected by a size effect. Sugrue and Ward (1990) and Vos and Forlong (1996) report increased costs of debt financing for small firms. Therefore, the advantageous effects of family involvement might only be observable with larger firms.

Second, the above-mentioned study by Anderson et al. (2003a) hypothesizes that cost is the sole determinant for the level of leveraging. However, if family managers say that independence and survival of the firm are the most important determinants when deciding upon the debt level, there is no reason for further leveraging, even if the associated costs are low. Chapter 4.5 on behavioral aspects of capital structure decision making outlined that family firms are averse to a loss in independence even if it is associated with a corresponding gain in return. It was shown that family firms display a stronger endowment effect for the independence goal than for the return goal.

Third, knowing that families have a large proportion of their fortune invested in the company, families are not expected to reason in the way a well diversified investor does. If a major part of one's wealth is invested in the firm, it does not make sense to put this asset in danger with increased leveraging.

Finally, if family firms strongly stick to the pecking order of financing (Poutziouris, 2001), these firms implicitly reveal that their costs of equity can be even lower than the costs of debt, even though the costs of debt are low. If the cost of equity can be determined by the family itself, less financially motivated families might face reversed costs of capital with cost of debt being higher than the cost of equity capital imposed by the family. Consequently, if equity is seemingly more economical than debt, the capital structure of family firms is adapted-with a preference for equity.

6.3.4 Total value and the implied cost of capital

The three preceding subchapters delineated that family firms might face lower costs of capital than their nonfamily counterparts. In addition, it could be shown that family firms might even face reversed cost of capital, with cost of debt being higher than cost of equity.

The model of total value provides further insight into the cost of capital discussion with privately held (family) firms. According to the concept of total value introduced in chapter 6.2.2, total value is composed of market value and emotional value.

$$TV = MV + EV \qquad \textbf{Formula 10}$$

The value of an asset is traditionally determined by discounting some economic income deriving from it (Pratt et al., 1996). This raises the question how economic income should be discounted if it is not the sole source of value. This argument leads to the adaptation of above formula 10:

$$\frac{CF}{k} = \frac{CF}{r} + EV \qquad \textbf{Formula 11}$$

With:

$\frac{CF}{r}$: Market value of the firm,

$\frac{CF}{k}$: Total value of the firm,

CF: Cash flow of the firm,

k: Implied cost of capital for the manager,

r: Risk equivalent weighted average cost of capital on the market for corporate control,

EV: Emotional value.

Formula 11 assumes differing costs of capital on the market for corporate control (r) and the implied costs of capital for the family manager (k) as the entrepreneur derives further value that is not directly affected by the firm's cash flow. Solving above Formula 11 for k results in:

$$k = \frac{CF}{TV}$$ **Formula 12**

Although several author researchers have determined implied costs of capital (e.g. Gebhardt et al., 2001) their understanding of costs of capital was always rooted in market value. The approach chosen in this text is to determine costs of capital based on the subjective valuation of the firm by the entrepreneur, as determined by total value. Such an approach bares the advantage to reveal the implied, true, costs of capital that represent the monetary and nonmonetary preferences of the entrepreneur.

6.3.4.1 Development of hypotheses

In the case that emotional value is larger than 0, and the firm is thus not for sale as market value is lower than total value, the implied cost of capital needs to be smaller than the cost of capital on the market for corporate control. This leads to the following hypothesis.

Hypothesis 23:
If total value is larger than market value, the implied cost of capital of the owners is smaller than the costs of capital determined by the capital market.

In the case that emotional value is smaller than 0 and the owners could capitalize on the market value via the sale of the firm as market value is higher than total value, the implied cost of capital of the entrepreneur is expected to be larger than the cost of capital on the market for corporate control. This leads to the following hypothesis.

Hypothesis 24:
If total value is smaller than market value, the implied cost of capital of the owners is larger than the costs of capital determined by the capital market.

As outlined in chapter 6.3.3 privately held firms might face inverse costs of capital with costs of equity being lower than costs of debt. If this assumption is verified this

would provide additional insight into the investment behavior of privately held firms with a preference for internal equity financing due to lower implied costs of capital in comparison to costs of debt. This leads to the following hypothesis.

Hypothesis 25:
If total value is larger than market value the implied cost of capital is lower than the cost of debt.

The chapters on total and emotional value did only reveal limited evidence to the hypotheses that family firm specific factors (e.g. family influence, generation, descendants of the founder still active) have an impact on total and emotional value. However, the results of other researchers and the considerations introduced above hypothesized that family firms display lower costs of capital than the nonfamily firms. This leads to the following hypothesis.

Hypothesis 26:
The implied cost of capital of family firms is lower than that of nonfamily firms.

The empirical results for these hypotheses are presented in the next chapter.

6.3.4.2 Results

The above stated hypotheses were tested applying T-test for equality of means. The results are presented in below

Table 25: Costs of capital: descriptive statistics and comparison of means

Data sample: Sample Nr. 7, Table 2. The data includes family and nonfamily firms. The data for means and standard deviations is in %. The table reports descriptive statistics and T-tests. Significance level: * $p \leq 0.05$, ** $p \leq 0.01$. No statistical test applied to the comparison of mean implied costs of capital and costs of debt per industry.

For cases where emotional value is larger than 0

	N	Mean	Standard Deviation	Significance
Costs of capital according to CAPM	190	9.607	1.847	
Implied costs of capital	190	4.467	2.353	0.000 **

For cases where emotional value is smaller than 0

	N	Mean	Standard Deviation	Significance
Costs of capital according to CAPM	194	9.053	1.235	
Implied costs of capital	194	29.029	36.200	0.000 **

Comparison of mean implied costs of capital and costs of debt per industry
For cases where emotional value is larger than 0

only for industries with n > 5		N	Mean implied cost of capital	Cost of debt per industry
1	Homebuilding / construction	58	3.38	8.22
2	Metal / machinery	30	4.57	7.22
3	Nutrition / beverages	11	4.39	6.22
4	Watches	10	5.25	9.22
5	Electronics / optics	12	5.62	8.72
6	Wood / paper / graphical industry	10	4.08	7.72
7	Other sectors industry	12	4.54	7.22
8	Wholesale	9	4.80	7.22
9	Restaurants	12	4.63	7.22
10	Consulting	6	4.07	6.22
11	Transport	7	5.86	7.72
12	Other services	10	2.98	7.72

Implied costs of capital for family and nonfamily firms

	N	Mean	Standard Deviation	Significance
Family firms	305	4.025	3.082	
Nonfamily firms	58	4.354	2.380	0.518

The empirical data reported above provides evidence that under the condition that market value is smaller than total value firms tend to apply lower implied costs of capital than required on the market for corporate control. The mean implied costs of capital was 4.47% under the condition that the entrepreneur overestimates the value of his firm.

As hypothesized, this relation is reversed in the case that market value is larger than total value. Hypothesis 23 and Hypothesis 24 are therefore both verified. In the case that the entrepreneurs assign to their firms a value lower than the market, the average implied cost of capital rose to 29%.

Hypothesis 25 is verified as well. In 12 of 12 industries the entrepreneurs apply lower implied costs of capital than the industry specific cost of debt. This provides further evidence to the finding of Poutziouris (2001) that for cost reasons privately held firms strongly stick to the pecking order of financing and rather rely on (internal) equity than on external debt to fund their activities.

In contrast Hypothesis 26 could not be verified. Apparently, family firms do not generally apply lower implied costs of capital. This is further evidence to the finding that the organizational variable family does not have any influence on the subjective valuation of the firm by its managers.

6.3.4.3 Conclusion

The concept of total value provides further insight into the case of discretionary costs of capital in family firms. It could be shown that privately held firms do not generally apply higher or lower implied costs of capital than a risk equivalent cost of capital applied by the capital market. In contrast, it was shown that the implied costs of capital of privately held firms are influenced by the subjective value the managers are attributing to their firms. The higher that value, the lower the implied cost of capital.

With regard to the cost of capital discussion of family firms the present text revealed that family firms do not generally apply lower or higher costs of capital than their nonfamily counterparts. Again, the implied costs of capital depend on the subjective valuation of the firm, which, as shown in the preceding chapters, is not significantly affected by family firm specific factors.

Further research is needed on the costs of capital implicitly applied in privately held firms. For example, it remains open whether implicitly applying higher or lower costs of capital than applied by the market for corporate control shifts investment priorities to more or less profitable projects. In particular, if a company applies costs of capital that are permanently lower than the market, the company will commit resources to

projects that will erode profitability and destroy shareholder value. The subsequent two chapters will discuss the threats but also opportunities associated to applying lower costs of capital than the market for corporate control.

6.3.5 Threats associated to lower costs of capital

Applying lower costs of capital than applied on the market for corporate control raises the question whether such behavior is sustainable. Sustaining lower costs of capital for long comprises the firm's ability to regenerate the asset base through new investment in the productive capacity and hinders the creation of shareholder value. However, if the family believes that there are additional rewards than the return on capital, the family will keep on investing in things that produce those rewards.

In the long run, allocating funds according to the subjective goals and values of the entrepreneur or his family and not according to economic criteria might seriously hamper the profit discipline of the firm and endanger its survival. In addition, it is questionable whether owners who constantly apply lower costs of capital will sustain such behavior for a long time. It can be expected that if the disparity between costs of capital paid on the capital market and the cost of capital paid by the firm widens too much, shareholders are increasingly incentivized to divert funds from the firm and invest it elsewhere.

6.3.6 Opportunities associated to lower costs of capital

On the one hand applying lower costs of capital for a long time can be harmful for an enterprise, as shown above. On the other hand applying lower costs of capital for example due to a longer planning horizon offers unique investment opportunities that can no be tackled by firms with shorter planning cycles.

The standard formula for estimating the costs of capital is the Capital Asset Pricing Model (Sharpe, 1964; Lintner, 1965; Mossin, 1966; Black, 1972; Ross, 1976; March and Shapira, 1987). CAPM however assumes that companies tend to settle on a discount rate and use it as their financial benchmark for long periods of time, regardless of changes that may take place in the company or on the markets. This is a

central shortcoming particularly if one considers the long-term investment perspectives of family firms. Indifference to the holding period highlights a central problem within CAPM, which compounds the likelihood of error and the resulting cost on equity numbers. Using a single term may be misleading regarding the costs of capital for family firms.

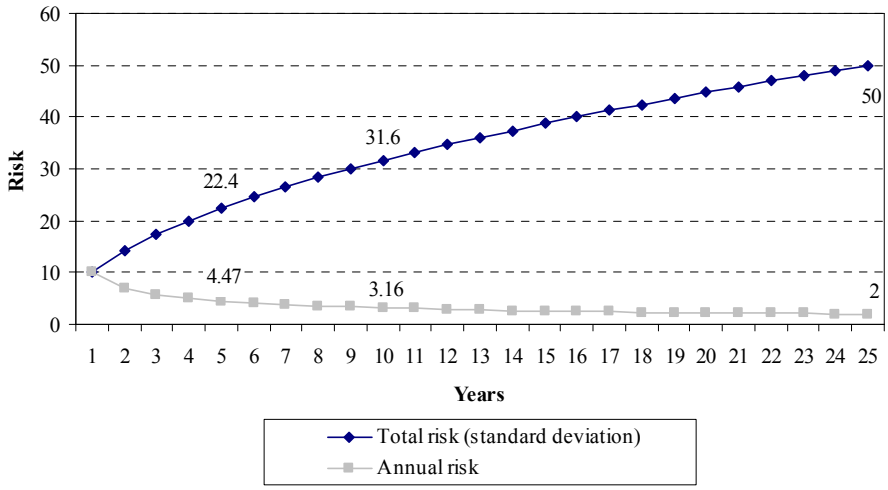
There is analytical evidence from options theory and trading experience showing that the marginal risk of an investment declines as a function of the square root of time (Hull, 2003). An example helps in understanding the relation between time respectively planning horizon and annualized risk of an investment: imagine a venture that asks for an initial investment of 100. The project has an expected positive drift per annum of 20, the standard deviation is 10.

Under the condition of normal distribution of results, at the end of one year, the project will have a mean of 120 and a standard deviation of 10. At the end of five years, an average employment period of a manager in a publicly quoted firm in North America or Europe (Booz Allen Hamilton, 2005), the project is expected to have a mean of 200 (= 100 + 5 * 20) and a standard deviation of 10 * √5 = 22.36. The normalized per annum risk of the investment is therefore 4.47 (= 22.36 / 5). Taking the investment horizon of a family firm that plans for one whole generation, let us assume 25 years, the situation looks different. At the end of 25 years, the investment is expected be worth 600 (= 100 + 25 * 20) with a standard deviation of 10 * √25 = 50. However, the normalized per annum risk of the investment has fallen to 2 (= 50 / 25).

The overall riskiness of the longer term investment is certainly greater than that of the shorter one. 25 years of 2 is certainly bigger than 5 years of 4.47. However, the riskiness increases at a declining rate over time.

As the (opportunity) costs of capital depend on the risk of the project's cash flows, the above measured risk directly influences the firms' cost of capital (Brealey and Myers, 2000). Consequently, the falling normalized per annum risk with the longer planning horizon serves to reduce the annual discount rate, e.g. cost capital (Mc Nulty et al., 2002). Therefore, an investor who requires a 10% return for a one year equity investment would require in minimum a 4.47% annual rate on a five year investment, respectively a 2% annual rate on a 25 year investment (Figure 39).

Figure 39: Normalized annual risk and investment horizon



There is a central limitation to the argument that by extending planning horizons risk and the associated cost of capital can be lowered. In fact, with an infinite planning horizon the normalized annual risk would fall to zero, which is not possible given the fact that next to the normalized annual risk the project also bears some instantaneous default risk (Duffee, 1999). A long-term strategy needs to consider the instantaneous default risk that could arise from one period to the next, even though the normalized annual risk falls with the longer planning horizon. Hence, a long-term investment strategy always needs to account for the instantaneous risk by accumulating sufficient resources (e.g. liquidity) to weather through difficult periods and avoid instantaneous default risk. This can, for example, be achieved through lower dividend pay out respectively higher earnings retention. As family firms inherently meet the requirement of longer planning horizon as they strive to pass their firms over to the next generation (Ward, 1997) and often display very committed shareholders providing patient capital (Ward, 1991; Teece, 1992; Dobrzynski, 1993), long-term investment strategies seem particularly adapted to family firms.

6.3.6.1 Cost of capital and value created by investment projects

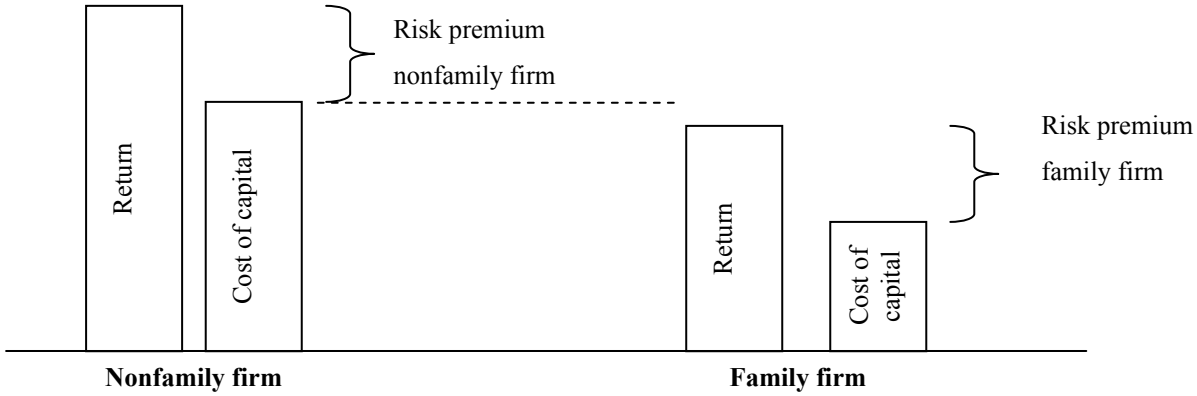
Copeland et al. (2000) state that a company creates value by investing capital at rates that exceed their cost of capital. Applying costs of capital lower than required in an efficient market environment for anonymous investors is expected to have important consequences for the investment behavior of firms. In particular, if a company routinely applies too high a cost of capital in its project valuations it will reject valuable opportunities which its competitors will happy seize. Setting the rate too low, on the other hand, the company will commit resources to projects that will erode profitability and destroy shareholder value (Mc Nulty et al., 2002). The finding that family firms display lower costs of capital due to a longer planning horizon therefore raises the question of whether family firms invest in less profitable projects and thereby endanger their survival in the long run.

