

**Performance, Valuation and Capital Structure:
A Survey of Family Firms**

Performance, Valuation and Capital Structure: A Survey of Family Firms

ABSTRACT:

Most countries often have public companies with large controlling owners, typically a family or a private person (La Porta et al. 1999, 2002). This empirical evidence contrasts with the classical view of the largest dispersed firm presented by Berle and Means (1932). This picture 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. Therefore, family firms represent an important group in the stock market today and motivate a thorough investigation of the effect of the family as a controlling owner on the firms' performance, valuation and capital structure. The objective of this paper is three fold: first, we discuss whether family firms do really behave differently from non-family firms, and if so, how and why they are different; secondly, we review current literature related to how family (taking in account specific governance characteristics such as family ownership, family control and family management) affects the firms' performance and value; thirdly, we focus on how ownership/governance structure influences capital structure, as a proxy for risk aversion. The literature allows us to conclude that the founder's family control and professional (outside) management increase performance, whereas excess control via control enhancing mechanisms (such as dual class shares and pyramidal structures) and descendent management produce both lower valuation and performance. This evidence means that families have the incentives and the power to systematically expropriate the wealth from minority shareholders. Furthermore, the low debt level of family firms is considered as an external manifestation of a firm's control risk aversion.

Key Words: Family Firms, Ownership Structure, Firm Value, Firm Performance, Capital Structure, Risk Aversion.

JEL classification: G31; G32; L25.

1 – Introduction

Several recent studies reveal an increasing importance on the studies of family relations and their business (Jensen and Meckling, 1976; Myers, 1977; Scott, 1977; Myers and Majluf, 1984; Harris and Raviv, 1990; Walsh and Ryan, 1997; McConaughy et al. 1988, 2001; Anderson and Reeb, 2003a, 2003b; Anderson et al. 2003; Villalonga and Amit, 2006). The prime motivation for scholars for directing academic research toward family firms has largely been their dominance on most nations' economic landscape (McKinley et al. 1999; Anderson and Reeb, 2003a, 2003b; Faccio and Lang, 2002; Claessens et al. 2000). For instance, in the United States, 60 percent of the Gross Domestic Product (GDP) is generated by family-controlled businesses (Bellet et al. 1995; McConaughy et al. 2001; Anderson and Reeb, 2003a). These are often thought to be “microfirms”, however, family owned business make up approximately 35% of the 500 Fortune firms. Indeed, with respect to the predominance of family firms in particular regions of the world, control by a family appears commonly among large U.S. companies (Bhattacharya and Ravikumar, 2001; Anderson and Reeb, 2003; Gadboum et al. 2005) as well as among corporations that operate in Western European Countries (Franks and Mayer, 2001; Faccio and Lang, 2002). Additionally, several studies document the importance of family firms in the East Asian region (Classens et al. 2000). Despite variations between countries, family business represents a substantial portion of an economy and has a huge impact on the economy as a whole, which contrasts to Berle and Means's image of ownership concentration corporation, i.e., ownership is dispersed among small shareholders, while control is concentrated in the hands of managers.

It is generally accepted that the traditional finance literature has little to say about how family (taking in account specific governance characteristics such as family ownership, family control and family management) affects the firm's performance, value and capital structure. Previous studies show that family controlled firms differ from the non-family controlled firms (e.g. Fama and Jensen, 1983a, 1983b; Gallo, 1995; Westhead et al. 1998; McConaughy et al. 2001; Anderson and Reeb, 2003a; Villalonga and Amit, 2006). However, a small theoretical and empirical research has been done to support

and advance an understanding of this premise (Daily and Dollinger, 1991). Thus, for a complete study of the family business, it is first necessary to clarify the definition of the family firm.

The literature on family business is wide-ranging and it is difficult to find consensus on the exact definition of a family firm and numerous attempts have been made to articulate conceptual and operational definitions of family firms. The typical family business has been characterized as an organization controlled and usually managed by multiple family members (Shanker and Astrachan, 1996 and Lansberg, 1999), often from multiple generations (Anderson and Reeb, 2003a and Gomez-Mejia et al. 2007). Despite this fact, the research does not provide us with a monolithic picture; so we define a family firm whenever the members of the family and their affined have fractional equity ownership and/or when the family serves on the board of directors. Thus, the scope of this survey is related to public quoted firms that are controlled by a family. Indeed, the link between family's influence and performance, and value and capital structure is greatly affected by the definition of the family firm employed. As pointed out by Zellweger (2006), the existing empirical work has focused mainly on two effects: first, the impact of ownership on performance, efficiency and value, and second, the impact of ownership on capital structure as a proxy of control risk propensity or risk aversion. However, the literature raises more issues concerning performance, risk, and firm value than the ones it answers. The objective of this paper is to review the most important literature on both aspects in order to assess whether the existing literature provides evidence of financial singularities of family firms.

We, therefore, divide our literature review in two blocks. First, we review current literature related to the impact of family ownership on the firms' performance and valuation. Our main objective regards the question: Does family ownership really affects firms' performance/valuation? Secondly, we focus on how ownership/governance structure influences capital structure, as a proxy for risk aversion. Our main concern regards the fact that the empirical literature shows that family firms are less leveraged (e.g. Muradoglu and Sivaprasad, 2007), which challenges the traditional capital structure literature regarding their elucidative power

concerning the lower debt level of family firms. However, before presenting the highlights of the literature related on how family (ownership, control, management) affects firms' performance, this paper engages in a discussion on whether family firms do really behave differently from non-family firms, and if so, how and why they are different.

The main contribution of this paper is to update the literature taking in consideration not only the differences between family and non-family firms, in terms of valuation and performance, but analyzing the impact of the family as an additional organizational variable on a firm's financial issues. Therefore, we focus our literature review on the relation of families' influence, considering ownership concentration, ownership control, and managerial ownership on the firms' performance/valuation and capital structure.

The remaining of the paper is organized as follows. In Section 2 the main issue is the analysis of whether family firms behave differently from non-family firms, and if so, why they are different. The third section reviews how family affect firms' performance and value, concerning three main corporate governance variables: ownership concentration, ownership control and managerial ownership. Section four reviews the literature on the impact of ownership/governance structure on capital structure, related to family firms. Section 5 concludes the essay.

2 – Are family firms really different?

Family firms are said to be the originating form of any business activity (Wakefield, 1995). The justification for the emergence of the field of family firm research lays in the assumption that family and non-family firms are different, especially in terms of certain characteristics (e.g. size, growth, profitability), some of these differences between family and non-family firms were exhaustively studied (Gallo, 1995; McConaughy et al. 1998; Westhead et al. 1998). Nevertheless, there is no universal definition of family firm.

McConaughy et al. (1998) define a family firm as any company run by a founder or member of the founding family. Similarly, Anderson and Reeb (2003a), Cronqvist and Nilsson (2003), Faccio and Lang (2002), La Porta et al. (1999), Smith and Amoako-Adu (1999), Barth et al. (2005) among others, consider as family businesses any firm in which a founding family or founding individual own a fraction of the company or serve on the board (the percentage for these ownership fractions vary)¹. As a complement to the definition above, Fink et al. (2007) point that there are some particularities assigned to the family firms: i) mainly due to facts like long CEO tenures (typically more than 15 years) and concern for subsequent family generations, family firms are more likely to take a long-term orientation in making strategic investments (Le Breton-Miller et al. 2006); ii) family firms tend toward sustaining strategy over a longer period of time (Ensley, 2006); iii) family firms have to deal with additional issues – namely family ones (Paisner, 1999; Lester et al. 2006), which might be resource-consuming; iv) family firms often experience slower growth as well as slower decision-making processes (Meyer and Zucker, 1989); v) family firms are more hesitant to invest in risky projects (Cabrera-Suárez et al. 2001; Gersick et al. 1997), and, thus, could miss investment opportunities; vi) non-family firms are often regarded as being more innovative than family firms (Gomez- Mejia et al. 2003) and vii) family firms resist change, and become fixated on maintaining the status quo (Kellermanns and Eddleston, 2006).

¹ Appendix I present the most common definitions of family firms that have been used in literature (Miller et al. 2007).

However, Górriz and Vincente (2005) argue that family relations reinforce the cohesion and trust among partners and, at times, workers (Pollak, 1985; Chami, 1999); they increase the level of commitment to bringing off the managerial project, as the success of the business also implies that of the family name (Lyman, 1991; Brokaw, 1992), and they lengthen the time horizon of decisions, as it is hoped that future generations will continue to push the prosperous firm that has been passed on to them (James, 1999; Stein, 1989). All of this may entail a better management of family firms compared with non-family ones, as they function with less supervision costs, with greater ability to generate trust and confidence with third parties and with more long-term vision.

In fact, Dalton and Daily (1992) argue that family firms are one of the most efficient forms of organization because of the little separation between ownership and control, mitigating the information asymmetry. Thus, the concentrated equity position and management control, along with the founding family's historical presence, offer an advantage position for the family to monitor its business (Demsetz and Lehn, 1985). In this context, the classic owner-manager conflict described by Berle and Means (1932) and Jensen and Meckling (1976) is mitigated due to the major shareholder's greater incentives to monitor the manager².

Although a persistent theme suggests that family ownership and control are beneficial in mitigating the principal agent conflicts that afflict firms run by professional managers without founding family oversight, there are contradictory opinions on this issue. For example, Górriz and Vincente (2005) refer that family owners are often more entrenched in comparison to non-family block holders, which may delay, beyond the optimal point, the substitution of family shareholders by better qualified professionals among the management positions of the firm (Gomez-Mejia et al. 2001; Burkart et al.

² Jensen and Meckling (1976:308) define agency relationship "as a contract in which one party (the principal) engages another party (the agent) to perform some services on his behalf. The principal party will delegate some decision-making authority to the agent, which is well known principal-agent conflict. The agency costs are related with monitoring expenditures incurred by the principal.

2003). Additionally, concentration of ownership does not prevent other governance problems due to conflicts of interests between family members or distortion of incentives due to altruism or kinship behavior (Chami, 1999; Schulze et al. 2001). Levinson (1971) suggests that family firms are "...plagued with conflicts..." which can be costly to mitigate. Kets and Vries (1993) show that family differences and role conflict can lead to behavior that is not in the best interest of the firm. Thus, family conflicts can offset the benefits of reduced monitoring (Schulze et al. 2003a; 2003b).

3 - How family ownership affects firm performance and value?

Traditional finance literature has little to say about how family ownership affects the way a firm is operated, consequently its performance and value. Research has long focused on the impact of ownership on corporate value, following the leads of Berle and Means (1932) and Jensen and Meckling (1976), i.e. the separation of ownership and control can be an efficient form of economic organization³. However, as pointed out by Tosi et al. (1997) the agency theory approach oversimplifies the complexity of the agency relationship. In fact, family members have advantages in monitoring and disciplining related decision agents (Fama and Jensen, 1983a). But, no separation between ownership and management can offset the positive long-term orientation of the business (Morris, 1989). In addition, family differences and role conflict can lead to behavior that does not support the best interests of the firm (Schulze et al. 2003a; 2003b). In this context, the effect of family ownership on corporate performance and value remains an open issue.

The majority of research on corporate governance contains two distinct strands. One direction initiated by Berle and Means (1932) is to seek a causal effect on corporate performance from governance variables such as family ownership. By contrast, research by Demsetz (1983), Demsetz and Lehn (1985) and Demsetz and Villalonga (2001) has sought to explain how ownership and other governance variables endogenously respond

³ In general, large public firms are often characterized as having dispersed ownership, atomistic shareholders, and a separation between ownership and control (Demsetz and Lehn, 1985).

to firm and industry characteristics without necessarily inducing a causal effect of ownership on performance.

Berle and Means (1932) are among the first to consider the relationship between a firm's ownership structure and its performance. They argue that, given the fact that interests of management and shareholders are not generally aligned, corporate resources are not used efficiently into maximizing corporate profit, and therefore suggest that the relationship between control and performance should be a negative one. In fact, Holderness and Sheehan (1988) find that firms under family ownership create less economic value than non-family. Nevertheless, recent studies argue that concentrated ownership solves the free-riding problem and makes manager monitoring easier, and, thus, positively affects corporate performance (Shleifer and Vishny, 1986; Hill and Snell, 1988, 1989; Agrawal and Mandelker, 1990). McConnaughy et al. (1998), Palia and Ravid (2002), Anderson and Reeb (2003a), Adams et al. (2008), Fahlenbrach (2008) and Villalonga and Amit (2006) provide empirical evidence that relationship between family ownership and firm performance is associated with superior ratios when compared to widely-held companies, both in terms of accounting performance and valuation⁴.

In fact, Anderson and Reeb (2003a) provide evidence consistent with family firms having higher market valuations and better accounting performance than non-family firms. Barontini and Caprio (2006) find only a weak positive relationship between cash-flow ownership and performance. As an alternative to this view, Maury (2006) finds no significant relation between ownership concentration and performance for the full sample, but when including only majority owned firms, the relationship becomes negative indicating a concave function of ownership concentration on performance. This evidence is confirmed by Anderson and Reeb (2003a), Gompers et al. (2004) and Averstad and Rova (2007). These authors show that the primarily found relationship

⁴ Performance and valuation can be measured in different ways, however the most commonly used metrics are return on assets (ROA) and the valuation proxy Tobin's Q, defined as the ratio of the market value of the firm's debt and equity (enterprise value) and the replacement cost of its assets, since both these measures can be respectively compared across companies (Averstad and Rova, 2007).

between ownership concentration and performance is positive and non-linear, with the positive effect starting to wear off after a middle size ownership stake, at approximately 30%. Thus, if ownership stake is above 30%, then family firms perform worse than non-family firms.

However, in line with the literature strand, which argues that ownership concentration is the endogenous outcome of profit-maximizing decisions by current and potential shareholders, Demsetz and Villalonga (2001), Claessens et al. (2002), Villalonga and Amit (2006), Cronqvist and Nilsson (2003) and Driffield et al. (2006), sustain that, because the majority of studies do not separate family ownership concentration from family control, the effect of ownership concentration *per se* cannot be ascertained from these studies. According to these authors, the relationship between family ownership and performance cannot be identified without distinguishing between family ownership of cash-flow rights and ownership of voting rights. For instance, Anderson and Reeb (2003a) examine the effects of family ownership and management but do not distinguish ownership from control⁵.