The answer to this problem should not only respect cost of capital but needs to include the return on the investments undertaken. In line with Copeland et al. (2000) the present text argues that companies create value by investing capital at rates of return that exceed their costs of capital. Hence whether value is created or destroyed is determined by the risk premium, defined as the difference between the return of the project and the associated costs for the capital to finance it (μ-c) and not the absolute level of return of a project.

To illustrate the interrelation between time horizon, costs of capital and a firm's capacity to create value an investment project that is solely financed with equity shall be examined. Considering its long-term investment horizon, the family firm will face a lower per annum risk of the investment than a short term financier-as explained above. In line with the example of the preceding subchapter, the family firm with a 25 year planning horizon faces an normalized per annum risk of 2%, the nonfamily firm, with a planning horizon of 5 years, a normalized per annum risk of 4.47%.

Considering the risk premium between the project's return and the associated risk, it becomes evident that with the costs of capital being lower, the returns of investment projects can be lower as well. In the end, whether the investments projects of family or nonfamily firms create more shareholder value depends on the risk premium they earn (Figure 40).

Figure 40: Risk premia of family firms and nonfamily firms



Due to above considerations, family firms are able to invest in projects that seem less or insufficiently profitable to nonfamily firms and still create as much value as their nonfamily counterparts. Just as Eaton et al. (2002) concluded, lower (agency) costs of capital could lead to a competitive advantage for a family firm. In addition, as shown above, this helps building unique investment and business strategies that are just as valuable as those of nonfamily firms.

6.3.6.2 Generic investment strategies of family firms

In line with above considerations, risk premia similar to those of the nonfamily investor combined with the longer planning horizon enables family firms to follow unique and inimitable investment strategies in two generic directions:

1. Invest in projects with equal risk but lower returns compared to the nonfamily investor,
2. Invest in projects with equal return but higher risk compared to the nonfamily investor.

The two following subchapters discuss the generic investment strategies of family firms in more detail.

Generic strategy 1: The perseverance strategy

In the first generic strategy family firms seize investment projects with equal risk compared to the investments of nonfamily firms. Under this precondition and imposing that the family needs to earn risk premia at least as large as the one of nonfamily firms to create as much value, the longer planning horizon gives family firms the possibility to accept lower returns than their nonfamily counterparts. This will be illustrated below.

$t_{nf} < t_f$ **Formula 13**

With:

t_{nf}: holding periods of nonfamily firms,

t_f: holding periods of family firms.

As outlined above, the longer holding periods allows reducing the risk and the associated risk equivalent cost of capital for the family firm investment. Hence:

$c_f < c_{nf}$ **Formula 14**

With:

c_{nf}: costs of capital of nonfamily firms,

c_f: costs of capital of family firms.

Equal risk premia of family and nonfamily, assuring that both types of firms create equal value, are represented as follows:

$r_{nf} - c_{nf} \equiv r_f - c_f$ **Formula 15**

With:

r_{nf}: returns of nonfamily firms,

r_f: returns of family firms.

The cost of capital can be replaced by the (normalized per annum) risk of the investment as the costs of capital depend on the risk of the project's cash flows (Brealey and Myers, 2000; Hull, 2003):

$r_{nf} - \delta_{nf} / \sqrt{t_{nf}} \equiv r_f - \delta_f / \sqrt{t_f}$ **Formula 16**

Under the assumption that the family firm and the nonfamily firm are investing in projects with equal risk represented by the project's standard deviation ($\delta_f = \delta_{nf} = \delta$), the return of the family firm is defined as follows:

$$r_f = r_{nf} - \delta \left(1/\sqrt{t_{nf}} - 1/\sqrt{t_f}\right) \qquad \textbf{Formula 17}$$

as $(1/\sqrt{t_{nf}} - 1/\sqrt{t_f}) > 0$ due to $t_{nf} < t_f$ and $t_{nf} > 1$ and $t_f > 1$

$r_f < r_{nf}$

The implications of this result shall be illustrated with the following example. Let us assume a nonfamily firm and a family firm are investing in two different projects. Both projects display an equal risk of 10, measured by the projects' standard deviations. The return of the project selected by the nonfamily firm is 9. The holding period of the family firm is 25 years, the one of the nonfamily firm is 5.

In order to create as much value as the nonfamily firm, the family firm needs to earn the same risk premium as the nonfamily firm ($r_{nf} - c_{nf} = r_f - c_f$). By applying above formula 17 one finds that the family firm can invest in projects with a return of only 6.53%. Again, this does not imply that the family firm is creates less value, but as a result of the longer holding period it can afford investing in lower-return projects that might not be sufficiently profitable to the nonfamily firm, as its costs of capital amount to already 4.47% ($=\delta_{nf} / \sqrt{t_{nf}} = 10 / \sqrt{5}$).

In practice, there are many examples of family firms who follow the perseverance strategy. Aronoff and Ward (1991) find that family firms are often active in cyclical industries with widely fluctuating prices, as are trading businesses such as scrap, commodities or shipping commitments. Often, these businesses are considered as dirty, out of favor, to be avoided. For example, the noble Thurn und Taxis family is one of the largest private land and forestry developers in Germany and has been developing its business activities for several centuries. As the returns are low in this type of business (Khadjavi, 2005) such an investment is particularly adapted to a long-term strategy.

Generic strategy 2: The outpacing strategy

The second generic investment strategy comprises strategies in which family firms seize investment projects with equal return compared to the investments of nonfamily firms. Under this condition and imposing that both types of firms need to the same amount of value, measured by equal risk premia for family and nonfamily firms, the longer planning horizon gives family firms the possibility to accept riskier strategies than their nonfamily counterparts, as will be shown below.

The main conditions as outlined in the first generic strategy hold as well:

$t_f > t_{nf}$ and $c_f < c_{nf}$

Again, the following condition must be met, in order to calculate the risk of the family investment that assures an equal capacity to create value measured by the risk premia of the family and nonfamily investment.

$r_{nf} - c_{nf} \equiv r_f - c_f$

Again, the cost of capital can be substituted by (the normalized per annum) risk of the investment. Under the assumption that family firms invest into projects with an identical return ($r_f = r_{nf} = r$) the risk of the investment the family firm can bear is defined as follows:

$$r - \delta_{nf}/\sqrt{t_{nf}} = r - \delta_f/\sqrt{t_f}$$

$$\delta_f = \delta_{nf} \sqrt{t_f} /\sqrt{t_{nf}} \qquad \textbf{Formula 18}$$

as $\sqrt{t_f} /\sqrt{t_{nf}} > 1$

$\delta_{nf} < \delta_f$

Again, the implication of above formula 18 shall be illustrated with an example. Let us assume a nonfamily firm and a family firm that are investing in two different projects. Both projects have an equal return of 10 (although r would not be needed, refer to Formula 18). The risk in terms of standard deviation of the nonfamily firm is 10. The holding period of the family firm is 25 years, the one of the nonfamily firm is 5.

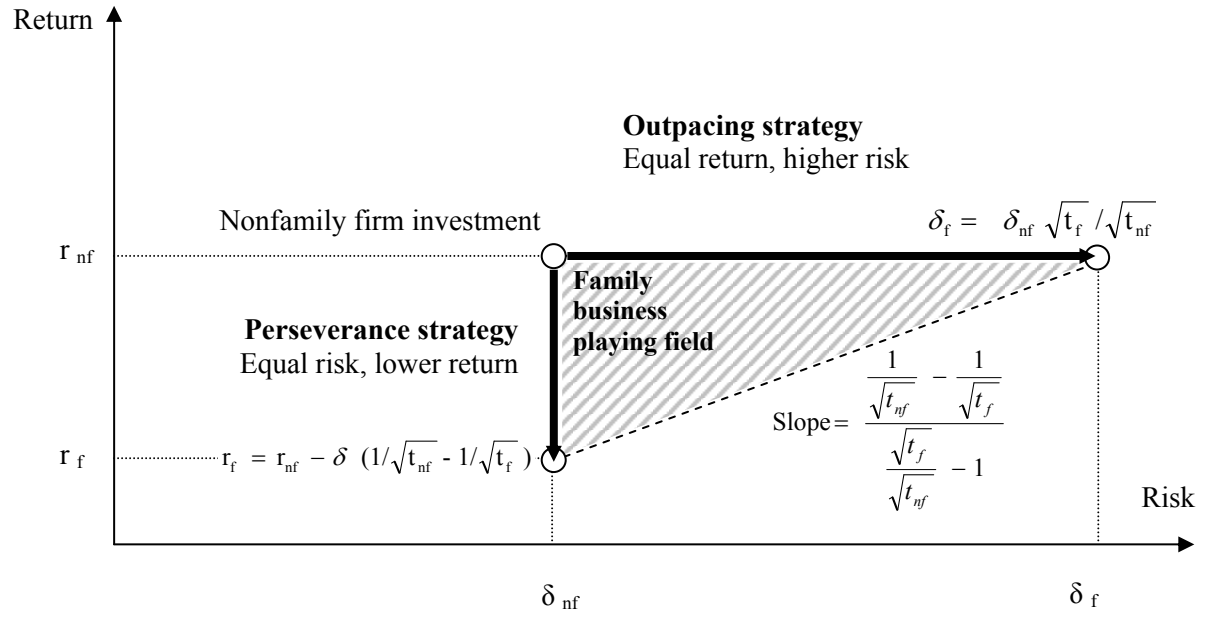
In order to attain the same capacity to create value, equal risk premia ($r_{nf} - c_{nf} = r_f - c_f$) need to be earned by both types of firms. Within above example the family firm can invest in projects with a risk of 22.36% (calculated by applying Formula 18). Thus, due to the longer holding period family firms can invest in riskier projects than nonfamily firms.

Just as for the perseverance strategy there are well-known examples for the outpacing strategy. The Swiss Bertarelli family owns the world's third largest biotechnology firm, Serono. The family controls 71.54% of the publicly quoted equity. Serono is active in the pharmaceutical industry in which new medicaments and active substances take years to bring to market and a flop in one product can cause the default of the company. Serono has managed to be very successful throughout the world with only seven products to sell.

The family business playing field

As shown above, lower costs of capital give rise to two generic investment strategies. First, equal risk investments allow family firms to accept investment opportunities with lower returns (perseverance strategy). Second, equal return projects allow retaining investment opportunities with higher risk (outpacing strategy). Hence, family firms are able to tackle investment opportunities that can be characterized as follows (Figure 41).

Figure 41: Generic investment strategies



The investment strategies indicated above open a space for investment opportunities characterized by combinations of risk and return that still satisfy the criterion that $r_{nf} - c_{nf} \leq r_f - c_f$, assuring that the family firm creates as much value as the nonfamily firm does. This family business playing field is delimited by the slope of the dashed line in Figure 41 above. This slope is defined as follows:

$$\text{Slope} = \frac{r_{nf} - r_f}{\delta_f - \delta_{nf}} = \frac{r_{nf} - r_{nf} + \delta_{nf}\left(\frac{1}{\sqrt{t_{nf}}} - \frac{1}{\sqrt{t_f}}\right)}{\frac{\delta_{nf}\sqrt{t_f}}{\sqrt{t_{nf}}} - \delta_{nf}} = \frac{\frac{1}{\sqrt{t_{nf}}} - \frac{1}{\sqrt{t_f}}}{\frac{\sqrt{t_f}}{\sqrt{t_{nf}}} - 1}$$

The family business playing field sets the limits for the generic investment strategies. All investment opportunities with return / risk combinations falling outside the family business playing field lead to lower risk premia for the family firms ($r_{nf} - c_{nf} > r_f - c_f$) and should therefore not be considered.

6.3.6.3 Conclusion and limitations

Certain scholars who argue that high concentration of ownership can result in risk averse strategic behavior (Chandler, 1990), a preference for projects with short payback periods (Chen, 1995) and a tendency towards underinvestment (Fama and Jensen, 1985), do not capture the essence of investment strategies of family firms.

The considerations on generic investment strategies based on the lower cost of capital showed that family firms have good reasons to invest into long-term projects without risk of underinvestment. In turn, the lower total cost of capital of family firms induced by the longer planning horizon allows taking on seemingly less interesting investment projects and still enables these firms to create as much value as the nonfamily firms. The two generic investment strategies of family firms (perseverance strategy and outpacing opportunities for family firms) present a singular fit between family unique resources (Sirmon and Hitt, 2003) like patient capital (Aronoff and Ward, 1991) and investment opportunities on the markets.

The above considerations on holding periods and costs of capital call for an adapted form of asset pricing model for the family firm which, just as with interest rates on debt, should take into account term structures when calculating rates of return on equity (Mc Nulty et al., 2002).

A first limitation to the practicability of the proposed long-term investment projects is that they require the family to align its differing interests for the long run. A second limitation is the above-mentioned instantaneous risk (Duffee, 1999), hence the risk of default in the short run. To reap the rewards of the generic investment strategies family firms must get prepared for these risks in the short run. This means that family firms need to overcome the instantaneous risks through the alignment of interests and the accumulation of sufficient patient capital in order to weather difficult periods.

6.3.7 Conclusion

The investigation of costs of capital revealed that family firms represent a specific type of firm. It was found that family firms stick to the pecking order of financing, providing evidence that internal sources of equity are the cheapest form of funding in this type of firm. In addition, family firms were found to deliberately restrict their founding to internal sources of equity for emotional reasons as for example the strive for independence and the aversion to control risk (Achleitner and Poech, 2004).

An investigation of literature on the cost of debt within family firms showed that family firms display lower costs of debt than otherwise comparable firms. Up to an equity level of 12% family owners were found to positively influence costs of debt as they can be considered as shareholders having the power and the voice to promote a long-term business strategy without threat of expropriation of debt claimants (Anderson et al., 2003a).

Given that privately held family firms prefer equity to debt to finance investment projects (Poutziouris, 2001) raises the question whether debt is considered as more costly than equity. In family firms that are not for sale, families serve as the market for capital and can deliberately determine an adapted cost of equity capital. As long as the family considers itself to be deriving other rewards than solely monetary ones from its firm, it is free to allocate funds in order to produce those nonmonetary rewards and hence accept lower costs of equity capital.

An analysis of implied costs of capital based on the subjective valuation of the firm by the entrepreneur, measured by total value, provided further evidence to this. In the case where total value was higher than market value, entrepreneurs applied significantly lower costs of capital than the corresponding weighted average costs of capital on the market for corporate control. It was shown that the mean implied cost of capital amounts to 4.4% if the firm is not for sale.

In addition, the analysis revealed that in 12 of 12 industries the privately held firms displayed lower implied costs of capital than the industry specific cost of debt. This provides further evidence to the finding of Poutziouris (2001) that privately held firms strongly stick to the pecking order of financing and rely on equity rather than on debt for cost reasons.

The chapter on costs of capital also reveals that privately held firms do not generally apply higher or lower implied costs of capital than a risk equivalent cost of capital applied by the capital market. In contrast, it was shown that the implied costs of capital of privately held firms are influenced by the subjective value the managers are attributing to their firms. The higher that value, the lower the implied cost of capital.

Applying permanently lower costs of capital to a firm can endanger its survival as it undermines its profitability and destroys shareholder value. However, as family firms display longer planning horizons through their will to pass on the firm to the next generation, they are able to apply lower costs of capital while earning equal risk premia and thus create as much shareholder value as nonfamily firms.

This gives family firms the opportunity to tackle investment strategies in two generic directions. First, the perseverance strategy follows investment projects at equal risk as the nonfamily firms but at lower returns. Second, the outpacing strategy gives family firms the opportunity to tackle investment projects with equal return but higher risk than the investment strategies of nonfamily firms. These strategies are delimited by the family business playing field, which ensures that the family firms create just as much economic value as the nonfamily firms.

7 Conclusion

Management theory in the past has neglected the influence of family as an additional organizational variable (Astrachan, 2003; Chua et al., 2002). It was the intent of the present text to include family firm specificities in the research on financial characteristics of firms and behavior of managers. To this end, the present text has analyzed in depth the issues of risk, return and value in family firms.

7.1 Risk and the family firm

The first part, chapter 4, analyzed the risk-taking propensity of family firms. In particular, the text analyzed control risk aversion of family firms measured by the capital structure of firms (Mishra and Mc Conaughy, 1999).

Chapter 4.1 revealed that family firms display lower debt levels than their nonfamily counterparts, which confirms the findings of other authors (e.g. Gallo and Vilaseca, 1996). This finding could also be verified with increasing levels of family influence as defined by Substantial Family Influence (SFI).

Taking a closer look at traditional capital structure theory, the analysis in chapter 4.2 revealed that solely pecking order theory has strong explicative power for family firms. In chapter 4.3 the text therefore tried to shed more light on further, family firm-specific factors affecting capital structure and the hypothesized control risk aversion of family firms.

First of all, chapter 4.3.1 showed that the capital structure of family firms can be explained by the low diversification of family wealth. In addition, a large part of income derives from a firm-specific investment in human capital. Risk, in this case, is strongly linked to the viability of the company.

Secondly, chapter 4.3.2 revealed that an insufficient separation of private and business wealth may cause leverage levels of family firms to be flawed. To assess the risk propensity of a family firm an integrative view of the true asset base of the family consisting of business and private wealth is proposed.

Thirdly, chapter 4.3.3 showed that increasing family ownership dispersion induces an inversely U-shaped curve of leverage in family firms. Thus, family firms with very concentrated and family firms with wide-spread ownership dispersion have lower leverage levels than firms with medium ownership dispersion with 2 to 4 shareholders. This is found to be influenced by group think effects (Janis, 1972; Stoner, 1968). In addition, the consumption of individual financial gains (e.g. perks) is the highest in firms with medium shareholder dispersion. In turn, this consumption of perks might reduce the equity base of the firm.

Fourthly, despite anecdotal evidence regarding the risk taking propensity of continuing generations (Mann, 1901), chapter 4.3.4 found no empirical evidence regarding differing debt levels and the generation active in the firm.

The analysis also revealed that debt levels can be flawed, particularly in family firms, and are therefore not a very reliable indicator even of control risk aversion. Chapter 4.4 divulged that behavioral aspects like managerial preferences that have an effect on control risk aversion remain neglected. It could be found that a subjective approach, taking into account individual behavior, better explains capital structure decision making in family firms. This is due to the fact that family firms and many privately held firms in general also follow nonfinancial goals (Spremann, 2002), which cannot be fully explained with traditional financial theory, which is rooted in the paradigm of pure rationality. Based on the research body of behavioral finance (Kahneman and Tversky, 1991), chapter 4.5 demonstrated that family entrepreneurs display a high aversion to control risk. Their investment choices affecting capital structure prove to depend on reference points.

Family managers consider situations with high control risk as “insecure” as it does not correspond to their control goal and opt for investment strategies that increase control. In contrast, if family managers feel “secure” and have to bear little control risk, they will try to adhere to this situation. In addition, it was found that family managers increasingly opt for investment strategies with higher control risk and higher potential return if they can start from a “secure” initial situation. Apparently, the managers increasingly prefer the riskier investments if they can afford it, as represented by the secure initial position.

Family firms therefore display stronger endowment for the control goal than for the return goal (Kahneman and Tversky, 1991). Consequently, they show differing value functions for control and return.

In sum, it was exhibited that traditional finance theory, which proclaims exogenous factors affecting capital structure needs to be completed by the proposed subjective behavioral approach, which fosters endogenous factors (Cho, 1998). Only a combined view gives insight into capital structure decision making not only of family firms, but of privately held firms in general.

7.2 Return and the family firm

Whereas chapter 4 analyzed the control risk propensity of family firms, chapter 5 investigated the financial returns of family firms. Even though monetary returns are only one facet of a complex goal set of family firms that includes nonmonetary goals, this investigation could reveal how this goal set affects financial return.

The empirical investigation in chapter 5.1 revealed that privately controlled family firms perform less well in terms of return on equity. The discussion on the reasons for the difference in return on equity revealed that family firms face agency cost (refer to chapter 5.2), despite a close relation of principals and agents in one family (Jensen and Meckling, 1976). Family firms were found to be plagued with conflicts that are costly to mitigate. Altruism can induce a double moral hazard problem that hampers the efficiency of governance structures, especially in the firm's life stages of controlling owners and sibling partnerships (Schulze et al, 2003a and 2003b). The conflicts family firms face can result in financial and strategic inertia, ineffective governance structures, misalignment of interests and ineffective information processing, as discussed in chapter 5.2.6. The text proposed practical guidelines to overcome these problems, in particular, the incentive problems occurring in the succession process within family firms.

Next to agency problems, the analysis revealed further reasons for the performance difference between family and nonfamily firms. The lower leverage levels of family

firms, the prevalence of nonfinancial goals in family firms, the more conservative financial reporting and a lower profit discipline provided further insight into the performance differences.

However, the investigation went beyond a simplistic comparison of family and nonfamily firms. It was found that family firms with low family influence (SFI between 1 and 2) display lower returns on equity due to insufficient monitoring. Family influence of about 2 resulted in the highest return on equity (refer to chapter 5.3). Beyond this turning point additional family influence entrenches the profitability of family firms due to consumption of private benefits.

The impact of ownership dispersion on firm performance is a widely discussed field in economics (e.g. Kaplan, 1989; Smith, 1990; Muscarella and Vetsuypens, 1990; Gibbs, 1993; Ang et al., 1996, Ehrhardt and Nowak, 2003a). With regard to ownership dispersion in family firms the empirical analysis in chapter 5.4 revealed that controlling owners and cousin consortia display higher returns on equity, and sibling partnerships, in particular, seem to suffer from costly agency conflicts. This finding provides evidence in the discussion of changing agency conflicts with continuing evolvement of the family firm.

Additionally, the investigation in chapter 5.5 finds that family firms are particularly successful in industries where personal commitment, family values, and long-term business perspectives are of crucial importance. Family firms are found to outperform their nonfamily counterparts in industries in which they can bring into play these values to their advantage such as in retailing, but also forestry, mining, land development and luxury products.

Furthermore, family firms were found to outperform their nonfamily counterparts when the family firms had up to 10 or 50 to 99 employees (refer to chapter 5.6). In the other size classes (11 to 49 and 100 to 249 employees) the analysis revealed just the opposite results. It was found that the cost-efficient governance structures of family firms with 50 to 99 employees could help explain these differences. For family firms with 11 to 49 employees the study showed a lack of external and internal control and monitoring, which can induce a decrease in financial performance. In turn, for firms

with 100 to 249, family firms displayed insufficient access to external financial and human resources which might hamper the growth of the family firms.

The analysis of firm size and of family influence and their respective impact on financial performance provided the basis for the development of a model of the dynamic adaptation of family influence throughout the life cycle of the firm (refer to chapter 5.7). Based on life cycle theory, the qualitative study by Muehlebach (2004) and the empirical findings presented above, the model postulates that family firms are facing two types of pitfalls, represented by the independence vicious circle and the return vicious circle. In the independence vicious circle family firms are endangered through the excessive weight of the independence goal at the expense of the return goal. In this case the family needs to lower its influence on the firm. The return vicious circle represents the case where (nonfamily) managers excessively follow the return goal at the expense of family values as, for example, the independence of the firm. In this case the family needs to increase its influence on the firm.

In order to overcome these pitfalls families need to establish a common understanding of where they stand in the model. Accordingly, family influence needs be adapted by reducing or consolidating family influence. In sum, the model shows that family influence is not generally good or bad, but can become a blessing or a curse depending on the firm's situation in the life cycle.

Moreover, the discussion in chapter 5.8 provided evidence that third generation family firms perform less well than family firms in other generations. The explanations for the lower performance of third generations family firms draw from a wide body of research and underline the importance of a cross-disciplinary approach for research on family firm finance. First, the lack of a dividend policy in preceding generations can cause equity levels to rise at high levels, especially in later generations (Levin and Travis, 1987). In addition, entwined private and business finances can cause debt and equity levels to be distorted. Furthermore, the third generation was found to display a lower profit discipline than the other generations. Additionally, group think effects (Stoner, 1968; Janis, 1972) in larger groups of people often found in third generation families tied together in their firm, can cause family firms to follow inappropriate and less risky business strategies. Such behavior can deprive the family firm of the

necessary entrepreneurial activities. Finally, culture in third generation family firms can become a curse in the sense that business cultures reigning in third generation family firms are particularly susceptible to being influenced by traditional and partly outdated values. What could be called “the shadow of the founder” and the fact that anchoring new values in firms takes time hinder the evolution of new values established by the third generations.

In sum, privately held family firms display financial characteristics that call for specialized research in finance. The empirical results also demonstrate that to interpret the results correctly, as they apply to family firms, one must consider concepts of finance, accounting and socio-psychology specifically adapted to family firms. Such an integrative view is of particular importance in deriving management advice for practitioners.

7.3 Value and the family firm

Chapter 6 investigated the value of family firms. Whereas chapter 6.1 examined the value of publicly quoted family firms in Switzerland, chapter 6.2 investigated the value of privately held firms.

The first part, chapter 6.1, examined the stock market performance of Swiss publicly quoted family firms and found that family firms outperformed their nonfamily counterparts in the time period from 1990 to 2004. This is in line with other studies on the stock performance of family firms throughout the world (Morck et al., 1988; Anderson and Reeb, 2003b; Mc Conaughy et al., 2001; Hasler, 2004).

In sum, the study found three main explanations for this excess stock market performance: first, lower analyst forecast dispersion (Scherbina, 2001; Diether et al., 2002; Johnson, 2004) induced by a transparent information setting nurtured by less variance in operating profits and earnings per share; second, a reward to investors for the lower market liquidity of these shares; and third, a compensation for the instantaneous default risk induced by riskier investment projects commensurate with the longer holding period of family firms. The argument that family firms are

significantly smaller in size and, therefore, benefit from a size effect (Fama and French (1992, 1995) does not hold true for Switzerland.

Whereas the stock market determines the price of publicly quoted family firms, the valuation of privately held firms, hence of most family firms, remains a challenge.

Chapter 6.2.1 discussed the impact of further monetary sources of value for entrepreneurs, which have not yet been considered in the valuation of privately held firms so far. The analysis found that entrepreneurs of privately owned family firms derive substantial monetary value through the allocation of individual financial gains (e.g. perks and other private expenses) to company accounts. This allocation of individual financial gains to company accounts challenges the finding that family managers generally are paid less (Mc Conaughy, 2000). The study of individual financial gains revealed two main effects.

On the positive side, the allocation of private goods in company accounts can be rational as it provides a tax shield deriving from a reduced company income. The size of this tax shield depends on the tax regime. For the sample analyzed, which consisted of small and mid-sized Swiss family firms in the construction industry, this tax shield amounted to 6.0% of the estimated entity value of these firms. This provides evidence that allocating private consumption to company accounts can increase shareholder value to the extent of this tax shield.

On the negative side, the consumption of private goods in the name of the company needs to be considered as an agency cost, which the noncontrolling financial claimants (e.g. employees, trade creditors, banks) have to bear.

It is argued that in order to determine the real monetary flows from the firm to the family, but also to determine the monetary value of a firm to its owner, the impact of individual financial gains needs to be considered. In order to determine correctly the monetary compensation of family managers, along with salary levels, individual financial gains need to be taken into consideration.

Whereas chapter 6.2.1 studied the impact of individual financial gains as additional monetary value to family firms, chapters 6.2.2 and 6.2.3 investigated the impact of nonmonetary values predominant in family firms (Ward, 1997; Spremann, 2002). These findings provide evidence that the entrepreneurs also price subjective goals.

This is in contrast to market value, which particularly prices economic income (Brealey and Myers, 2000; Pratt et al., 1996).

The concept of total value introduced in chapter 6.2.2 considers the individual value, which an entrepreneur subjectively assigns to his firm. It was found that total value is affected by both monetary and nonmonetary factors. The monetary values are reflected in the firm's market value, which can be assessed using traditional financial models (e.g. CAPM).

The empirical investigation of total value showed that entrepreneurs indeed price nonmonetary values. The overpricing of market value, which in the concept of total value is called emotional value, might be a manifestation of insider knowledge of the entrepreneurs on the positive future development of the firm. A further explanation to this overpricing (on average 100% of market value if a firm is not for sale) is provided by Kahneman and Lovallo (2003), who find that managers tend to be overoptimistic with regard to the outcomes of risky projects.

It was found that entrepreneurs add emotional value when pricing their achievements (e.g. the survival or the independence of the firm) and their private benefits of control (e.g. reputation). They consider these aspects unpriced or not sufficiently priced by the market for corporate control. With multiple regression it was shown that the older a firm the higher is emotional value, with emotional value being defined as the difference between total value and market value. Emotional value can be interpreted as a premium, which the entrepreneur assigns to his firm, as with increasing age the probability of default of a firm decreases (Cantor and Packer, 1995).

Managers were also found to price their efforts, as, for example, the stress of building up the firm, the efforts to assure its growth or the pressure felt to turn it around. Similarly, conflicts within the firm (e.g. within the family) are not priced by the market but might represent difficult moments for the entrepreneur, for which he or she requires compensation. In line with the argument that emotional value also incorporates compensation for efforts and stress, multiple regression showed that managers who consider themselves rather unhappy (Frey and Stutzer, 2000 and 2001) display significantly higher emotional or total value than rather happy entrepreneurs.

In the research by Lovallo and Kahneman (2003) the chapter on emotional value provided additional insight into the overoptimism bias. The present text, however, argues that overoptimism can not be considered simply as irrational behavior due to a psychological bias to overestimate one's own achievements. It needs to be understood in the light of valuable nonfinancial goals for entrepreneurs.

The variables specific to family firms explain emotional value and total value only partially. Whereas family influence and the generation active in the firm did not show any significant impact on total or emotional value, the fact that a descendant of the founder was still active in the firm positively affected total value. Hence the legacy of the family (Habbershon, 2005), represented by the presence of a descendant of the founder, plays a role in explaining the overestimation of firm value by entrepreneurs.

If a firm is sold, the entrepreneur will not be able to capitalize on total value – unless a buyer prices the nonfinancial goals as the seller does. The discrepancy between what is considered as valuable by the market for corporate control and what is considered as valuable by the entrepreneur helps to understand why many successions are failing. If an entrepreneur places the emotional value of his firm high, even a very lucrative offer to buy his firm may not compensate him adequately. In the logic of the entrepreneur rejecting a seemingly tempting offer can be considered as rational.

However, high total and emotional values are not always a blessing. The gap between market value and total value should not widen too much. A manager who overvalues his enterprise excessively in comparison to its market value could put the firm in danger and could inhibit a turnaround, which might ultimately save the firm. This might happen if a firm is underperforming in financial terms. Similarly, if the entrepreneur prices his firm excessively, but has to sell it as he reaches the retirement age, he might prevent a timely succession.

The concept of total and emotional value provides insight into the essence of entrepreneurial activity and exit as it changes the scope of analysis from a supposedly objective valuation that is geared toward what a buyer's expectations would be to a subjective valuation. The subjective valuation is typical for entrepreneurs who are not selling their firm, but intend to keep it in the hands of family for the succeeding generations.

The findings outlined above help judge quickly and concisely the likelihood of an owner's willingness to sell and help in determining an accurate price to compensate for both the market and the emotional value. These considerations enable brokers and underwriters to recognize the likelihood of a desire to sell and to identify opportunities to add significant value to firms in which emotional value starts to fall to low levels. They also help those desiring to make acquisitions determine accurate offering prices as well as offer ranges.

Whereas chapter 6.2 provided insight into value and valuation questions, chapter 6.3 investigated the cost of capital in family firms. The two topics are interrelated as the costs of capital allow managers to evaluate the value of their decisions (Adams et al., 2004).

The investigation of costs of capital revealed that family firms represent a specific type of firm. Chapter 6.3.1 showed that family firms stick to the pecking order of financing showing that internal sources of equity are the cheapest form of funding in this type of firm.

A study of the literature on the cost of debt within family firms (refer to chapter 6.3.2) showed that publicly quoted family firms display lower costs of debt than otherwise comparable firms (Anderson et al., 2003a). Up to an equity level of 12%, family owners were found to influence positively costs of debt in publicly quoted family firms; families can be considered as shareholders having the power and the voice to promote a long-term business strategy without threat of expropriation of debt claimants.