In the literature, ownership concentration refers to cash-flow rights, i.e. the right to claim dividends; voting right refers to the degree of control of a firm, i.e. the right of a shareholder to vote in person or by proxy for members of the board and other corporate policies (Driffield et al. 2006). So, ownership is characterized by the separation of two strands where control rights (or) of the largest owners (such as families) were often generally greater than the corresponding cash-flow rights. Therefore, family-controlled firms may use mechanisms to enhance their voting control, such as dual-class shares or pyramidal structures, which create a wedge between control rights and cash-flow rights

⁵ Ownership is not a reliable measure of the degree to which and the way in which families are influencing their firms (Lee, 2006; McConaughy et al. 2001). The extent of the shareholders' influence (ownership control) depends on their relative stakes in the firm, as well as on how actively they participate in the firm's activities. For example, a shareholder with 50 percent of the shares plus one can exercise total control the firm if he or she wants, because this individual can outvote all the other shareholders combined. However, an individual does not need this level of ownership to exercise a great deal of influence over the firm, because influence can also depend on how active is the role that individual plays, how credible the shareholder is, and how concentrated the other shareholdings are.

(DeAngelo and DeAngelo, 1985; Claessens et al. 2000; Faccio and Lang, 2002). Dual-class shares occur when there are two or more share classes with differential voting rights (as opposed to a “one share-one vote” structure). Pyramidal ownership structures occur when a blockholder – typically a family – controls an apex firm or holding company that has control stakes in a related group or chain of firms. These control enhancing mechanisms decrease the alignment of incentives between controlling and minority shareholders, increase managerial entrenchment and heighten the risk of expropriation (King and Santor, 2007).

This discussion brings, according to Villalonga et al. (2006), a second type of conflict (Agency Problem II) where the major shareholder may use its controlling position in the firm to extract private benefits at the expense of minority shareholders (e.g. higher consumption of perks). This way, the consensus seems to be that the first agency problem (principal-agent) is more prominent in lower levels of ownership concentration, where monitoring is less beneficial and at higher levels of ownership concentration, the second agency problem of minority expropriation is more prominent (Averstad and Rova, 2007).

In this way, a new question appears in the literature related to family firms which intends to know which of these two agency problems is more detrimental to shareholders’ value. The evidence on this point is limited and inconclusive. Claessens et al. (2002) and Lins (2003) show that in East Asian economies, the excess of large shareholders’ voting rights over cash flow rights reduces the overall value of the firm, albeit not enough to offset the benefits of ownership concentration. McConnell and Servaes (1990) do not find evidence supporting any direct effect of large shareholders on firm value in Japan, although their results suggest the existence of a certain joint influence of concentration and inside ownership. Indeed, Thomsen and Pedersen (2000) find mixed evidence about the relation between the nature of the dominant shareholder, the share of concentration and the performance in a sample of large companies from 12 European nations. In other economies, the evidence is scarce but also mixed (Morck et al. 2000; Claessens et al. 2002; Cronqvist and Nilsson, 2003; Bertrand et al. 2004). However, neither of these studies considers the endogeneity of ownership concentration

and control, which earlier research shows is a major determinant of their effect on firm value (Demsetz and Villalonga, 2001). This endogeneity makes it difficult to estimate the true effects of ownership concentration on firm performance, as there may be systematic differences between firms with high and low ownership concentration.

The incentives for the controlling shareholder to engage in expropriation, which, are likely to adversely affect the performance of the firm and its value, are a function of the institutional framework in which the firms operate. Thus, it is important to isolate the effect of the institutional environment when studying the relationship between ownership and performance, as the ownership structure itself will be shaped by the institutional environment (De Miguel et al. 2003).

The extent of the investors' legal protection in a country is one of the most determinant factors on the choice between concentrated and dispersed ownership of corporate shares. Indeed, the rights of minor shareholders and how well they are protected strongly depend on the law and the quality of its enforcement, on their role played in protecting the investors and in the corporate governance systems across countries (La Porta et al. 1997, 1998, 2000). Following La Porta et al. (1998), De Miguel et al. (2003) a comparison was established between the main corporate governance systems, and the way they affect the relationship between ownership concentration performance and valuation of family firms. According to De Miguel et al. (2003) there is a link between the presence of controlling shareholders and the strength of the legal rules protecting creditors and shareholders (especially the minority shareholders). Indeed, most studies have been conducted in the U.S. and the U.K., which are characterized by ownership dispersion and where most firms respect the «one share-one vote» rule. Despite this, recent studies by La Porta et al. (1999), Claessens et al. (2000), Faccio and Lang (2002) and Dyck and Zingales (2004) suggest that these types of ownership structures are not generally the norm elsewhere, even in U.S.. In this context, Maury (2004) raises the question of how family firms perform in different legal environments. The empirical results are not consensual.

Anderson and Reeb (2003a) argue that family ownership in listed firms operating in well-regulated and transparent markets reduces agency costs. Barontini and Caprio (2006) show that valuation is positively related to family control even after taking into account that families tend to use more control enhancing mechanisms⁶. Nevertheless, Fahlenbrach (2007), Palia et al. (2008), and Villalonga and Amit (2006) show that control enhancing mechanisms have a negative effect on firm value, even though U.S. law protects minority shareholders better than most of the other country's legislations and makes expropriation less likely to occur. In fact, in East Asia, where transparency is lower, Faccio et al. (2001) claim that politically powerful families in control of public firms have been able to expropriate minority shareholders. Differently, in Europe, controlling shareholders have less incentive to expropriate because they hold, on average, more cash-flow rights. According to Villalonga et al. (2006) the private benefits of control are diluted among several independent owners if there is another major shareholder such as a bank, an investment fund, or a widely held corporation⁷. Indeed, La Porta et al. (1998, 1999) and Bebchuck (2000) point out that major-shareholders are more usual when investors' protection is weak, whereas more dispersed shareholdings are typical wherever the law strongly protects shareholders' and creditors' rights. Thus, Maury (2006) concludes that family ownership may be more beneficial to firm value in legal environments, where minority shareholders can protect themselves better against family opportunism and where family owners participate with significant cash-flow rights. However, this does not imply that the legal environment should significantly affect the profit rate in family firms.

However, ownership control pattern among corporations is not only concentrated, but frequently characterized by the presence of a CEO, Board Chairman or Vice Chairman who is also a controlling shareholder of the company. The presence of a controlling

⁶ The ownership concentration in the hands of individuals, families, governments or industrial groups in most of countries is obtained by dual class shares and/or pyramidal structures (e.g. La Porta et al. 1999; Claessens et al. 2000; Faccio and Lang, 2002; Dyck and Zingales, 2004).

⁷ For example, McConnell and Servaes (1990) find no effect on the ratio of market value to replacement cost of assets (Tobin's Q), although they do find a positive effect of ownership by corporate insiders and institutional investors.

manager shareholder may however have mixed effects on the company's performance, depending on the level of concentration (Driffield et al. 2006).