The fact that privately held family firms prefer equity to debt for cost reasons raises the question of whether debt is considered more costly than equity. In family firms that are not for sale, families serve as the market for capital and can deliberately determine an adapted cost of equity capital. As long as the family feels that it derives rewards other than solely monetary ones from its firm, it is free to allocate funds in order to produce those nonmonetary rewards and hence accept lower costs of equity capital.

An analysis of implied costs of capital based on the subjective valuation of the firm by the entrepreneur in chapter 6.3.4 provided further evidence of this. In cases where total value was higher than market value and the family, therefore, had no incentive to sell

its firm, entrepreneurs applied significantly lower implied costs of capital than the corresponding weighted average costs of capital on the market for corporate control. It was shown that the mean implied cost of capital of 190 privately owned firms amounted to 4.4%.

In addition, the analysis revealed that in 12 of 12 industries the privately held firms displayed lower implied costs of capital than the industry-specific cost of debt. This provides further evidence to the finding of Poutziouris (2001) that privately held firms strongly stick to the pecking order of financing and rely rather on family equity than on debt for cost reasons.

The investigation of the costs of capital also revealed that family firms do not generally apply higher or lower implied costs of capital than a risk equivalent cost of capital applied by the capital market. It was shown that the implied costs of capital of privately held firms are influenced by the subjective value, which the managers attribute to their firms. The higher this total value, the lower the implied cost of capital.

In chapter 6.3.5 it was shown that applying permanently lower costs of capital to a firm can endanger its survival; doing so undermines the firm's profitability and destroys shareholder value.

The capacity of a firm to create value is defined by its capacity to invest capital at rates of return that exceed the costs of capital (Copeland et al., 2000). Given the possibility of family firms in applying lower costs of capital due to a longer planning horizon, chapter 6.3.6 showed that family firms have the opportunity for unique investment strategies that ensure a capacity to create shareholder value equal to that of nonfamily firms. These generic investment strategies work in two directions.

First, the perseverance strategy follows investment projects with equal risk but with lower returns than the nonfamily firms. Second, the outpacing strategy gives family firms the opportunity to tackle investment projects with equal return but higher risk than the investment strategies of nonfamily firms. These strategies are delimited by the family business playing field, which assures that the risk premia and thus the economic value created by the family firms does not fall below the economic value created by the nonfamily firms.

The present text on family firms intended to shed light on the financial aspects of family firms; the analysis is rather more descriptive than prescriptive. The exploratory character of the text shows directions for future research, research which is needed in several directions.

With regard to risk, behavioral finance could provide much deeper insight into the risk-taking propensity of individuals and firms. In particular, it would be helpful to investigate further the issue of diminishing sensitivity (Kahneman and Tversky, 1991) of value functions, for example, for return and control risk.

With regard to return, a lot of empirical work has been done. However, what is missing is a better understanding of how monetary and nonmonetary goals should be balanced in practice. In particular, if the owning family defines its goal set and allocates resources accordingly, what would an adapted performance benchmark be to assure a sustainable development of a firm?

More research is needed on total value and on the subjective value, which an individual assigns to his firm. Such research could help understand better how emotional value, as the difference between total value and market value, changes over time. In addition, it would be interesting to test the assumption that firms, whose emotional value is approaching or is below zero, will more likely than others engage in capital market transactions and sell out, as proposed by the concept of total value.

The challenge within all of these future projects consists in integrating multiple research disciplines while assuring the academic rigor of research.

8 Bibliography

Achleitner, A. K., Poech, A., (2004). *Familienunternehmen und Private Equity: Die psychologischen Bruchstellen*. Munich: Apax Partners.

Ackert, L. F., Athanassakos, G., (1997). Prior Uncertainty, Analyst Bias, and Subsequent Abnormal Returns. *Journal of Financial Research*, 20(2), 263-273.

Adams, A. F., Manners, G. E., Astrachan, J. H., Mazzola, P., (2004). The Importance of Integrated Goal Setting: The Application of Cost-of-Capital Concepts to Private Firms. *Family Business Review*, 17(4), 287-302.

Agrawal, A., Nagarajan, N., (1990). Corporate capital structure, agency costs and ownership control: The case of all-equity firms. *Journal of Finance*, 45(4), 1325-1331.

Amihud, Y., Lev, B., (1981). Risk Reduction as a Managerial Motive for Conglomerate Mergers. *Bell Journal of Economics*, 7(2), 605-617.

Amihud, Y., Mendelson, H., (1986). Liquidity and Stock Returns. *Financial Analysts Journal*, 42(3), 43-48.

Amihud, Y., Mendelson, H., (1991). Liquidity, Asset Prices and Financial Policy. *Financial Analysts Journal*, 47(6), 56-66.

Amihud, Y., Mendelson, H., Uno, J., (1999). Number of shareholders and stock prices: Evidence from Japan. *Journal of Finance*, 54(3), 1169-1175.

Amsden, A. H., (1992). *Asia's next giant-South Korea and Late Industrialization.* Oxford, UK: Oxford University Press.

Anderson, R., Mansi, S., Reeb, D., (2003a). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68(2), 263-286.

Anderson, R., Reeb, D., (2003b). Founding family ownership and firm performance: evidence from the S&P 500. *Journal of Finance*, 58(3), 1308-1328.

Ang, J., Lin, J., Tyler, F., (1995). Evidence on the lack of separation between business and personal risks among small businesses. *Journal of Small Business Finance*, 4(3), 197-210.

Ang, J., Cole, R. A., Lin, J., (1996). Agency cost and ownership structure. *Journal of Finance*, 55(1), 81-106.

Aronoff, C. E., Astrachan, J. H., (1996). Reducing the Risks of Family Business growth. *Nation's Business*, 84(3).

Aronoff, C. E., Ward, J. L., (1991). *Family Business Source Book*. Detroit: Omnigraphs.

Aronoff, C., (2001). Understanding family-business survival statistics. *Supply House Times*, 44(5).

Arrow, K., (1975). Kenneth Arrow on capitalism and society. *Business and Society Review / Innovation*, 10, 22-27.

Astrachan, J. H., Mc Conaughy, D., (2001). Venture Capitalists and Closely Held IPOs: Lessons for Family-Controlled firms. *Family Business Review*, 14(4), 295-311.

Astrachan, J. H., Klein, S., Smyrnios, K., (2002). The F-PEC scale of family influence: a proposal for solving the family business definition problem. *Family Business Review*, 15(1), 45-57.

Astrachan, J. H., Shanker, M. C., (2003). Family Business' Contribution to the U.S. Economy: A Closer Look. *Family Business Review,* 16(1), 211-219.

Astrachan, J. H., (2003). Commentary on the special issue: the emergence of a field. *Journal of Business Venturing*, 18, 567-572.

Atanasov, V., (2005). How much value can blockholders tunnel? Evidence from the Bulgarian mass privatization auctions. *Journal of Financial Economics*, 76(1), 191-234.

Audia, P. G., Locke, E. A., Smith, K. G., (2000). The paradox of success: An archival and a laboratory study of strategic persistence following radical environmental change. *Academy of Management Journal*, 43, 837-853.

Avery, R. B., Bostic, R. W., Samolyk, K. A., (1998). The role of personal wealth in small business finance. *Journal of Banking and Finance*, 22, 1019-1061.

Baik, B., Park, C., (2003). Dispersion of analysts' expectations and the cross section of stock returns. *Applied Financial Economics*, 13, 829-839.

Baker, T., Nelson, R., (2005). Making do with what's at hand: Entrepreneurial bricolage. *Administrative Science Quarterly,* In press.

Barnes, L. B., Hershon, S. A., (1976). Transferring power in the business. *Harvard Business Review*, July-August, 105-114.

Barton, S. L., Gordon, P. J., (1988). Corporate strategy and capital structure. *Strategic Management Journal*, 9(6), 623-632.

Barton, S. L., Matthews, C. H., (1988). *A strategic decision making process for the small entrepreneurial firm*. In: Roberts, G., Lasher, H., Maliche, E., (eds.). *Entrepreneurship: New direction for global economy,* (pp. 26-31). Proceedings of the 33rd World Conference of the International Council for Small Business (ICSB). ICSB-USASBE.

Batson, C. D., (1990). How social is an animal? The Human Capacity for Caring. *American Psychologist,* 45, 336-346.

Baumol, W., (1959*)*. *Business Behavior, Value and Growth*. New York: Mac Millan.

Baysinger, B., Kosnik, R. H., Turk, T. A., (1991). Effect of board and ownership structure on corporate R&D strategy. *Academy of Management Journal*, 34, 205-214.

Bebchuk, L. A., Kraakman, R., Triantis, G. G., (1999). *Stock pyramids, cross ownership and dual class equity: The mechanisms and agency costs of separating control from cash flow rights*. Working Paper 6951, Cambridge, MA: National Bureau of Economic Research.

Becker, G. S., (1974). A Theory of Social Interactions. *Journal of Political Economics*, 82(6), 1063-1093.

Becker, G. S., (1981). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Bergstrom, T. C., (1989). A fresh look at the rotten kid theorem and other household mysteries. *Journal of Political Economics*, 97, 1138-1159.

Berle, A., Means, G., (1932). *The Modern Corporation and Private Property*. New York: Mac Millan.

Bernstein, P. L., (1996). *Against the Gods: The Remarkable Story of Risk.* New York: John Wiley & Sons.

Berry, B., (1975). The development of organization structure in the family firm. *Journal of General Management*, 3(1), 42-60.

Besanko, D., Dranove, D., Shanley, M., (1996). *Economics of Strategy*. New York: John Wiley and Sons.

Bhagwat, Y., (2002). Commentary on: The Role of Going Public in Family Business' Long-Lasting Growth: A study of Italian IPOs. *Family Business Review*, 15(2), 149-151.

Bhattacharya, U., Ravikumar, B, (2001). Capital Markets and the Evolution of Family Businesses. *Journal of Business*, 74(2), 187-219.

Bjuggren, P. O., Sund, L. G., (2001). Strategic decision making in intergenerational successions of small- and medium-size family-owned businesses. *Family Business Review*, 14(1), 11-24.

Black, F., (1972). Capital market equilibrium with restricted borrowing. *Journal of Business,* 45, 444-455.

Bogod, T., (2004). Will non-family firms take their cue from family firms? *Families in Business*, 16, 70-71.

Booz Allen Hamilton, (2005). CEO Succession 2004: The World's most prominent temp Workers. *Strategy + Business*, 39, Summer, 28-43.

Brauchlin, E., Pichler, J. H., (2000). *Unternehmer und Unternehmensperspektiven für Klein- und Mittelunternehmen. Festschrift für Hans Jobst Pleitner*. Schriftenreihe des Schweizerischen Instituts für gewerbliche Wirtschaft an der Universität St. Gallen, St. Gallen: IGW.

Brealey, R. A., Myers, S. C., (2000). *Principles of corporate finance.* 6th edition. Boston: Mc Graw Hill.

Buchanan, J. M., (1975). *The Samaritan's Dilemma*. In: Phelps, E. S., (eds.). *Altruism, Morality, and Economic Theory*, (pp. 71-75). New York: Russell Sage Foundation.

Buchanan, J. M., (1983). Rent seeking, noncompensated transfers and laws of succession. *Journal of Law and Economics*, 26, 71-85.

Burch, P., (1972). *Managerial revolution reassessed: Family control in America's largest corporations*. Lexington, MA: Lexington Books.

Business Week, (2003). *Defining family*, November 10, 2003.

Cantor, R., Packer, F., (1995). Multiple ratings and credit standards: differences of opinion in the credit rating industry. *Federal Reserve Bank of New York*, Research Paper: 9527.

Carlock, R. S., Ward, J., (2001). *Strategic planning for the family business-parallel planning to unify the family and business*. Houndsmill, NY: Palgrave.

Cassar, G., Holmes, S., (2003). Capital structure and financing of SMEs: Australian evidence. *Accounting and Finance*, 43, 123-147.

Casson, M., (1995). *Entrepreneurship and Business Culture: Studies In the Economics of Trust*, Aldershot: Edward Elgar.

Casson, M., (1999). The economics of the family firm. *Scandinavian Economic History Review*, 47, 10-23.

Chaganti, R., Damanpour, F., (1991). Institutional ownership, capital structure, and firm performance. *Strategic Management Journal*, 12(7), 479-491.

Chami, R., (1999). What's different about family business? Unpublished working paper, University of Notre Dame and the International Monetary Fund, Indiana and Washington DC.

Chan, K. C., Chen, N. F., Hsieh, D. A., (1983). An Explanatory Investigation of the Firm Size Effect. *Journal of Financial Economics*, 12, 451-471.

Chandler, A. D., (1990). *Scale and Scope*. Cambridge, MA: Cambridge University Press.

Chen, M., (1995). *Asian Management Systems: Chinese, Japanese and Korean Styles of Business.* London: Routledge.

Chen, H., Hexter, L., Hu, M., (1993). Management Ownership and Corporate Value: Some New Evidence. *Managerial and Decision Economics*, 14(4), 335-346.

Cho, M., (1998). Ownership structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics*, 47, 103-121.

Chrisman, J. J., Chua, J. H., Litz, R. A., (2003). A unified systems perspective of family firm performance: an extension and integration. *Journal of Business Venturing*, 18, 467-472.

Chrisman, J. J., Chua, J. H., Litz, R. A., (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354.

Chua, J. H., Chrisman, J. J., Steier, L., (2003). Extending the theoretical horizons of family business research. *Entrepreneurship Theory and Practice*, 27(4), 331-338.

Ciccone, S. J., (2003). Forecast dispersion and error versus size, book to market ratio and momentum: A comparison of anomalies form 1992 to 2001. *Journal of Asset Management*, 3(4), 333-344.

Copeland, T., Koller, T., Murrin, J., (2002). *Valuation*. New York: John Wiley & Sons.

Copeland, T., Weston J. F., (1992). *Financial Theory and Corporate Policy*, 3rd edition, Addison-Wesley Publishing Company.

Corbetta, G., Salvato, C., (2004). Self-Serving or Self Actualizing? Models of Man and Agency Costs in Different Types of Family Firms: A Commentary on "Comparing the Agency Costs of Family Firms and Non-Family Firms: Conceptual Issues and Exploratory Evidence". *Entrepreneurship Theory and Practice*, 28(4), 355-362.

Credit Suisse, (2003). *Economic Briefing*, Nr. 33., Zurich: Credit Suisse.

Cyert, R. M., March, J. G., (1963). *A behavioral theory of the firm.* Engelwood Cliffs, NJ: Prentice Hall.

Daily, C. M., Dollinger, M. J., (1991). An empirical examination of ownership structure in family and professionally managed firms. *Family Business Review*, 5(2), 117-136.

Daily, C. M., Dollinger, M. J., (1993). Alternative Methodologies for identifying Family-versus Nonfamily-managed Businesses. *Journal of Small Business Management*, 31(2), 79-90.

Damodaran, A., (1999). *Applied Corporate Finance*. New York: Wiley and Sons.

Damodaran, A., (2005). www.damodaran.com. Data download: 24th of August 2005.

D´Aveni, R. A., Mac Millan, I. C., (1990). Crisis and the content of managerial communications: A study of the focus of attention of top managers in surviving and failing firms. *Administrative Science Quarterly*, 35, 634-657.

Davis, J., Tagiuri, R., (1989). The influence of life stage on father-son relationships in family companies. *Family Business Review*, 11(1), 47-74.

Davis, J. H., Schoorman, F. D., Donaldson, L., (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20-47.

De Angelo, H., De Angelo, L., (1985). Managerial ownership and voting rights: A study of public corporations with dual classes of common stock. *Journal of Financial Economics*, 14(1), 33-69.

De Angelo, H., Masulis, R., (1980). Optimal capital structure under corporate and personal taxation. *Journal of Financial Economics*, 8(1), 3-30.

De Visscher, F. M., Aronoff, C. E., Ward, J. L., (1995). *Financing Transitions: Managing Capital and Liquidity in the Family Business.* Family Business Leadership Series Nr. 7, Marietta, GA: Family Enterprise Publishers.

De Visscher. F. M., (2004). Balancing capital, liquidity and control. *Families in Business*, 16, 45-47.

Demsetz, H., (1983). The structure of ownership and the theory of the firm. *Journal of Law and Economics*, 26, 375-390.