Indeed, a common characteristic of family firms is that family members occupy the positions on top management, often being the CEO of the company, and obviously, owner-management assures the interests of owners and managers, thus reducing the level of agency costs (Kowaleski, 2007) and mitigates managerial expropriation (Demsetz and Lehn, 1985). Thus managerial ownership can be viewed as a proxy for how much influence the "owner/managers" exert in the firm (McConaughy et al. 2001; Lee, (2006)

Nevertheless, the owner-management effect also has some negative effects, especially when the protection of minority shareholders is weak and the agency problems are too severe to allow for separation of ownership and management (e.g. the family has enough ownership for unchallenged control) (Morck and Yeung, 2003; Burkart et al. 2003; Villalonga and Amit, 2006). In addition, as pointed out by Barclay and Holderness (1989), family owners' major stake reduces the probability of bidding by other agents, therefore reducing the value of the firm⁸. Third parties experience difficulties in capturing control of the firm when families influence the selection of managers⁹. For instance, Griffith (1999) finds that Tobin's Q (the market value of assets divided by its replacement cost), is a non-monotonic function of CEO ownership. Specifically, Tobin's Q rises when the CEO owns between 0 and 15% and declines as CEO ownership concentration increases above 15%. Thus, the combined effects of the convergence of interest and of the entrenchment effect imply that the relationship between ownership and firm performance may be positive or negative at different ranges of managerial ownership stakes (Morck et al. 1988).

⁸ As demonstrated by Claessens et al. (2002), when a major shareholder keeps significant control rights with relatively small cash flow rights, he/she may be averse to increasing outside equity financing because the latter may threaten the dominance of the controlling shareholder (often labelled as non-dilution of entrenchment effects).

⁹ The family's role in selecting managers and directors can create impediments for third parties in capturing control of the firm, suggesting greater managerial entrenchment and lower firm values relative to non-family firms Andersen and Reeb (2003b).

But when investigating family firm ownership, especially the managerial ownership, a so-called “founder effect” can be identified. Many papers highlight that founder-CEOs’ control have a positive effect on corporate performance and valuation (McConnaughy et al. 1998; Palia and Ravid, 2002; Anderson and Reeb, 2003a; Villalonga and Amit, 2006; Fahlenbrach, 2007; Adams et al. 2008). Founders seem to have a special influence and put forth unique value-adding skills that lead to a better performance. For instance, Davis et al. (1997) argue that family members act as stewards and view family wealth as an extension of their own well-being. In line with this thought, Hart (2001) argues that family members CEOs are preventing the deflection of money from the firm by outsiders CEOs who may set up other firms to suck cash out of the projects.

Indeed, recent research overall suggests that there seems to be a positive effect on performance by founder and professional management but a negative effect from descendant management. Villalonga and Amit (2006) find that founder management is positive for valuation and that descendant management decreases valuation. This is explained by the fact that the founder adds special competence to the firm which is not expected to be transferred to the next generation. Morck et al. (1988) find a negative effect of founding family control on market valuations, but only for older firms. For the younger firms, in their sample, the market value effect of having a member of the founding family as one of the top two executives is a positive one. Barontini and Caprio (2006) show that founder’s management is strongly positive for valuation in family firms. This result could be explained due to the fact that the family’s sustained presence in the firm also creates powerful reputation effects and provides incentives to improve the firm’s performance. Similar evidence is provided by Andersen and Reeb (2003a). Based on accounting performance measures, Anderson and Reeb’s (2003a) results indicate that family firms only perform better when a founder family member is a CEO.

This way, a critical event for family performance and value is clearly the retirement of the founder coupled to the ‘passing of the baton’ to a descendant, which often leads to a decline in the firm’s performance (McConnaughy et al. 1998; Pérez-González, 2006; Villalonga and Amit, 2006). Indeed, inherited control (also called entrenchment effects)

by a family member is associated with a decline in the firm's performance (Morck et al. 2000; Pérez-González, 2006; Bennedsen et al. 2007). It is also characteristic in an owner-managed family business, that the top manager is taken from a much more restricted pool of talent than when the manager is recruited from the general managers' market. It is often due to the "amenity potential", when a founder derives pleasure from having his child run the company that bears the family name. Such situation may result in the deterioration of the financial measures of the company (Kowaleski, 2007).

In summary, the general picture seems to be that the founder's family control and professional (outside) management increases performance, whereas excess control via control enhancing mechanisms (such as dual class shares and pyramidal structures) and descendent management produce both lower valuation and performance. This means that controlling shareholders (such as families) could engage in non-value maximization actions, e.g. diversion of funds, empire building that produces private benefits to the family but hurts the minority shareholders, especially in economies whose governments do not effectively enforce investor protection.

4 - How does owner risk aversion affect ownership structure in family firms?

While there is a relatively large amount of literature, particularly related to widely held firms on the effects of ownership on firm performance and value (e.g. Morck et al. 1988; McConnell and Servaes 1990; Hermalin and Weisbach 1991; Himmelberg et al. 1999; Demsetz and Villalonga, 2001; Claessens et al. 2002; Villalonga and Amit, 2006), the relationship between ownership structure and capital structure remains largely unexplored. Some review of the extant interdisciplinary literature indicates that there is a complex array of factors that influence the relation of capital structure like a proxy for control risk propensity or risk aversion and ownership structure in family firms¹⁰.

¹⁰ Risk is generally defined in the finance literature as the probability that the actual return on an investment will deviate from the expected return (Van Horne, 1980).

Indeed, in a perfect capital market, only investment decisions are important in pursuit of wealth maximization. Thus, finance literature is not explicit on the influence of family business owners' decisions on the choice of different forms of finance, such as debt or equity.

Modigliani and Miller (1958) were the first to landmark the topic of capital structure and they argued that it was irrelevant in determining the firm's value and its future performance. However, in 1963 the authors showed that their model is not effective if tax was taken into consideration since tax subsidies on debt interest payments will cause a rise in the firm's value when equity is traded for debt. Many studies have examined the benefits of leverage since Modigliani and Miller's (1958, 1963) theories of the irrelevance of capital structure was published. Those theories state that in a world with perfect capital markets but without taxes, changes in leverage have no effect on the 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. For instance, DeAngelo and Masulis (1980) and Givoly et al. (1992) documented a positive relationship between the debt ratio and tax rate changes. Fama and French (1992) also find that market leverage is positively associated with returns.

The agency issues were also found to have explicative power in financing decisions. Jensen and Meckling (1976) demonstrated the importance of the agency costs of equity in corporate finance arising from the separation of ownership and control of firms whereby managers tend to maximize their own utility rather than the value of the firm. In this context, managers prefer lower financial leverage because it reduces the risk of bankruptcy and protects their undiversified human capital (e.g. Jensen and Meckling, 1976; Fama, 1980; Grossman and Hart, 1986; Masulis, 1988). In this way shareholders prefer higher leverage as it reduces the overinvestment problem, particularly in firms

with excessive free cash flow (Jensen, 1986)¹¹. In this way, an increase from the ratio debt to the equity ratio ensures that managers are running the business more efficiently, since managers will have to make sure that the firm's debt obligations are repaid. Nevertheless, agency costs can also derive from conflicts between debt and equity investors. Debt-Holders will ensure that the firm makes enough profit to be able to meet its debt obligations. On the contrary, shareholders are more interested in the returns they should obtain. For example, the risk and the cost of preventing equity claimants from expropriating debt claimants by the investment of funds into riskier projects were examined by Demsetz and Lehn (1985) and Zimmer (1998). Timmons (1990) finds increasing agency costs of external financing from the early stage to the maturity phase of the firm. Vos and Forlong (1996) examined the agency costs of different forms of financing over the firm's life cycle.