Demsetz, H., Lehn, K., (1985). The Structure of Corporate Ownership: Causes and Consequences. *Journal of Political Economics*, 93, 1155-1177.

Demsetz, H., Villalonga, B., (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7, 209-233.

Diether, K. B., Malloy, C. J., Scherbina, A., (2002). Differences of Opinion and the Cross Section of Stock Returns. *Journal of Finance*, 57(5), 2113-2141.

Dische, A., (2002a). Dispersion in Analyst Forecasts and the Profitability of Earnings Momentum Strategies. *European Financial Management*, 8(2), 211-228.

Dische, A., (2002b). *Earnings Momentum Strategies: A Behavioral Finance Approach*; Dissertation, University of St. Gallen.

Dobrzynski, J. H., (1993). Relationship investing, *Business Week*, 3309, 68-75.

Donaldson, G., (1961). *Corporate debt capacity: A Study of corporate debt policy and the determinants of corporate debt capacity*. Working paper. Cambridge, MA: Harvard School of Business Administration.

Donnelley, R., (1964). The family business. *Harvard Business Review*, 42(2), 93-105.

Donovan, K., (1995). Just one tiny share can make the difference: they're battling about the family fortune and the brother has the upper hand. *National Law Journal*, 17(42), 12.

Dreux IV, D. R., Brown, B. M., (1999). Marketing private banking services to family businesses. Available: www.genusresources.com/Mark.Priv.Bank.Dreux_5.html.

Drozdow, N., Carroll, V. P., (1997). Tools for strategy development in family firms. *Sloan Management Review*, Fall, 75-88.

DTV Lexikon in zwanzig Bänden, (1995). Band 20, München und Mannheim: Deutscher Taschenbuch Verlag und Brockhaus Verlag.

Duffee, G. R., (1999). Estimating the Price of Default Risk. *The Review of Financial Studies*, 12(1), 197-226.

Dyer, W. G., (2003). The family: The missing variable in organizational research. *Entrepreneurship Theory and Practice*, 27(4), 401-416.

Eaton, C., Yuan, L., Wu, Z., (2002). Reciprocal altruism and the theory of the family firm. Paper presented at the Second Annual Conference on Theories of the Family Enterprise: Search for a Paradigm, Dec., Philadelphia.

Economist, (2004). The business of survival, December 18.

Ehrhardt, O., Nowak, E., (2003a). The effect of IPOs on German Family-Owned Firms: Governance Changes, Ownership Structure, and Performance. *Journal of Small Business Management*, 41(2), 222-232.

Ehrhardt, O., Nowak, E., (2003b). Private Benefits and Minority Shareholder Expropriation (or what exactly are Private Benefits of Control?). CFS Working Paper Series.

Einhorn, H. J., (1982). *Learning from experience and suboptimal rules in decision making*. In: Kahneman, D., Slovic, P., Tversky, A., (eds.). *Judgment under uncertainty: Heuristics and biases*, (pp. 268-283). New York: Cambridge University Press.

Eshel, I., Samuelson, L., Shaked, A., (1998). Altruists, egoists, and hooligans in a local interaction model. *American Economic Review*, 88(1), 157-179.

Faccio, M., Lang, L., (2002). The ultimate ownership of western European corporations. *Journal of Financial Economics*, 65, 365-395.

Fama, E. F., Mac Beth, J. D., (1973). Risk, Return and Equilibrium. Empirical Tests. *Journal of Political Economics*, 81, 607-636.

Fama, E. F., (1980). Agency Problems and the Theory of the Firm. *Journal of Political Economics*, 88(2), 288-307.

Fama, E. F., Jensen, M. C., (1983a). Separation of ownership and control. *Journal of Law and Economics*, 26, 301-325.

Fama, E. F., Jensen, M. C., (1983b). Agency problems and residual claims. *Journal of Law and Economics*, 26, 325-344.

Fama, E. F., Jensen, M. C., (1985). Organizational forms and investment decisions. *Journal of Financial Economics*, 14, 101-119.

Fama, E. F., French, K., (1992). Cross section of stock returns. *Journal of Finance*, 47, 427-465.

Fama, E. F., French, K., (1995). Size and book to market factors in earnings and returns. *Journal of Finance*, 50, 131-155.

Fama, E. F., French, K., (1999). The Corporate Cost of Capital and the Return on Corporate Investment. *Journal of Finance*, 54(6), 1939-1967.

Filatotchev, I., Michiewicz, T., (2001). *Ownership concentration, "private benefits of control", and debt financing*. Unpublished working paper, University of London and University College, London.

Flören, R. H., (1998). The significance of family business in the Netherlands. *Family Business Review*, 11(2), 121-134.

Forbes Wealthiest American Index, 2002.

Fox, M. A., Hamilton, R., (1994). Ownership and diversification: Agency theory or stewardship theory. *Journal of Management Studies*, 31, 69-81.

Franks, J., Mayer, C., (1997). Corporate ownership and control in the UK, Germany and France. *Journal of Applied Corporate Finance,* 9(4), 30-45.

Fraser, J. A., (1990). Executive compensation survey: missed opportunities. *INC Magazine*, 12, 11.

Fredrickson, J. W., (1984). The comprehensiveness of strategic decision making processes: Extensions, observations, future directions. *Academy of Management Journal*, 27(3), 445-466.

Frey, B. S., (1993). Does monitoring increase work effort? The rivalry with trust and loyalty. *Economic Inquiry*, 31, 69-81.

Frey, B. S., (1997). On the relationship between intrinsic and extrinsic work motivation. *International Journal of Industrial Organizations*, 15, 427-439.

Frey, B. S., Stutzer, A., (2000). Happiness, Economics and Institutions. *The Economic Journal*, 110(466), 918-938.

Frey, B. S., Stutzer, A., (2001). *Happiness and Economics: How the Economy and Institutions Affect Human Well-Being*. Princeton: University Press.

Frey, U., Halter, F., Klein, S., Zellweger, T., (2004). *Family Businesses in Switzerland: Significance and Structure*. In: Tomaselli, S., Melin, L., (eds.). *Family Firms in the Wind of Change*, Book Proceedings: 15th Annual Family Business Network World Conference, (pp. 73-89), Copenhagen.

Fueglistaller, U., (1995). *Tertiarisierung und Dienstleistungskompetenz in schweizerischen Klein- und Mittelunternehmen*. St. Gallen: KMU -Verlag University of St. Gallen.

Fueglistaller, U., Müller, C., Volery, T., (2004). *Entrepreneurship*. Wiesbaden: Gabler.

Gallo, M. A., Vilaseca, A., (1996). Finance in family business. *Family Business Review*, 9, 387-402.

Gallo, M. A., Tápies, J., Cappuyns, K., (2000). *Comparación entre empresas familiares y no familiares: lógicas financieras y preferencias personales*, Documento de Investigación nº 406, IESE, Universidad de Navarra.

Gallo, M. A., Tapies, J., Cappuyns, K., (2004). Comparison of Family and Nonfamily Business: Financial Logic and Personal Preferences, *Family Business Review*, 17(4), 303-318.

Ganderrio, B., (1999). Financial Performance of family and nonfamily Businesses. Working Paper, Lincoln UK.

Garrett, E., Reid, A., Schürer, K., Szreter, S., (2001). *Changing family size in England and Wales*. Cambridge, MA: Cambridge University Press.

Gebhardt, W. R., Lee, C. M. C., Swaminathan, B., (2001). Toward an Implied Cost of Capital. *Journal of Accounting Research*, 39(1), 135-176.

George, G., (2005). Slack Resources and the Performance of Privately Held Firms. *Academy of Management Journal*, 48(4), 661-676.

Gersick, K. E., Davis, J. A., Mc Collom Hampton, M., Lansberg, I., (1997). *Generation to Generation, Life cycles of the Family Business*. Boston: Harvard Business School Press.

Ghoshal, S., Moran, P., (1996). Bad for practice: A critique of transaction cost theory. *Academy of Management Review*, 21, 13-47.

Gibbs, P. A., (1993). Determinants of Corporate Restructuring: The Relative Importance of Corporate Governance, Takeover Threat, and Free Cash Flows. *Strategic Management Journal*, 9(6), 577-590.

Givoly, D., Hayn, C., Ofer, A., Sarig, O., (1992). Taxes and capital structure: Evidence from firms' tax reform act of 1986. *The Review of Financial Studies*, 5(2), 331-255.

Glaeser, E. L., Shleifer, A., (1998). *Not-For-Profit Entrepreneurs*. Working Paper 6810, Cambridge, MA: National Bureau of Economic Research.

Gnan, L., Montemerlo, D., (2001). *Structure and Dynamics of Ownership, Governance and Strategy: Role of Family and Impact on Performance in Italian SMEs*. In: Corbetta, G., Montemerlo, D. (eds.). *The role of family in family business*, (pp. 224-244). Rome: FBN Research Forum Proceedings.

Gnan, L., Songini, L., (2003). The professionalization of family firms: the role of agency cost control mechanisms, Proceedings from International Family Enterprise Research Academy World Conference, Lausanne.

Göcmen, V., Meyer, T., (2004). Mehr Wert dank Eigentümer Unternehmern. *Neue Zürcher Zeitung*, June 29, 25.

Goldstein, J., Lutz, W., Testa, M. R., (2003). The emergence of sub-replacement family size ideals in Europe. *Population Research and Policy Review,* 22(5-6), 479-496.

Gomez-Mejia, L. R., Nunez-Nickel, M., Gutierrez, I., (2001). The Role of Family Ties in Agency Contracts. *Academy of Management Journal*, 44(1), 81-95.

Graves, S. B., (1988). Institutional ownership and corporate R&D in the computer industry. *Academy of Management Journal*, 31, 417-428.

Greco, S., (1997). Employee package deal. *INC Magazine*, 19(15), 30.

Greenwald & Associates, (1994). *Major Findings of the MassMutual Family Business Survey*. Springfield, MA: Massachusetts Life Insurance Company.

Gross, P., (1994). *Die Multioptionsgesellschaft*. Frankfurt a. Main: Suhrkamp.

Grossman, S., Hart, O., (1986). *Corporate Financial Structure and Managerial Incentives*. In: Mc Call, J. J., (ed.). *The Economics of Information and Uncertainty*. Chicago: University of Chicago Press.

Groves, R., Harrison, R., (1996). Bank loan and small business financing in Britain. *Accounting and Business Research*, Summer, 227-233.

Griffith, J. M., (1999). CEO ownership and firm value. *Managerial and Decision Economics*, 20(1), 1-8.

Habbershon, T. G., Williams, M., Mac Millan, I. C., (2003). A unified system perspective of family firm performance. *Journal of Business Venturing*, 18, 451-465.

Habbershon, T. G., (2005). Transgenerational entrepreneurship, Successful Transgenerational Entrepreneurship Practices, Research Summit, Milan.

Hall, M., Weiss, L., (1967). Firm size and profitability. *Review of Economics*, 49, 319-331.

Hall, G. C., Hutchinson, P. J., Michaelas, N., (2004). Determinants of the Capital Structures of European SMEs. *Journal of Business Finance and Accounting*, 31(5) & (6), 711-728.

Halpern, P., (1999). Systemic perspectives on corporate governance systems. Paper presented at the Conference and Symposium on Corporate Governance and Globalization, University of Toronto.
http://www.rotman.utoronto.ca/cmi/papers/paper1-1.htm

Halter, F., Frey, U., Zellweger, T., (2005). *The Socialisation's Impact from Family Business on Youths Personality and Career Choice Motives*. Paper presented at the International Famliy Enterprise Research Academy (IFERA) Conference, Brussels.

Hambrick, D. C., D'Aveni, R. A., (1988). Large corporate failures as downward spirals. *Administrative Science Quarterly*, 33, 1-23.

Handler, W. C., (1989). Methodological issues and considerations in studying family businesses. *Family Business Review*, 2(3), 257-276.

Hansen, G. S., Hill, C. W. L., (1991). Are institutional investors myopic? A time-series study of four technology driven industries. *Strategic Management Journal*, 12, 1-16.

Hart, O., (1995). *Firms, contracts and financial structure*. Oxford: Clarendon Press.

Hasler, P. T., (2004). *Die Performance familiengeführter Gesellschaften*, June, HVB Equity Research,.

Haugh, H., Mc Kee, L., (2003). It's just like a family-shared values in the family firm. *Community, Work & Family*, 6(2), 141-159.

Hayes, R. H., Abernathy, W. J., (1980). Managing our way to economic decline. *Harvard Business Review*, 58(4), 67-77.

Haynes, G. W., Walker, R., Rowe, B. R., Hong, G. S., (1999). The intermingling of business and family finances in family-owned businesses. *Family Business Review*, 12, 225-239.

Heaton, H. B., (1998). Valuing Small Business. *The Appraisal Journal*, January, 11-16.

Heck, R. K. Z., Scannell, T., (1999). The prevalence of family business from a household sample. *Family Business Review*, 12(3), 209-224.

Heck, R. K. Z., Stafford, K., (2001). *The vital institution of family businesses: economic benefits in plain sight*. In: Mc Cann, G. K., Upton, N., (eds.). *Destroying Myths and Creating Value in Family Business*, Stetson University, DeLand, Fl.

Himmelberg, C. P., Hubbard, R. G., Palia, D., (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53, 353-384.

Holderness, C., Sheehan D., (1988a). Corporate Governance: Voting Rights and Majority Rules. *Journal of Financial Economic*, 20, 203-235.

Holderness, C., Sheehan, D., (1988b). The Role of Majority Shareholders in Public Held Corporations: An Exploratory Analysis. *Journal of Financial Economics,* 20, 317-347.

Hoy, F., Verser, T.G., (1994). Emerging business, emerging field: entrepreneurship and the family firm. *Entrepreneurship Theory and Practice*, 19(1), 9-23.

Hull, J., (2003). *Options, Futures and Other Derivatives*, 5th edition, Upper Saddle River: Prentice Hall.

Ibbotson, (1995). Ibbotson Associates, www.ibbotson.com

Ibbotson, (1999). Ibbotson Associates, www.ibbotson.com

Janis, I. L., (1972). *Victims of Groupthink*. Boston: Houghton Mifflin.

Jaskiewicz, P., Klein, S., Schiereck, D., (2005). Family Influence and Performance-Theoretical Concepts and Empirical Results, Working Paper, European Business School.

Jensen, M. C., Meckling, W., (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.

Jensen, M. C., Murphy, K., (1990). Performance Pay and Top Management Incentives. *Journal of Political Economics*, 225-264.

Jensen, M. C., (1994). Self-interest, altruism, incentives and agency. *Journal of Applied Corporate Finance*, Summer, 40-45.

Jensen, M. C., (1998). *Foundations of Organizational Strategy*. Cambridge, MA: Harvard University Press.

Johnson, W., Magee, R., Nagarajan, N., Newman, H., (1985). An analysis of the stock price reaction to sudden executive deaths. *Journal of Accounting and Economics*, 7(1-3), 151-174.

Johnson, H. T., Kaplan, R. S., (1987). *Relevance lost: the rise and fall of management accounting*. Cambridge, MA: Harvard Business School Press.

Johnson, T. C., (2004). Forecast Dispersion and the Cross Section of Expected Returns. *Journal of Finance*, 59(5), 1957-1978.

Kahneman, D., Tversky, A., (1972). Subjective probability: A judgment of representatives. *Cognitive Psychology*, 3, 430-454.

Kahneman, D., Tversky, A., (1973). On the psychology of prediction. *Psychological Review*, 80, 251-273.

Kahneman, D., Tversky, A., (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-291.

Kahneman, D., Slovic, P., Tversky, A., (1982). *Judgment under uncertainty: Heuristics and biases*. Cambridge, MA: Cambridge University Press.

Kahneman, D., Tversky, A., (1991). Loss Aversion in Riskless Choice: A Reference Dependent Model. *Quarterly Journal of Economics*, 106, 1039-1061.

Kahneman, D., Diener, E., Schwarz, N., (1999). *Well-being. The foundations of hedonic psychology*. New York: Russell Sage Foundation.

Kale, J. R., Noe, T. H., Ramirez, G. G., (1991). The effect of business risk on corporate capital structure: theory and evidence. *Journal of Finance*, 46(5), 1693-1715.

Kang, D., (2000). The impact of family ownership on performance in public organizations. A study of the U.S. Fortune 500, 1982-1994. *Academy of Management Meeting*, Toronto.