For those concerns, and according to the information hypothesis in which firm managers or insiders are assumed to possess private information about the characteristics of a firm's return stream or investment opportunities, Ross (1977), Myers (1984) and Myers and Majluf (1984) also sustain the advantage of increasing debt. The authors showed that if investors are less well informed than current firm insiders about the value of a firm's assets, then equity can be mispriced by the market. Thus, as greater risk is attached to a firm and leverage increases accordingly to the extent of information asymmetry. This view is also sustained in an owner-managed family business (Harvey et al. 2004; Zellweger, 2006). Indeed, Harvey et al. (2004) argues that, due to asymmetrical information between managers and shareholders, an increase in leverage allows managers to provide signal information about the firm's capacity to meet future interest payments. Even if a particular management group (particularly owner managers) does not have a meaningful conflict, information asymmetry between managers and outsiders allows debt to create value because it gives management the opportunity to signal its willingness to payout cash flows or be monitored by lenders, or both (Leland and Pyle, 1977; Ross, 1977; Flannery, 1986; Diamond, 1991).

¹¹ It should be reinforcing if markets for corporate control functioning properly, it serve as an incentive for managers to act in the best interest of owners (Jensen and Ruback, 1983; Martin and McConnell, 1991).

The pecking order hypothesis states that firms have a preferred hierarchy for financing decisions (Myers and Majluf, 1984; Myers 1984). The highest preference is to use internal financing (retained earnings and the effects of depreciation) before resorting to any form of external funds. If a firm must use external funds, the preference is to use the following order of financing sources: debt, convertible securities, preferred stock, and common stock. This order reflects the motivations of the financial manager to retain control of the firm (since only common stock has a “voice” in management), reduce the agency costs of equity, and avoid the seemingly inevitable negative market reaction to an announcement of a new equity issue. The market timing is also an important determinant of financing activity both in the short-run and in the long-run effects¹².

Despite the advantages of debt finance demonstrated by financial theories, the empirical evidence shows that family firms are less leveraged and use more self-financing, which is interpreted as a proof for control risk aversion of family firms (e.g. Gallo and Vilaseca, 1996; Mishra and McConaughy, 1999; McConaughy et al. 2001; Lyagoubi, 2003; Muradoglu and Sivaprasad, 2007). Thus, the explanatory power of the traditional capital structure literature was challenged when describing the different debt levels of family firms, i.e. debt level being considered as a proxy for control risk aversion.

Indeed, recent research is less concerned on how capital structure affects the firm’s value, instead, it lays more emphasis on the impact of ownership/governance structure on capital structure thereby influencing top management of the firms to make strategic decisions (e.g. Hitt, Hoskisson and Harrison, 1991)¹³.

¹² It is important to recall that there is an intense debate related to the existence of an optimal capital structure. According to the pecking order theory, the firms have no well-define debt-to-value ratio. The firms prefers internal to external financing, and debt to equity if the firms issues securities. Although Mayer and Sussman (2004) and Flannery et al (2004) argue that it is “targeting behaviour” which explains changes in firms’ capital structure rather than the pecking order theory.

¹³ It is important recall that traditional capital structure theories assume that managers and owners are distinct, thus not make predictions about the relationship between concentrated ownership and financial leverage.

The majority of studies following Holderness and Sheehan (1988) and Korteweg (2004) find a negative relationship between managerial ownership and financial leverage, particularly for entrenched managers who are more likely to use equity and avoid high levels of leverage. For instance, Friend and Lang (1988), Friend and Hasbrouck (1988) argue that an increase in managerial ownership pushes firms to reduce leverage in order to decrease default risk¹⁴. Zellweger (2007) adds that managers avoid leverage to reduce control risk on their undiversified personal and family capital. In a different point of view, Kim and Sorenson (1986), among others, document the opposite result, that financial leverage increases with either insider ownership or an index of manager entrenchment. In turn, Driffield et al. (2006) based on Brailsford et al. (2002) suggest that the relationship between managerial ownership and leverage may be non-linear. At low levels of managerial ownership, agency conflicts decrease leading to higher debt. However, when managers hold a significant portion of a firm's equity, an increase in managerial ownership may lead to an increase in managerial opportunism and therefore may cause lower debt. Indeed, separation of management from ownership control is rare, and the top management of about 60% of firms that are not widely held is related to the family of the controlling shareholder (e.g. Anderson and Reeb, 2003a; 2003b; Claessens et al., 2000; Faccio and Lang, 2002).

Hence, some authors suggest that the use of debt is related not to managerial ownership but to family control. For instance, Mishra and McConaughy (1999) after controlling a variety of factors that affect cross-sectional debt levels among all firms, they found that family control, and not managerial ownership, is related to debt levels. Sustaining this view, Harijono et al. (2004), based on Harris and Raviv (1988) and Stultz (1988) argue that debt can be used as a device that allows current owners to retain control of their firm. The families' desire to retain control and reduce firm's risk has opposing effects on leverage decisions. On the one hand, the desire to concentrate voting power motivates families to use more debt¹⁵. On the other hand, the desire to reduce risk

¹⁴ Indeed, DeAngelo and DeAngelo (2006) argue that although high leverage mitigates agency problems, it also reduces financial flexibility because the utilization of current borrowing capacity translates into less availability in the future.

¹⁵ The finance theory argues that firms with a controlling shareholder should exhibit higher financial leverage, as it increases their voting control for a given level of equity investment,

motivates families to use less debt. This calls into question the studies of managerial ownership and firm characteristics that do not account for how family's influence affects control risk aversion measured by debt level.

Indeed, family controlled firms, typically have undiversified portfolios. This way, when the analysis refers to family business, the risk is strongly linked to the company's viability¹⁶. Founding families view their firms as an asset to bequeath to family members or their descendants rather than a wealth to consume during their lifetimes (Casson, 1999; Chami, 1999). Therefore, controlling shareholders of family controlled firms represent a special class of major shareholders that beside the strong incentive to maintain control of their companies prefer less debt as more debt increases the probability of financial distress (Zellweger, 2006). In this way, the costs of financial distress (the costs of bankruptcy) are presumably as high as higher are the debt levels, and the owner's decisions about the capital structure of family firms are strongly linked to the viability of the company.

5 - Conclusion

The objective of this paper is to make a review of the literature related to how family (taking in account specific governance characteristics such as family ownership, family control and family management) affects the firms' performance, value and capital structure.

The literature review has revealed that family firms averagely perform better than non-family firms. Indeed, ownership is, on average, positive for firms' valuation, and also for firms' performance both on control, concentration and management. However, this

reduces the risk of a hostile takeover, and increases the takeover premium embedded in the stock price (e.g. Stulz, 1988).

¹⁶ As demonstrated by Ahn et al. (2006), firms with diversified investments have higher leverage than firms with more focused investments. So, corporate diversification is an efficient strategy for founding families.

is a non-linear relation, which indicates, as suggested by Demsetz (1983), Demsetz and Lehn (1985), that ownership structure is endogenous. So, it is important to distinguish between ownership concentration (claims against the cash-flow of the firms) and control (the holding of voting rights at board level). Therefore, family-controlled firms may use mechanisms to enhance their voting control, such as dual class shares or pyramidal structures which allow them to have incentives and power to systematically expropriate wealth from the firm's other claimants, creating severe moral hazard conflicts between the founding family and minority shareholders. Indeed, the risk of expropriation is particularly strong in countries where minority shareholders are weakly protected. We are now able to identify that the main institutional factors embodied in a corporate governance system affect the relationship between ownership structure and firm value. That relationship suggests that family ownership may be more beneficial to firm value in legal environments, where minority shareholders can protect themselves better against family opportunism.

The presented review also shows a significant positive effect of founder management on both valuation and performance, whereas the descendant effect is negative for both performance and valuation, when compared to professional management. This relation could be explained by the fact that restricting executive talent to a labor pool of family members can be challenging. The family's role in selecting managers and directors can create impediments for third parties in capturing control of the firm, creating greater managerial entrenchment and consequently a decrease in performance and value. Since performance and value are lower for such firms, the investors impose a premium for the allocation of control to these families. This concession is also a result from a much smaller probability of a takeover, since typically families are a long term controlling owner.

There is scarce literature reviewing the influence of family business owners' decisions on the choice of different forms of finance. The empirical evidence shows that family firms present low level of debt. This evidence is interpreted as an external manifestation of a firm's control risk aversion, which challenges the traditional financial theories on capital structure. Indeed, despite the families' desire to retain control, the desire to

reduce risk is much stronger. This behavior could be explained by the fact that the family business owners' desire to protect their monetary and nonmonetary benefits induces a business perspective that lasts further into the future (e.g. one or more generations) than the perspective of a more short-term oriented manager with a time horizon of few years to one working life. Furthermore, controlling shareholders of family controlled firms typically have undiversified portfolios. Thus, the separation of business and family wealth, or the allocation of private investments to company accounts, are not clear.

In this study, we investigate the link between ownership, performance and value by relating ownership with several dimensions of the 'family effect'. However, the argument that family controlled business should be more efficient than professionally run firms, due to lesser monitoring costs in family controlled firms, is controversial. This way, agency models assume that the effects of concentrated ownership and owner-management will lead to a minimized or even zero level of agency costs. Given significant shareholdings, family owners possess the incentive, power and information to control their managers, thereby reducing free-rider agency costs and boosting returns. Moreover, managers and large family shareholders are often the same persons, and, therefore, the residual claimants bear (nearly) all of the costs and receive (nearly) all of the benefits of their actions. Nonetheless, no separation between ownership and management can offset the advantages in monitoring and disciplining decision agents. Indeed, it is also true that family-dominated businesses are more apt to be characterized by extraordinary dividend payouts, entrenched managers and a redistribution of wealth from the family to the employees. Moreover, family differences and role conflict can lead to behavior that does not support the best interests of the firm. Psychological conflict within the family (such as sibling rivalry, autocratic behavior, and nepotism) can offset the benefits of reduced monitoring. Thus, the role of trust, altruism but also stewardship should be further analyzed in order to answer the question of whether the agency advantages, as proposed by traditional financial theory, are prevailing or if the disadvantages are larger. The challenge for such research is not whether a business is family or non-family run, but the extent of the family's involvement and its influence on the firm.

Appendix I: Family Firms Definitions¹⁾

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
Allen and Panian (1982)	1971–1980	250 largest firm in terms of sales for 1974 or 1975	U.S.	Family firm whenever the members of a descendent group and their affines owned or controlled at least 5 percent of the voting stock in a corporation and were represented on board of directors. Other definitions employed: Direct family control when the CEO is a member of the controlling family.
Anderson and Reeb (2003)	1992–1999	1992 S&P 500	U.S.	Family firm if there exists fractional equity ownership of the founding family and / or the presence of family members serving on the board of directors. Other definitions employed: Ratio of board seats held by family members to board seats held by independent directors / CEO founder indicates a founding family firm when the CEO is the founder of the firm / CEO descendent indicates a founding family firm when the CEO is a descendent of the founder during the past decade.
Anderson and Reeb (2004)	1992–1999	1992 S&P 500	U.S.	Family firm if there exists fractional equity ownership of the founding family and/or the presence of family members serving on the board of directors. Other definitions employed: Ratio of board seats held by family members to board seats held by independent directors/If family board control exceeds independent director control.
Anderson et al. (2003)	1993–1998	Firms in both the Lehman Brothers Bond Database and the S&P 500	U.S.	Family firm if there exists fractional equity ownership of the founder and his/ her immediate family. Other definitions employed: Fractional equity ownership of the founder and his/her immediate family & board of directors membership/ Fractional equity ownership of the founder and his/her immediate family and size of the family's ownership stake relative to other block holders/Fractional equity ownership of the founder and his/her immediate family and family equity holdings as a fraction of outstanding shares.

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
Ang et al. (2000)	1992	Federal Reserve Board's National Survey of Small business Finances	U.S.	Family firm when a single family controls more than 50% of the firm's shares.
Barontini and Caprio (2005)	1999	Large publicly traded firms greater than 300 million euros in assets. 675 firms.	Continental Europe (11 countries)	Family firm if the largest shareholder owns at least 10% of ownership rights and either family or largest shareholder controls more than 51% of direct voting rights or controls more than the double of the direct voting rights of the second largest shareholder. Other definitions employed: Firm run by family COO/Firm run by non family COO but one family member is on board/Family firm when founder or descendent of founder runs firm.
Barth et al. (2005)	1996	Survey of firms associated with the Confederation of Norwegian Business and Industry	Norway	Family firm if at least 33% of the shares of the firm are owned by one person or one family.
Bennedsen et al. (in press)	1994–2002	Limited liability public and private firms which underwent a CEO succession	Denmark	Family firm whenever an incoming CEO is related by blood or marriage to the outgoing CEO.
Claessens et al. (2000)	1996	WorldScope	9 East Asian Countries	Family groups are those that control more than 5% of the company's votes. Family group is identified through published family trees in each country and may consist of one family or a

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
				group of families.
Claessens et al. (2002)	1996	WorldScope	8 East Asian Countries	Family firm when there is the presence of a group of people related by blood or marriage with large ownership stakes.
Cronqvist and Nilsson (2003)	1991–1997	Stockholm Stock Exchange	Sweden	Founder families may include only a single individual or a closely knit group of individuals who do not belong to the same family. Other definitions employed: Founder family ownership is ownership by the founder or descendants of the founder and families/individuals affiliated with the founder.
Denis and Denis (1994)	1985	Value Line Investment Survey	U.S.	Family firm if 2 or more family members are present as officers/directors or if founders are officers.
Faccio and Lang (2002)	1996–1999	WorldScope plus various country specific reference data bases	13 Western European countries	Family firm if a family or an individual or unlisted firm on any stock exchange is considered as the ultimate owner (greater than 20% of either cash flow or control rights).
Fahlenbrach (2006)	1992–2002	2327 publicly traded firms listed in IRCC for all years, firms drawn from S&P 500, Fortune, Forbes, Business Week	US	Family firm if the CEO is the founder or co-founder.