Kaplan, S., (1989). The Effects of Management Buyouts on Operating Performance and Value. *Journal of Financial Economics*, 24(2), 217-254.

Kepner, E., (1983). The Family and the Firm: A co-evolutionary Perspective. *Organizational Dynamics*, 12(1), 57-70.

Kets de Vries, M. F. R., (1993). The Dynamics of Family Controlled Firms: The Good and Bad News. *Organizational Dynamics*, 21(3), 59-71.

Kets de Vries, M. F. R., (1996). *Family business: Human dilemmas in the family firm*. London: International Thomson Business Press.

Khadjavi, K., (2003). *Specifics of valuation in private, manager-owned companies-a CAPM approach*, Working paper, Swiss Research Institute of Banking and Finance, University of Sankt Gallen.

Khadjavi, K., (2005). *Wertmanagement im Mittelstand*, Dissertation, University of St. Gallen.

Kisfalvi, V., (2000). The threat of failure, the perils of success and CEO character: Sources of strategic persistence. *Organization Studies*, 21, 611-639.

Klein, S., (1991). *Der Einfluss von Werten auf die Gestaltung von Organisationen.* Berlin: Duncker & Humblot.

Klein, S., (2000). Family Businesses in Germany: Significance and Structure. *Family Business Review*, 13(3), 157-173.

Klein, S., (2004). *Family Influence on Value Creation*. Fueglistaller, U., Volery, T., Weber, W., (eds.). *Value Creation in Entrepreneurship and SMEs.* Book Proceedings: Rencontres de St. Gall, University of St. Gallen.

Koch, M. J., Mc Grath, R. G., (1996). Improving labor productivity: human resource management policies do matter. *Strategic Management Journal*, 17(5), 335-354.

KPMG, (2004). *Unabhängig erfolgreich, Wachstums- und Finanzierungsstrategien von grossen Familienunternehmen*. Frankfurt: KPMG, Apax Partners and West LB.

Kwak, M., (2003). The Advantages of Family Ownership. *MIT Sloan Management Review*, Winter, 12-12.

Lansberg, I., (1983). Managing the Human Resources in Family Firms: the Problem of Institutional Overlap. *Organizational Dynamics*, 12 (1), 39-46.

Lansberg, I., Perrow, E. L., Rogolsky, S., (1988). Family business as an emerging field. *Family Business Review*, 1(2), 1-8.

La Porta, R., Lopez de Silanes, F., Shleifer, A., (1999). Corporate ownership around the world. *Journal of Finance*, 54, 471-517.

Leland, H. E., Toft, K. B., (1996). Optimal Capital Structure, Endogenous Bankruptcy, and the Term Structure of Credit Spreads. *Journal of Finance*, 51(3), 987-1019.

Levin, R. I., Travis, V. R., (1987). Small Company Finance: what the books don't say. *Harvard Business Review*, November / December, 6, 30-33.

Levinson, H., (1971). Conflicts that plague family business. *Harvard Business Review*, 90-98.

Levinthal, D., March, J., (1981). A model of adaptive organizational search. *Journal of Economic Behavior and Organization***,** 2, 307-333.

Lindbeck, A., Weibull, J. W., (1988). Altruism and time consistency: the economics of fait accompli. *Journal of Political Economics*, 96, 1165-1182.

Lindsley, D. H., Brass, D. J., Thomas, J. B., (1995). Efficacy-performance spirals: A multilevel perspective. *Academy of Management Review*, 20, 645-678.

Lintner, J., (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *Review of Economics and Statistics,* 47, 13-37.

Litz, R. A., (1995). The family business: towards definitional clarity. *Family Business Review*, 8(2), 71-81.

Lloyd, W. P., Jahera Jr., J. S., Goldstein, S. J., (1986). The Relation Between Returns, Ownership Structure, and Market Value. *Journal of Financial Research,* 9(2), 171-177.

Lovallo, D., Kahneman, D., (2003). Delusions of Success. *Harvard Business Review*, 81(7).

Lubatkin, L. H., Lane, P. J., Schulze, W. S., (2001). *Agency relationships in firm governance*. In: Hitt, M. A., Freeman, R. E., Harrison, J. R., (eds.). *Handbook of strategic management*, (pp. 124-188). Oxford, UK: Blackwell Publishing.

Lunati, M. T., (1997). *Ethical Issues in Economics: From Altruism to Cooperation to Equity*. London: Macmillan.

Lyagoubi, M., (2003). *Family firms and financial behaviour: How the preferences of family shareholders influence firm financing?*, Proceedings from International Family Enterprise Research Academy World Conference, Lausanne.

Mahérault, L., (2000). The Influence of Going Public on Investment Policy: An empirical study of French family-owned businesses. *Family Business Review*, 13(1), 71-79.

Mankiw, G. M., (2004). *Principles of Microeconomics*, 3rd edition, South Western.

Mann, T., (1901). *Buddenbrooks*. Frankfurt: Fischer.

March, J. G., Shapira, Z., (1987). Managerial Perspectives on Risk and Risk-Taking. *Management Science*, 33(11), 1404-1418.

Marcus, M., (1969). Profitability and Size of Firm: Some further evidence. *Review of Economics and Statistics*, 51, 104-107.

Markowitz, H. M., (1954). Portfolio Selection. *Journal of Finance*, 7, 77-91.

Markowitz, H. M., (1959). *Portfolio Selection: Efficient Diversification of Investment,* New York: Wiley.

Masulis, R. W., (1988). Corporate Investment and Dividend Decisions under Differential Personal Taxation. *Journal of Financial and Quantitative Analysis*, 23(4), 369-385.

Matthews, C. H., Vasudevan, D. P., Barton, S. L., Apana, R., (1994). Capital Structure Decision Making in Privately Held Firms: Beyond the Finance Paradigm. *Family Business Review*, 7(4), 349-367.

Maury, B., Pajuste, A., (2005). Multiple large Shareholders and Firm Value. *Journal of Banking and Finance*, 29(7), 1813-1834.

May, D. O., (1995). Do Managerial Motives Influence Firm Risk Reduction Strategy? *Journal of Finance*, 50(4), 1291-1308.

Mazzola, P., Marchisio, G., (2002). The Role of Going Public in Family Business' Long-Lasting Growth: A study of Italian IPOs. *Family Business Review*, 15(2), 133-148.

Mc Cauley, C., (1998). Group Dynamics in Janis's Theory of Groupthink: Backward and Forward. *Organizational Behavior and Human Decision Processes*, 73(2-3), 142-162.

Mc Conaughy, D., (1994). Founding family controlled corporations: an agency theoretic analysis of corporate ownership and its impact upon performance, operating efficiency and capital structure. *Unpublished doctoral dissertation*, University of Cincinnati.

Mc Conaughy, D., Mendoza, D., Mishra, C., (1996). Loyola University Chicago Family Firm Stock Index. *Family Business Review*, 9(2), 125-137.

Mc Conaughy, D., Mishra, C. S., (1996). Debt, Performance-Based Incentives and Firm Performance. *Financial Management*, Summer, 37-51.

Mc Conaughy, D., Walker, M., Henderson, G., Mishra C., (1998). Founding family controlled firms: Efficiency and value. *Review of Financial Economics*, 7(1), 1-19.

Mc Conaughy, D., (1999). Is the Cost of Capital Different for Family Firms? *Family Business Review*, 12(4), 353-359.

Mc Conaughy, D., Mishra, C. S., (1999). Founding family control and capital structure: The risk of loss of control and the aversion to debt. *Entrepreneurship Theory and Practice*, 23(4), 53-65.

Mc Conaughy, D., Phillips, G. M., (1999). Founders versus descendants: The profitability, efficiency, growth characteristics and financing in large, public, founding-family-controlled firms. *Family Business Review*, 12, 123-132.

Mc Conaughy, D., (2000). Family CEOs versus Nonfamily CEOs in the family controlled firm: an examination of the level and sensitivity of pay to performance. *Family Business Review*, 13(2), 121-131.

Mc Conaughy, D., Matthews, C., Fialko, A., (2001). Founding Family Controlled Firms: Performance, Risk, and Value. *Journal of Small Business Management*, 39(1), 31-49.

Mc Connell, J., Servaes, H., (1990). Additional evidence on Equity Ownership and Corporate Values. *Journal of Financial Economics*, 27(2), 595-612.

Mc Nulty, J. J., Yeh, T. D., Schulze, W. S., Lubatkin, M. S., (2002). What's your real cost of capital? *Harvard Business Review*, 80(10), 114-121.

Merton, R. K., (1949). *Social Theory and Social Structure*. New York: Free Press.

Merton, R. C., (1974). On The Pricing of Corporate Debt: The Risk Structure of Interest Rates. *Journal of Finance*, 29(2), 449-470.

Meyer, A., (1982). Adapting to environmental jolts. *Administrative Science Quarterly,* 27, 515-537.

Meyer, M., Zucker, L. G., (1989). *Permanently failing organizations*. Newbury Park, CA: Sage Publications.

Meyer, M., (2002). *Rethinking Performance Measurement*. Cambridge, MA: University Press.

Mintzberg, H., (1994). *The Rise and Fall of Strategic Planning*. New York: Prentice Hall.

Modigliani, F., Miller, M., (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, June, 261-297.

Montemerlo, D., Ward, J., (2004). How a formal family agreement can benefit your business. *Families in Business*, 16, 72-73.

Morck, R., Shleifer, A., Vishny, R., (1988). Management Ownership and Market Valuation: An empirical analysis. *Journal of Financial Economics*, 20(1), 293-315.

Morck, R., Stangeland, D. A., Yeung, B., (1998). *Inherited wealth, corporate control and economic growth: the Canadian disease?* Cambridge, MA.: National Bureau of Economic Research.

Morck, R., Yeung, B., (2003). Agency Problems in Large Family Business Groups. *Entrepreneurship Theory and Practice*, 27(4), 367-382.

Mossin, J., (1966). Equilibrium in a capital asset market. *Econometrica,* 34, 768-783.

Muehlebach, C., (2004). *Familiness als Wettbewerbsvorteil*. Bern: Haupt.

Mueller, D. C., (1987). *The Corporation: Growth, Diversification and Mergers*. Harwood: Academic Publishers.

Müller-Tiberini, F., (2001), *Wenn Familie den Laden schmeisst: Modelle zur Führung von Familienunternehmen*. Zurich: Orell Füssli.

Muscarella, C., Vetsuypens, M., (1990). Efficiency and Organizational Structure. *Journal of Finance*, 45(5), 1389-1413.

Myagkov, M., Plott, C. R., (1998). Exchange Economies and Loss Exposure: Experiments Exploring Prospect Theory and Competitive Equilibria in Market Environments. *American Economic Review*, 87(5), 801-828.

Myers, S., (1984). The capital structure puzzle. *Journal of Finance*, 39(3), 575-592.

Myers, S., Majluf, N., (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221.

Myers, D. G., Diener, E., (1996). The pursuit of happiness. *Scientific American*, 274(5), 70-72.

Neely, A., Adams, C., (2001). Perspectives on Performance: The performance prism. *The Journal of Cost Management*, 15(1), 7-15.

Nelton, S., (1995). The agony of quitting the family firm. *Nation's Business*, 82(10), 62.

Newsweek, (2004). *The best of the best*, April 12, Atlantic Edition.

Nisbett, R. E., Ross, L., (1980). *Human inference: Strategies and shortcomings of social judgments*. Englewood Cliffs, NJ: Prentice Hall.

Nordhoy, F., (1962). *Group interaction in decision-making under risk.* Master thesis. Cambridge, MA: Sloan School of Management.

Norton, E., (1991). Capital structure and small public firm. *Journal of Business Venturing*, 6(4), 287-303.

NZZ, (2005). Neue Zürcher Zeitung, www.nzz.ch, data download: 25th of August 2005.

O'Donoghue, T., Rabin, M., (2000). The economics of immediate gratification. *Journal of Behaviour and Decision Making*, 13, 233-250.

Oswald, A. J., (1997). Happiness and Economic Performance. *The Economic Journal*, 107(445), 1815-1831.

Penrose, E., (1959). *The Theory of the Growth of the Firm*. Oxford: Basil Blackwell.

Phan, P. H., Hill, C. W. L., (1995). Organizational restructuring and economic performance in leverage buyouts: An ex post Study. *Academy of Management Journal*, 38(3), 704-739.

Pichler, J. H., (2004). *SME financing and financing patterns, an EU / international comparison*. In: Fueglistaller, U., Volery, T., Weber, W., (eds.). *Value Creation in Entrepreneurship and SMEs.* Book Proceedings: Rencontres de St. Gall, University of St. Gallen.

Piderit, S. K., (2000). Rethinking resistance and recognizing ambivalence: A multi-dimensional view of attitudes toward an organizational change. *Academy of Management Review*, 25, 783-794.

Poutziouris, P., (2001). The views of family companies on venture capital: Empirical evidence from the UK small to medium-size enterprising economy. *Family Business Review*, 14(3), 277-291.

Poutziouris, P., Sitorus, S., (2001). *The Financial Structure and Performance of family and nonfamily firms revisited: Evidence from the UK Private Economy*. In: Corbetta, G., Montemerlo, D., (eds.). *The Role of Family in Family Business*, Book Proceedings: 12th Annual Family Business Network World Conference, (pp. 416-435). Rome.

Poutziouris, P., Sitorus, S., Chittenden, F., (2002). *The financial affairs of family companies*. Manchester: Business School Press.

Poza, E. J., (2004). *Family Business*. South-Western Publishing, 2004.

Prahalad, C. K., Doz, Y. L., (1981). An Approach to Strategic Control in MNCs. *Sloan Management Review*, Summer, 5-13.

Pratt, S. P., Reilly, R. F., Schweihs, R. P. (1996). *Valuing a Business - The Analysis and Appraisal of Closely Held Companies*, 3rd edition, Chicago: Irwin.

Pratt, S. P., (2001). *The market approach to valuing businesses*, New York: John Wiley and Sons.

Pressey, A. D., Mathews, B. P. V., (1997). *Characteristics of Relationship Marketing and its Applicability to Consumer Transactions; Including Retailing.* In: Proceedings of the 26 th EMAC Conference, Warwick: European Marketing Academy, 1043-1057.

Pricer, R. W., Johnson, A. C., (1997). The accuracy of valuation methods in predicting the selling price of small firms. *Journal of Small Business Management*, 4, 24-35.

Prokesch, S., (1991). *Rediscovering family values*. In: Aronoff, C. E., Ward, J. L., (eds.). *Family Business Source Book*, (pp. 126-144). Detroit: Omnigraphs.

Rabin, M., (1998). Psychology and Economics. *Journal of Economic Literature*, 36(1), 11-46.

Rappaport, A., (1986). *Creating Shareholder Value*. New York: Free Press.

Ranft, A. L., O´Neill, H. M., (2001). Board composition and high-flying founders: hints or trouble to come? *Academy of Management Executive*, 15(1), 126-138.

Reynolds, L., (1992). Is the family leave here to stay? *Management Review*, 81(1), 5-5.

Rokeach, M., (1973). *The nature of human values*. New York: Free Press.

Romano, C. A., Tanewski, G. A., Smyrnios, K. X., (2000). Capital Structure Decision making: A Model for Family Business. *Journal of Business Venturing*, 16, 285-310.

Rosenkind, A. H., (1981). Werte und Macht - Eine empirische Analyse der Wertsysteme von Führungskräften und Arbeitnehmervertretern im Einflussbereich der Mitbestimmung, Doctoral Dissertation, Munich.

Ross, S. A., (1976). The Arbitrage Theory of Capital Asset Pricing. *The Journal of Economic Theory*, 13, 343-362.

Ross, S. A., (1977). The Determination of financial structure: The incentive-signaling approach. *Bell Journal of Economics*, 8, 23-40.

Ross, J., Staw, B. M., (1993). Organizational escalation and exit: Lessons from the Shoreham nuclear power plant. *Academy of Management Journal*, 36, 701-732.

Sadler-Smith, E., Hampson, Y., Chaston, I., Badger, B., (2003). Managerial Behavior, Entrepreneurial Style, and Small Firm Performance. *Journal of Small Business Management*, 41(1), 47-67.

Samuels, J. M., Smyth, D. J., (1968). Profits, Variability of Profits and Firm Size. *Economica*, 35, 127-139.