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
Gomez-Mejia et al. (in press)	1944–1998	Spanish government registry	Spain	Family firm if the company is owned and operated by the founding family. Other definitions employed: Owned and operated by non-founding extended family/Owned and operated by non-founding extended family members but managed by hired professionals.
Gomez-Mejia et al. (2003)	1995–1998	Random sample culled from Compustat	U.S.	Family controlled firm under two conditions: two or more directors had a family relationship, and family members owned or controlled at least 5% of the voting stock. Family relationship included father, mother, sister, brother, son, daughter, spouse, in-laws, aunt, uncle, niece, nephew, cousin. Other definitions employed: Family controlled and CEO is family member/Percentage of family equity ownership/Family controlled and family member(s) are on the compensation committee.
Gomez-Mejia et al. (2001)	1966–1993	Registry of Newspapers, Media Guide of Spain, Oficina de Justificacion de la Difusion—All daily newspapers	Spain	Family firm if in this newspaper sample there were family ties between the newspaper's CEO and editor.
Holderness and Sheehan (1988)	1980–1984	114 randomly chosen publicly traded firms — data source Spectrum 5	US	Family firm if an individual majority shareholder or entity owns at least 50.1% of the stock: may include trusts and foundations.
La Porta et al.	1995–1997	World scope-27 countries	Worldwide	Family firm if a person is the controlling shareholder (ultimate owner) whose direct and indirect

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
(1999)		represented		voting rights exceed 20%.
Luo and Chung (2005)	1973–1996	Directory business groups in Taiwan	Taiwan	Firm created by entrepreneurs. Other definitions employed: Firm's key leader has inner circle members who are immediate family members/Firm's key leader has inner circle members with prior social relationships — distant relatives, in-laws, friends, classmates, colleagues, business partners.
Maury (2006)	1996–2003	Faccio and Lang, 2002 data plus WorldScope 2003	13 Western European countries	Family firm if the largest controlling shareholder who holds at least 10% of the voting rights is a family, an individual, or an unlisted firm (unlisted firms are often closely held and therefore considered under family control). Other definitions employed: The controlling shareholder is from an unlisted firm/The largest controlling shareholder is an identified family or individual/The controlling shareholder is a family or an individual holding the title of CEO, Honorary Chairman, Chairman, or Vice Chairman
McConaughy et al. (1998)	1987	Business Week CEO 1000	U.S.	Family founder controlled firm — A public corporation whose CEO is either the founder or a member of the founder's family.
Morck et al. (1988)	1980	Fortune 500	U.S.	Family firm if a member of the founding family is among the top two officers.
Perez-Gonzalez (2006)	1980–2001	Compustat 1994	U.S.	Sample firms met the following requirements: (1) founded prior to 1971; (2) exhibited at least one of the following (a) two or more individuals related by blood were directors, officers, or shareholders (b) an individual had at least 5% ownership (c) a founder was an executive or director, and (3) a CEO change occurred during the time window. Further a family succession was coded within this sample of firms when the new CEO was related by blood or marriage to : (1) the departing CEO, (2) the founder, or (3) a large shareholder.

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
Schulze et al.(2001)	1995	Survey of American family businesses conducted by the Arthur Anderson Center for Family Business.	U.S.	Family firm if privately held, greater than \$5 m annual sales, and listed by Arthur Anderson as a family business.
Schulze et al. (2003)	1995	Survey of American family businesses conducted by the Arthur Anderson Center for Family Business.	U.S.	Family firm if privately held, greater than \$5 m annual sales and listed by Arthur Anderson as a family business.
Smith and Amoako- Adu (1999)	1962–1996	Toronto Stock Exchange companies	Canada	Family firm if a person or a group related by family ties holds the largest voting block and at least 10% of the total votes.
Villalonga and Amit (2006b)	1994–2000	Fortune 500	U.S.	Family firm if the founder or a member of the family is officer, director or owns N5% of the firm's equity. Other definitions employed: 1 or more family members are officers directors or block holders/At least 1 family officer and 1 family director/Family is largest vote holder/Family is largest shareholder/1 or more family members from 2nd generation or later are officers, directors, or block holders / Family is largest vote holder and has at least one family officer and 1 family director/Family is largest shareholder and has at least 20% of the votes/1 or more family

Author (s)	Study time line	Data Source	Country/Region	Family firm definition(s) employed
				members are directors or block holders but there are no family officers/Family is largest vote holder, has at least 20% of votes, one family officer and 1 family director and is in 2nd or later generation.

1) According Miller et al. (2007) this table represents studies identified by searching top tier finance and management journals between 1996 to 2006 (e.g. Academy of Management Journal – Administrative Science Quarterly – Journal of Corporate Finance – Journal of Financial Economics – Quarterly Journal of Economics – Review of Financial Economics – The Journal of Finance) for titles or abstracts that used the term “family firm”. Using the ancestral approach we were also able to identify other sources. The list above is intended to be representative of the major contributions to the field of empirical family business research published in the last decade

References

- ADAMS, R., ALMEIDA, H. and FERREIRA, D. (2008) Understanding the Relationship between Founder-CEOs and Firm Performance, *Journal of Empirical Finance*, Forthcoming. Available at SSRN: <http://ssrn.com/abstract=470145>
- ANDERSON, R. and REEB, D. (2003a) Founding-Family Ownership and Firm Performance: Evidence from the S&P 500, *Journal of Finance*, 58 (3):1301-1328. Available at SSRN: <http://ssrn.com/abstract=365260>
- ANDERSON, R. and REEB, D. (2003b) Founding-Family Ownership, Corporate Diversification, and Firm Leverage, *Journal of Law and Economics*, 46:653. Available at SSRN: <http://ssrn.com/abstract=462541>
- ANDERSON, R.C., MANSI, S.A. and REEB, D.M. (2003) Founding family ownership and the agency cost of debt, *Journal of Financial Economics*, 68 (2):263–285. Available at SSRN: <http://ssrn.com/abstract=303864> or DOI: 10.2139/ssrn.303864
- AGRAWAL, A. and MANDELKER, G. (1990) Large Shareholders and the Monitoring of Managers: The Case of Antitakeover Charter Amendments, *Journal of Financial and Quantitative Analysis*, 25(2):143-161.
- AHN S., DENIS D. J. and DENIS D. K. (2006) Leverage and investment in diversified firms, *Journal of Financial Economics*, 79:317-337.
- AVERSTAD, J. and ROVA, G. (2007) Performance and Valuation of Swedish Family Firms, *Master thesis of Finance*.
- BARONTINI R. and CAPRIO L. (2006) The Effect of Family Control on Firm Value and Performance: Evidence from Continental, *Europe European Financial Management*, 12(5): 689–723. Available at SSRN: <http://ssrn.com/abstract=675983>
- BHATTACHARYA, U. and RAVIKUMAR, B. (2001) Capital Markets and the Evolution of Family Businesses, *Journal of Business*, 74(2):187-219.
- BARTH, E., GULBRANDSEN, T. and SCHONE, P. (2005) Family ownership and productivity: the role of owner-management, *Journal of Corporate Finance*, 11 (1/2):107–127.
- BEBCHUCK, L.A., KRAAKMAN, R. and TRIANTIS, G. (2000) Stock Pyramids, Cross-Ownership, and Dual-Class Equity: The Creation and Agency Cost of Separating, Control