Samuelson, W., Zeckhauser, R., (1998). Status Quo Bias in Decision Making. *Journal of Risk and Uncertainty*, 1, 7-59.

Scherbina, A., (2001). *Stock Prices and Differences of Opinion: Empirical Evidence That Prices Reflect Optimism*, Working Paper, Northwestern University.

Scherr, F., Sugrue, T., Ward, J., (1990). Financing the small firm start up: Determinants of debt use. *Proceedings second annual small firm finance research synopsium*, April.

Schulze, W. S., Lubatkin, M. H., Dino, R. M., (2000). Altruism and Agency in Family Firms. *Academy of Management Proceedings*.

Schulze, W. S., Lubatkin, M. H., Dino, R. M., Bucholtz, A. K., (2001). Agency relationships in family firms: theory and evidence. *Organization Science*, 12, 99-116.

Schulze, W. S., Lubatkin, M. H., Dino, R. M., (2002). Altruism, Agency and the Competitiveness of Family Firms. *Managerial and Decision Economics*, 23, 247-259.

Schulze, W. S., Lubatkin, M. H., Dino, R. M., (2003a). Toward a theory of agency and altruism in family firms. *Journal of Business Venturing*, 18, 473-490.

Schulze, W. S., Lubatkin, M. H., Dino, R. M., (2003b). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal*, 46(2), 179-194.

Schulze, W. S., (2005). Informal discussion between Thomas M. Zellweger and William S. Schulze on the cost of capital of family firms, May-June.

Schumpeter, J. A., (1912). *Theorie der wirtschaftlichen Entwicklung.* Leipzig: Dunker und Humbolt.

Shanker, M., Astrachan, J. H., (1996). Myths and realities: family businesses' contribution to the US economy - a framework for assessing family business statistics. *Family Business Review*, 9(2), 107-124.

Sharpe, W. F., (1964). Capital asset prices: a theory of market equilibrium under conditions of risk. *Journal of Finance,* 19, 425-442.

Sharma, P., Manikutty, S., (2005). Strategic divestments in family firms: role of family structure and community culture. *Entrepreneurship Theory and Practice*, 29(3), 293-311.

Shaw, M. E., (1976). *Group dynamics: The psychology of small group behavior*. New York: Mc Graw Hill.

Shefrin, H., (2002). *Beyond Greed and Fear: Understanding behavioral finance and the psychology of investing*. Oxford, UK: University Press.

Shleifer, A., Vishny, R., (1986). Large shareholders and corporate control. *Journal of Political Economics*, 94, 461-488.

Shleifer, A., Vishny, R., (1997). Management Entrenchment: the Case of Manager-Specific Investment. *Journal of Financial Economics*, 25, 123-139.

Simon, H. A., (1987). Making management decisions: The role of intuition and emotion. *Academy of Management Executive*, 1(1), 57-64.

Simon, H. A., (1993). Altruism and economics, *American Economic Review*, 83, 156-161.

Sirmon, D., Hitt, M., (2003). Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms. *Entrepreneurship Theory and Practice*, 27(4), 339-358.

Slovin, M., Sushka, M., (1993). Ownership Concentration, Corporate Control Activity, and Firm Value: Evidence for the Death of Inside Blockholders. *Journal of Finance*, 48, 1293-1321.

Smith, A., (1990). The Effects of Leverage Buyouts. *Business Economics*, 25(2), 19-25.

Smyrnios, K. X., Tanewski, G. A., Romano, C. A., (1998). Development of a measure of the characteristics of family business. *Family Business Review*, 11(1), 49-60.

Spremann, K., Pfeil, O., Weckbach, S., (2001). *Lexikon Value Management*. Munich: Oldenbourg.

Spremann, K., (2002). *Finanzanalyse und Unternehmensbewertung*. Munich: Oldenbourg.

SPSS, (2004). *Handbook for Software Package for Social Sciences (SPPS)*. Chicago: SPSS.

Starr, J., MacMillan, I., (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal,* 11, 79-93.

Stavrou, E. T., Kleanthous, T., Anastasiou, T., (2005). Leadership Personality and Firm Culture during Hereditary Transitions in Family Firms: Model Development and Empirical Investigation. *Journal of Small Business Management*, 43(2), 187-206.

Staw, B. M., Sandelands, L. E., Dutton, J. E., (1981). Threat-rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26, 501-524.

Steier, L., (2003). Variants of agency contracts in family financed ventures as a continuum of familial altruistic and market rationalities. *Journal of Business Venturing*, 18, 597-618.

Stoner, J. A. F., (1968). Risky and cautious shifts in group decisions: The influence of widely held values. *Journal of Experimental Social Psychology*, 4(4), 442-459.

Stulz, R. M., (1988). On takeover resistance, managerial discretion, and shareholder wealth. *Journal of Financial Economics*, 20, 25-54.

Sundaramurthy, C., Lewis, M., (2003). Control and Collaboration: Paradoxes and Governance. *Academy of Management Review*, 28(3), 397-415.

Swiss Federal Bureau of Statistics, (2005). *Wachstums des Bruttoinlandproduktes*, source: www.bfs.admin.ch. Data retrieval: August 31st, 2005.

Swiss National Census, (2002). *Buchhaltungsergebnisse schweizerischer Unternehmen, Bundesamt für Statistik,* Neuchatel, Switzerland.

Teece, D. J., (1992). Foreign investment and technological development in Silicon Valley. *California Management Review*, 34(2), 88-106.

Thaler, J. J., Shefrin, H. M., (1981). An economic theory of self control. *Journal of Political Economics*, 89, 392-406.

Timmons, J., (1990). *New Venture Creation*, 2nd edition, Boston: Irwin.

Tobin, J., (1958). Liquidity Preference as Behavior Towards Risk. *Review of Economic Studies,* 25, 68-85.

Tosi, H. L., Gomez-Mejia, L. R., (1994). CEO compensation and firm performance. *Academy of Management Journal*, 37, 1002-1016.

Tosi, H. L., Katz, J. P., Gomez-Mejia, L. R., (1997). Disaggregating the Agency Contract: The Effects of Monitoring, Incentive Alignment, and Term in Office on Agent Decision-Making. *Academy of Management Journal*, 40(3), 584-602.

Van Auken, H. E., Holman, T., (1995). Financial Strategies of Small, Public Firms: A comparative analysis with small, private firms and large, public firms. *Entrepreneurship Theory and Practice*, 20(1), 29-41.

Van Auken, H. E., (2001). Financing Small Technology-Based Companies: The Relationship between Familiarity with Capital and Ability to Price and Negotiate Investment. *Journal of Small Business Management*, 39(3), 240-258.

Van Horne, J. C., (1980). *Financial Management and Policy*, 5th edition, Englewood Cliffs, N.J.: Prentice Hall.

Villalonga, B., Amit, R., (2004). *How Do Family Ownership, Management and Control affect Firm Value?* Working paper, Harvard Business School and Wharton School of Economics.

Vos E., Forlong, C., (1996). The agency advantage of debt over the lifecycle of the firm. *Journal of Entrepreneurial and Small Business Finance*, 5(3), 193-211.

Wagenvoort, R., Hurst, C., (1999). How well do European Loan Markets Work? Some Insights from the financial structures of SMEs in Three Countries. *European Investment Bank Papers*, 4(2), 64-86.

Walsh J. P., Seward, J. K., (1990). On the Efficiency of Internal and External Corporate Control Mechanisms. *Academy of Management Review*, 15, 421-458.

Ward, J., (1987). *Keeping the family business healthy: How to plan for continuing growth profitability and family leadership*. San Francisco: Jossey-Bass.

Ward, J., (1991). The power of patient capital. *Nation's Business*, 79(9).

Ward, J., (1997). Growing the family business: special challenges and best practices. *Family Business Review*, 10(4), 323-337.

Watson, R., Wilson, N., (2002). Small and Medium Size Enterprise Financing: A Note on Some of the Empirical Implications of a Pecking Order. *Journal of Business Finance and Accounting*, 29(3) & (4), 557-579.

Westhead, P., Cowling, M., Howorth, C., (2001). The development of companies: Management and ownership imperatives. *Family Business Review*, 14(4), 369-385.

Whyte, G., (1989). Groupthink reconsidered. *Academy of Management Review*, 14, 40-56.

Winborg, J., Landström, H., (2000). Financial Bootstrapping in Small Business: Examining Small Business Managers' Resource Acquisition Behaviors. *Journal of Business Venturing*, 16, 235-254.

Wiseman, R. M., Gomez-Mejia, L. R., (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review*, 23, 133-153.

Wortman Jr., M. S., (1994). Theoretical foundations for family-owned business: A conceptual and research based paradigm. *Family Business Review***,** 7(1), 3-27.

Wruck, K., (1989). Equity Ownership Concentration and Firm Value. Evidence From Private Equity Financings. *Journal of Financial Economics*, 23, 3-28.

Xiao, J. J., Alhabeeb, M. J., Hong, G. S., Haynes, G. W., (2000). Risk Tolerance of Family Business Owners. *Consumer Interests Annual*, 46.

Zahra, S., Neublaum, D., Huse, M., (2000). Entrepreneurship in median sized companies. Exploring the effects of ownership and governance systems. *Journal of Management*, 26(5), 947-976.

Zellweger, T., Fueglistaller, U., (2004b). *Schweizer Familienunternehmen an der Börse*. Zurich and St. Gallen: Ernst & Young and Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen.

Zellweger, T., Fueglistaller, U., Meister, R., (2005). *The outperformance of family firms: the role of variance in earnings per share and analyst forecast dispersion*, Paper presented at the International Family Enterprise Research Academy, Brussels.

Zimmer, P., (1998). *Finanzierung im Lebenszyklus der Unternehmung unter besonderer Berücksichtigung des asymmetrischen Information,* Doctoral dissertation, University of St. Gallen.

Zimmermann, H., (1996). *Die moderne Finance*. In: Gehrig, B., Zimmermann, H., (eds.). *Fit for Finance*, (pp. 1-20). Zurich: Verlag NZZ.

9 Appendix

Table 26: Differences within employee classes (statistical details 1)

Data source: Sample Nr. 1, Table 1. Statistical test applied: T-test regarding employee classes. Significance level: * $p \leq 0.05$. FF: Family firm; NFF: Nonfamily firm.

T-Test of means between employee classes of family firms (FF) and nonfamily firms (NFF)									
* = T-test: Significant on 5% level	Mean 1 10-49 empl FF (G1)	Mean 2 10-49 empl NFF (G2)	Signi-ficance G1 / G2	Mean 1 50-99 empl FF (G1)	Mean 2 50-99 empl NFF (G2)	Signi-ficance G1 / G2	Mean 1 100-249 empl FF (G1)	Mean 2 100-249 empl NFF (G2)	Signi-ficance G1 / G2
Number of companies	358	104		90	41		79	33	
Turnover year 2003	2.06	2.17	0.139	2.87	2.98	0.400	3.32	3.94	0.002*
Founding period	5.12	5.95	0.000*	4.24	5.15	0.025*	3.71	3.76	0.899
Number of shareholders	4.30	12.22	0.032*	4.11	1041.59	0.127	6.58	334.90	0.016*
Family ownership	92.51	17.07	0.000*	93.84	19.05	0.000*	93.89	10.53	0.000*
Third party ownership	7.49	82.93	0.000*	6.16	80.95	0.000*	6.11	89.47	0.000*
Family ownership of the core company	18.67	1.66	0.006*	20.17	1.57	0.030*	8.56	1.89	0.164
Third party ownership of the core company	3.29	12.28	0.019*	2.88	14.30	0.029*	1.60	4.95	0.214
Holding ownership of the core company	88.21	86.48	0.742	87.14	84.85	0.772	90.38	93.16	0.601
Family ownership of the holding	92.07	9.09	0.000*	96.33	23.48	0.000*	91.83	6.39	0.000*
Third party ownership of the holding	8.08	65.61	0.000*	4.07	45.77	0.000*	5.75	67.67	0.000*
Second holding ownership of the holding	0.00	25.13	0.000*	0.00	33.33	0.001*	2.63	25.94	0.004*
Family ownership of second holding	2.13	9.68	0.143	0.00	8.10	0.118	2.50	8.82	0.268
Existence of supervisory board (yes = 1, no = 2)	1.58	1.55	0.531	1.42	1.29	0.181	1.34	1.27	0.507
Number of members of the supervisory board (sb)	3.18	4.20	0.001*	3.50	3.90	0.180	3.94	4.73	0.091
Number of family members in the sb	2.05	1.18	0.000*	2.22	1.31	0.009*	2.13	1.67	0.210
Number of nonfamily members nominated by family for sb	1.52	2.79	0.000*	1.84	2.33	0.108	2.11	2.00	0.870
Number of persons in management board (mb)	2.35	3.20	0.000*	3.18	3.20	0.957	4.33	4.75	0.308
Number of family members in the mb	1.74	1.26	0.000*	1.94	1.00	0.003*	1.60	1.43	0.620
Number of nonfamily members nominated by fam. for mb	1.63	2.08	0.018*	2.18	2.44	0.469	2.97	2.30	0.309
Current owner generation	1.87	1.38	0.000*	2.05	1.97	0.740	2.42	2.93	0.321
Years until next change in ownership	11.75	10.22	0.150	9.52	7.96	0.295	9.87	10.21	0.844
Current management generation	1.88	1.45	0.000*	2.21	2.32	0.721	2.82	4.64	0.069
Years until next change of the management	10.10	9.07	0.194	8.67	6.50	0.089	8.46	8.88	0.765
Generation active in the supervisory board	1.77	1.31	0.000*	1.97	2.12	0.611	2.53	3.80	0.115
Ability to lead	4.46	4.47	0.936	4.65	4.39	0.014*	4.67	4.48	0.107
Ability to influence other people	3.78	3.62	0.103	3.83	3.59	0.142	3.77	3.91	0.391
Ability to take decisions independently	4.25	4.16	0.282	4.23	4.02	0.146	4.15	4.28	0.420
Ability to motivate other people	4.55	4.44	0.115	4.52	4.51	0.942	4.54	4.45	0.514
Ability to communicate effectively	4.32	4.38	0.471	4.37	4.12	0.049*	4.36	4.18	0.196
Ability to resolve conflicts	4.23	4.17	0.402	4.33	4.02	0.020*	4.23	4.03	0.188
Ability to set strategic targets	4.32	4.26	0.469	4.47	4.05	0.002*	4.54	4.39	0.312
Ability to position the company in the market	4.40	4.27	0.095	4.60	4.22	0.002*	4.67	4.36	0.016*
Ability to form networks and cooperations	3.82	3.83	0.870	3.84	3.61	0.138	3.86	3.94	0.647
Ability to innovate	4.46	4.31	0.056	4.44	4.10	0.012*	4.45	4.45	0.968
Ability to analyze the financial performance of the company	4.13	3.97	0.073	4.24	3.95	0.054	4.22	4.09	0.426
Substantial Family Influence	1.79	0.33	0.000*	1.89	0.35	0.000*	1.71	0.18	0.000*
Share of family members in the supervisory board	68.01	30.01	0.000*	63.41	32.56	0.000*	59.10	34.81	0.035*
Share of nonfamily members in the supervisory board nominated by family members	46.88	66.84	0.006*	52.83	65.56	0.073	49.31	48.89	0.975
Share of family members on the management	80.39	43.21	0.000*	69.41	31.67	0.000*	43.60	28.54	0.170
Share of nonfamily members nominated by family on mb	55.84	62.40	0.125	55.85	75.51	0.002*	63.02	50.64	0.134
Number of nonfamily members in supervisory board	1.20	3.41	0.000*	1.33	2.77	0.000*	1.81	3.50	0.006*
Number of nonfamily members in management board	0.65	2.00	0.000*	1.19	2.55	0.003*	2.90	3.57	0.416
Share of nonfamily members in supervisory board	31.99	69.99	0.000*	36.59	67.44	0.000*	40.90	65.19	0.035*
Share of nonfamily members in management	19.61	56.79	0.000*	30.59	68.33	0.000*	56.40	71.46	0.170
Age of the firm	46.08	33.67	0.000*	61.12	45.68	0.026*	68.19	69.73	0.837
Share of equity on balance sheet	42.38	36.03	0.063	42.56	41.94	0.899	45.09	47.83	0.606
Return on equity	10.51	16.76	0.000*	13.82	9.07	0.061	11.14	14.44	0.162

Table 27: Differences within employee classes (statistical details 2)

Data sample: Sample Nr. 1, Table 1. Statistical test applied: T-test on means of different variables regarding employee classes. Significance level 0.05

	Number of members on management board	Generation owning the firm	Generation managing the firm	Number of family members actively contributing to the firm	Share of family members on the management board	Number of family members on the management board (5 categories)	Number of nonfamily members on the management board	Share of nonfamily members on the management board	Number of family members actively contributing to the firm (9 categories)
Mean 1 < 10 emp	2.000	1.480	1.517	2.060	89.173	4.391	0.297	10.202	2.058
Mean 2 10-49 emp	2.617	1.735	1.761	2.209	75.794	3.702	0.820	24.206	2.236
Mean 3 50-99 emp	3.204	2.008	2.209	2.427	65.087	3.156	1.344	34.913	2.402
Mean 4 100-249 emp	4.413	2.500	3.065	1.846	42.234	2.065	2.961	57.766	1.901
Mean 5 250-499 emp	4.857	2.348	2.696	2.318	39.389	1.950	3.050	60.611	2.364
Mean 6 500-999 emp	5.050	2.615	3.091	2.083	27.724	1.444	3.444	72.276	2.167
Mean 7 >=1000 emp	6.222	2.154	1.900	2.200	29.557	1.571	3.857	70.443	2.200
T-Test (1-2)	0.000*	0.001*	0.001*	0.078	0.000*	0.000*	0.000*	0.000*	0.022*
T-Test (1-3)	0.000*	0.000*	0.000*	0.008*	0.000*	0.000*	0.000*	0.000*	0.003*
T-Test (1-4)	0.000*	0.000*	0.000*	0.107	0.000*	0.000*	0.000*	0.000*	0.191
T-Test (1-5)	0.000*	0.001*	0.000*	0.300	0.000*	0.000*	0.000*	0.000*	0.169
T-Test (1-6)	0.000*	0.001*	0.000*	0.945	0.000*	0.000*	0.000*	0.000*	0.714
T-Test (1-7)	0.000*	0.053	0.333	0.695	0.000*	0.000*	0.000*	0.000*	0.654
T-Test (2-3)	0.000*	0.011*	0.000*	0.137	0.003*	0.003*	0.000*	0.003*	0.201
T-Test (2-4)	0.000*	0.000*	0.000*	0.013*	0.000*	0.000*	0.000*	0.000*	0.016*
T-Test (2-5)	0.000*	0.006*	0.000*	0.699	0.000*	0.000*	0.000*	0.000*	0.633
T-Test (2-6)	0.000*	0.004*	0.000*	0.739	0.000*	0.000*	0.000*	0.000*	0.845
T-Test (2-7)	0.000*	0.162	0.636	0.982	0.000*	0.000*	0.000*	0.000*	0.925
T-Test (3-4)	0.000*	0.014*	0.014*	0.009*	0.000*	0.000*	0.000*	0.000*	0.005*
T-Test (3-5)	0.000*	0.183	0.130	0.788	0.001*	0.002*	0.000*	0.001*	0.902
T-Test (3-6)	0.000*	0.095	0.070	0.526	0.001*	0.003*	0.000*	0.001*	0.569
T-Test (3-7)	0.000*	0.676	0.503	0.694	0.005*	0.013*	0.000*	0.005*	0.640
T-Test (4-5)	0.240	0.700	0.605	0.112	0.675	0.721	0.862	0.675	0.100
T-Test (4-6)	0.169	0.832	0.980	0.542	0.122	0.171	0.491	0.122	0.470
T-Test (4-7)	0.000*	0.517	0.278	0.370	0.233	0.335	0.262	0.233	0.424
T-Test (5-6)	0.716	0.610	0.515	0.656	0.174	0.185	0.556	0.174	0.693
T-Test (5-7)	0.016*	0.679	0.060	0.801	0.311	0.374	0.295	0.311	0.715
T-Test (6-7)	0.059	0.542	0.141	0.838	0.728	0.642	0.411	0.728	0.951

Table 28: Return on equity and generation in charge

Data sample: Sample Nr. 1, Table 1. Statistical test applied: T-test on means of different variables regarding employee classes. Significance level 0.05.

Generation in charge:	Ownership	Management	Supervisory
Mean ROE 1 Founding generation	12.924	13.233	12.974
Mean ROE 2 2nd generation	10.428	10.871	10.557
Mean ROE 3 3rd generation	8.835	8.526	7.871
Mean ROE 4 4th and higher generation	11.159	11.183	9.510
T-Test (1-2)	0.009*	0.016*	0.017*
T-Test (1-3)	0.001*	0.000*	0.000*
T-Test (1-4)	0.285	0.232	0.055
T-Test (2-3)	0.190	0.041*	0.033*
T-Test (2-4)	0.636	0.845	0.528
T-Test (3-4)	0.169	0.108	0.307
Standard deviation 1 Founding generation	11.060	11.165	10.781
Standard deviation 2 2nd generation	9.437	9.576	9.272
Standard deviation 3 3rd generation	8.945	8.804	7.238
Standard deviation 4 4th and higher generation	10.332	10.640	9.186
n 1 Founding generation	387	341	332
n 2 2nd generation	178	182	154
n 3 3rd generation	87	104	70
n 4 4th and higher generation	50	48	39

Table 29: Stability of net income of family and nonfamily firms in S&P 500 index

Data sample: Sample Nr 4, Table 2. Please note that firms with annual changes in net income of above 1000 % were eliminated. Firms with less than four years of net income published on www. nasdaq.com were eliminated as well. *, **, *** = Significant differences between standard deviations of net income of family firms and nonfamily firms for all three variables. Statistical test applied: Box test on homogeneity of the variances. Significance level: 0.000.

	Variable 1 Standard deviation of changes in net income from 2002 to 2003	**Variable 2** Standard deviation of changes in net income from 2001 to 2002	**Variable 3** Standard deviation of changes in net income from 2000 to 2001
Standard deviation family firms (n = 355)	* 138%	** 147%	*** 120%
Standard deviation nonfamily firms (n = 94)	* 164%	** 231%	*** 169%

Table 30: Correlation between variance in operating profit and variance in earnings per share -full sample

Data sample: Sample Nr. 3, Table 1. The table reports correlations between normalized standard deviation of earnings per share and normalized standard deviation of EBITS of 130 firms quoted on the Swiss stock market, including family and nonfamily firms. Only stocks with coverage of at least three analysts are included in the sample to assure consistency with the sample in the dispersion analysis. Normalized standard deviations are obtained from the reported EPS and EBITs in the period 1987 to 2004.

Pearson correlation is 0.018 and is not significant as we aggregated the yearly variances in EBIT and earnings per share each to one single value per firm. We did not calculate the correlation between EBIT and EPS variance on a yearly basis. Therefore, Kendall's Taub b and Spearman's Rho are more appropriate correlation measures.

			Normalized standard deviation of EPS	Normalized standard deviation of EBIT
Kendall's-Taub-b	Normalized standard deviation of EPS	Correlation Coefficient	1.000	0.606 **
		Sig. (2-tailed)	.	0.000
		N	132	130
	Normalized standard deviation of EBIT	Correlation Coefficient	0.606 **	1.000
		Sig. (2-tailed)	0.000	.
		N	130	130
Spearman's -Rho	Normalized standard deviation of EPS	Correlation Coefficient	1.000	0.791 **
		Sig. (2-tailed)	.	0.000
		N	132	130
	Normalized standard deviation of EBIT	Correlation Coefficient	0.791 **	1.000
		Sig. (2-tailed)	0.000	.
		N	130	130

**. Correlation is significant at the 0.01 level (2-tailed).

Table 31: Correlation between variance in earnings per share and mean dispersion-full sample

Data sample: Sample Nr. 3, Table 1. The table reports correlations between the normalized standard-deviation of earnings per share (EPS) and the mean dispersion of the respective stock. The sample consists of 143 stocks in the Swiss stock market, including family and nonfamily firms. Only stocks with coverage of at least three analysts are included in the sample to make it consistent with the sample used in the dispersion analysis. Normalized standard-deviations are obtained from the reported EPS in the period of 1987 to 2004, consistent with the dispersion analysis in this paper. The mean dispersion is the arithmetic average of all monthly reported consensus dispersions for an individual stock.

			Normalized Standard-diviation of EPS	Mean Dispersion
Pearson	Normalized Standarddeviation of EPS	Correlation Coefficient	1.000	0.177 *
		Significance (2-sided)	.	0.035
		N	143	143
	Mean Dispersion	Correlation Coefficient	0.177 *	1.000
		Significance (2-sided)	0.035	.
		N	143	143
Kendall-Tau-b	Normalized Standarddeviation of EPS	Correlation Coefficient	1.000	0.401 **
		Significance (2-sided)	.	0.000
		N	143	143
	Mean Dispersion	Correlation Coefficient	0.401 **	1.000
		Significance (2-sided)	0.000	.
		N	143	143
Spearman-Rho	Normalized Standarddeviation of EPS	Correlation Coefficient	1.000	0.559 **
		Significance (2-sided)	.	0.000
		N	143	143
	Mean Dispersion	Correlation Coefficient	0.559 **	1.000
		Significance (2-sided)	0.000	.
		N	143	143

* This correlation is significant on the 0.05 niveau (2-sided).

** This correlation is significant on the 0.01 niveau (2-sided).

Table 32: Cost of capital for estimation of market value

		A	B	C	D	E	F	G	H	I	J	K	L	M
		Industry adjusted beta	**Equity from total assets**	**Debt from total assets**	**Tax rate**	**Long term treasury bond rate**	**Market return**	**Size premia**	**Cost of equity**	**Standard deviation in stock**	**Cost of debt**	**Weighted average cost of capital (WACC)**	**Growth rate (g)**	**WACC - g**
	Information source	Dow Jones STOXX 600 Europe	Swiss National Census, for small and mid sized firms, 2002	= 1 - Equity level	Swiss governement body	Source: www.nzz.ch	Long term return of Swiss stock market: 8% (source: Zimmermann, 1996) + 4.8% (60% of above 8%) increase for nonmarketability of privately held firm shares (source: Khadjavi, 2003)	For firms with market capitalizatrion below 50 Mio CHF, (source: Ibbotson, 1995)	Calculated according to formula 8	Damodaran (2005)	Based on standard deviation in stock prices: J = E + Basis spread according to separate table (see below)	Weighted average cost of capital, with tax shield on debt	Long term Swiss GDP growth rate: 0.88% (source: Swiss Federal Bureau of Statistics, 2005)	Costs of capital corrected by GDP growth rate
1	Homebuilding / construction	0.96	22%	78%	28%	2.5%	12.8%	5.5%	17.9%	130.00%	8.22%	8.55%	0.88%	7.67%
2	Metal / machinery	0.99	41%	59%	28%	2.5%	12.8%	5.5%	18.2%	100.00%	7.22%	10.53%	0.88%	9.65%
3	Textile	0.85	36%	64%	28%	2.5%	12.8%	5.5%	16.8%	108.00%	7.22%	9.36%	0.88%	8.48%
4	Chemistry / pharmaceuticals / plastics	0.91	50%	50%	28%	2.5%	12.8%	5.5%	17.4%	86.00%	7.22%	11.28%	0.88%	10.40%
5	Nutrition / beverages	0.79	27%	73%	28%	2.5%	12.8%	5.5%	16.1%	75.00%	6.22%	7.62%	0.88%	6.74%
6	Watches	1.05	61%	39%	28%	2.5%	12.8%	5.5%	18.8%	180.00%	9.22%	14.07%	0.88%	13.19%
7	Electronics / optics	1.26	52%	48%	28%	2.5%	12.8%	5.5%	21.0%	150.00%	8.72%	13.93%	0.88%	13.05%
8	Wood / paper / graphical industry	1.15	33%	67%	28%	2.5%	12.8%	5.5%	19.8%	120.00%	7.72%	10.27%	0.88%	9.39%
9	Other sectors industry	0.99	36%	64%	28%	2.5%	12.8%	5.5%	18.2%	82.00%	7.22%	9.88%	0.88%	9.00%
10	Wholesale	0.94	23%	77%	28%	2.5%	12.8%	5.5%	17.7%	92.00%	7.22%	8.07%	0.88%	7.19%
11	Retail	0.89	30%	70%	28%	2.5%	12.8%	5.5%	17.2%	92.00%	7.22%	8.79%	0.88%	7.91%
12	Restaurants	0.95	23%	77%	28%	2.5%	12.8%	5.5%	17.8%	99.00%	7.22%	8.09%	0.88%	7.21%
13	Repair	0.99	19%	81%	28%	2.5%	12.8%	5.5%	18.2%	101.00%	7.22%	7.67%	0.88%	6.79%
14	Consulting	1.04	22%	78%	28%	2.5%	12.8%	5.5%	18.7%	76.00%	6.22%	7.61%	0.88%	6.73%
15	Bank / insurance / financial services	1.07	43%	57%	28%	2.5%	12.8%	5.5%	19.0%	72.00%	6.22%	10.73%	0.88%	9.85%
16	Energy utility	0.72	22%	78%	28%	2.5%	12.8%	5.5%	15.4%	64.00%	6.22%	6.88%	0.88%	6.00%
17	Transport	0.92	45%	55%	28%	2.5%	12.8%	5.5%	17.5%	114.00%	7.72%	10.92%	0.88%	10.04%
18	Other services	0.99	23%	77%	28%	2.5%	12.8%	5.5%	18.2%	122.00%	7.72%	8.47%	0.88%	7.59%

t of Debt Lookup Table (based on std dev in stock pri		
Standard Deviation		Basis Spread
Lower end	Upper end	
0	0.3	3.25%
0.5	0.8	3.75%
0.8	1.1	4.75%
1.1	1.3	5.25%
1.3	1.5	5.75%
1.5	1.8	6.25%
1.8	10	6.75%

Table 33: Methodology of index building

The Swiss Family Index, the Swiss Nonfamily Index and an adapted form of the Swiss Performance Index were constructed based on daily market capitalization of all firms from Lichtenstein and Switzerland quoted on the Swiss Stock Exchange (SWX) from January 1990 to October 2004. The indices used are performance indices in order to assure comparability to the Swiss Performance Index (SPI).

In line with the definition by La Porta et al. (1999) a firm was considered as a family business when 20% of the voting rights are controlled by a single shareholder or a group of shareholders. Of the 270 publicly quoted companies 38% of the companies could be considered as family controlled.

When a new firm went public the divisor of the respective index was increased by the market capitalization of the new firm on the first trading day.

In addition, the indices were adapted for extraordinary changes in market capitalization, which are a daily change in market capitalization of >10%, for firms with a market capitalization of more than 1 Mia CHF, for example due to a merger. In the case of an extraordinary event as described above, the indices were readjusted so that this event did not erroneously affect the index performance. No adaptations were made for changes in free float, as these changes were immaterial to the analysis.

All three indices were calculated based on the following formula:

$$S_1 = \frac{\sum_{i=1}^{n} p_1 n_1}{\sum_{i=1}^{n} p_0 n_0}$$

With:

i: days,

p: share price of stock,

n: number of shares,

S: Performance of index, starting at 100.

The divisor represented the market capitalization of the firm on 1.1.1990 respectively the first trading day when the firm went public.

Curriculum vitae of Thomas M. Zellweger

Date of birth:	25th of October 1974, in Muensterlingen, Switzerland
1981 – 1994	Primary and secondary school in Weinfelden and Kreuzlingen, Kanton Thurgau, Switzerland
1994 – 2000	Studies at the University of St. Gallen (HSG), Switzerland, and at the Catholic University of Louvain, Belgium Master of Science in Management Studies, University of St. Gallen
2000	Project Manager at Helbling Corporate Finance and Turnaround, Zurich, Switzerland
2000 – 2003	Marketing Director at Derivative, Brussels, Belgium
2003 – 2005	Project Manager at the Swiss Institute of Small Business and Entrepreneurship, University of St. Gallen
2006	Dissertation « Risk, Return and Value in the Family Firm », Dr. oec. HSG
Since Jan. 2006	Member of the Executive Board of the Center for Family Business at the University of St. Gallen, CFB-HSG
	Lecturer at the University of St. Gallen, Switzerland