- from Cash Flow Rights, In *Concentrated Corporate Ownership*, (R. Morck, ed.), pp. 295-315, Harvard Law and Economics Discussion Paper No. 249. Available at SSRN: <http://ssrn.com/abstract=147590> or DOI: 10.2139/ssrn.147590
- BELLET, W., DUNN, B., HECK, R., PARADY, P., POWELL, J. and UPTON, N.B.(1995) Family Business as a Field of Study, *Family Business Annual I (Section II)*, pp. 1-8.
- BERLE, A. and MEANS, G. (1932) *The Modern Corporation and Private Property*. New York: Mac Millan. Edition Revised in 1969 by Harcourt, Brace and World, New York.
- BERTRAND, M., JOHNSON, S.H., SAMPHANTHARAK, K. AND SCHOAR, A. (2004) Mixing Family with Business: A Study of Thai Business Groups and the Families behind Them, *Unpublished working paper*. University of Chicago and MIT. Available at SSRN: <http://ssrn.com/abstract=687299>
- BENNEDESEN, M., NIELSEN, K., PÉREZ-GONZÁLEZ, F. and WOLFENZON, D. (2007) Inside the Family Firm: The Role of Families in Succession Decisions and Performance, *Quarterly Journal of Economics*, 122:647-691. Available at SSRN: <http://ssrn.com/abstract=925650>
- BRAILSFORD, T., OLIVER B., and PUA S., (2002) On the relation between ownership structure and capital structure, *Journal of Accounting and Finance*, 42:1-26. Available at SSRN: <http://ssrn.com/abstract=318592>
- BROKAW, L. (1992) Why Family Firms are Best, *Inc.* 14(3):72-81.
- BURKART, M., PANUNZI, F. and SHLEIFER, A. (2003) Family Firms, *Journal of Finance*, 58:2167-2202.
- CABRERA-SUÁREZ K, SAÁ-PÉREZ, P DE. and GARCIA-ALMEIDA, D. (2001) The succession process from a resource- and knowledge-based view of the family firm, *Family Business Review*, 14(1):37-46.
- CASSON, M. (1999) The economics of the family firm, *Scandinavian Economic History Review*, 47:10–23.
- CLAESSENS, S., DJANKOV, S. and LANG, L.H. (2000) Separation of Ownership and Control in East Asian Corporations, *Journal of Financial Economics*, 58(1-2):81-112.
- CLAESSENS, S., FAN, J.P., DJANKOV, S. and LANG, L.H. (2002) Disentangling the Incentive and Entrenchment Effects of Large Shareholdings, *Journal of Finance*, 57(6):2741-2771.

- CRONQVIST, H. and NILSSON, M. (2003) Agency costs of controlling minority shareholders, *Journal of Financial and Quantitative Analysis*, 38:695–719.
- CHAMI, R. (1999) What is Different about Family Businesses? Notre Dame University and International Monetary Fund Institute, *Working Paper 01/70*.
- DAILY, CM., and DOLLINGER, M.J. (1991) Family Firms Are Different, *Review of Business*, 13(1):3-5.
- DALTON D.R. and DAILY C.M. (1992) Financial performance of founder-managed versus professionally managed corporations, *Journal of Small Business Economics*, 30.
- DAVIS, J. H., SCHOORMAN, F. D. and DONALDSON, L. (1997) Toward a stewardship theory of management, *Academy of Management Review*, 22(1):20-47.
- DeANGELO, H and DeANGELO, L. (1985) Managerial ownership of voting rights: A study of public corporations with dual classes of common stock, *Journal of Financial Economics*, 14:33-69.
- DeANGELO, H. and MASULIUS, R. (1980) Optimal Capital Structure Under Corporate and Personal Taxation, *Journal of Financial Economics*, 8:3-29.
- DeANGELO, H. and DeANGELO, L. (2006) The irrelevance of the MM dividend irrelevance theorem, *Journal of Financial Economics*, 79(2):293-315.
- DE MIGUEL, A., PINDADO, J. and DE LA TORRE, C. (2003) Ownership Structure and Firm Value: New Evidence from the Spanish Corporate Governance System, *EFMA Helsinki Meetings*. Available at SSRN: <http://ssrn.com/abstract=393464>
- DEMSETZ, H. (1983) The structure of ownership and the theory of the firm, *Journal of Law and Economics*, 26:375-390.
- DEMSETZ, H. and LEHN, K. (1985) The Structure of Corporate Ownership: Causes and Consequences, *Journal of Political Economics*, 93:1155-1177.
- DEMSETZ, H. and VILLALONGA, B. (2001) Ownership Structure and Corporate Performance, *Journal of Corporate Finance*, 7(3):209-233. Available at SSRN: <http://ssrn.com/abstract=266101>
- DIAMOND, D. (1991) Monitoring and reputation: the choice between bank loans and directly placed debt, *Journal of Political Economy*, 99:689–721.
- DRIFFIELD N., MAHAMBARE V. and PAL S. (2006) How Does Ownership Structure Affect Capital Structure and Firm Performance? Recent Evidence from East Asia, *Economics*

and Finance Discussion Papers 06-23, Economics and Finance Section, School of Social Sciences, Brunel University.

- DYCK, A. and ZINGALES L. (2004) Private Benefits of Control: An International Comparison, *The Journal of Finance*, 59:537-600.
- ENSLEY, M. (2006) Family businesses can out-compete: As long as they are willing to question the chosen path, *Entrepreneurship Theory and Practice*, 30(6): 747-754.
- FACCIO, M., LANG, L., YOUNG, L. (2001) Dividends and expropriation, *American Economic Review*, 91(1):54-78.
- FACCIO, M. and LANG, L. (2002) The ultimate ownership of western European corporations, *Journal of Financial Economics*, 65:365-395.
- FAHLENBRACH, R. (2007) Founder-Ceos, Investment Decisions, and Stock Market Performance; *Dice Center Working Paper No. 2004-20, Journal of Financial and Quantitative Analysis (JFQA) Forthcoming. Fisher College of Business, Working Paper No. 2004-01-001*. Available at SSRN: <http://ssrn.com/abstract=606527>
- FAMA, E.F. (1980) Agency Problems and the Theory of the Firm, *The Journal of Political Economy*, 88(2):288-307.
- FAMA E.F. and FRENCH K. (1992) The cross-section in expected stock returns, *Journal of Finance* 47:427-466.
- FAMA, E.F. and JENSEN, M.C. (1983a) Separation of Ownership and Control, *Journal of Law and Economics*, 26:301-325.
- FAMA, E. F. and JENSEN, M. C. (1983b) Agency problems and residual claims, *Journal of Law and Economics*, 26: 327-349.
- FINK, A. (2007) Family Business Research: A Literature Review, *Working Paper*.
- FLANNERY, M. (1986) Asymmetric information and risky debt maturity choice, *Journal of Finance*, 41:19-37.
- FLANNERY M.J. and RANGAN K.P. (2006) Partial Adjustment Towards Target Capital Structures, *Journal of Financial Economics*, 79:469-506.
- FRIEND, I. and HASBROUCK J. (1988) Determinants of Capital Structure, in *Research in Finance A. H. Chen, ed., Greenwich, CT. Jai Press, Inc.*, 7:1-20.
- FRIEND, I. and LANG L. (1988) An Empirical Test of the Impact of Managerial Self-Interest on Corporate Capital Structure, *Journal of Finance*, pp. 271-281.

- GALLO, M.A. (1995) The role of family business and its distinctive characteristic behavior in industrial activity, *Family Business Review*, 8(2):83-97.
- GALLO, M.A. and VILASECA, A. (1996) Finance in family business, *Family Business Review*, 9:387-402.
- GERSTICK, K., DAVIS, J., HAMPTON, M. and LANSBERG, I. (1997) Generation to generation: Life cycles of the family business, *Harvard Business School Press: Boston, MA*.
- GIVOLY, D., HAYN, C., OFER, A., and SARIG, O. (1992) Taxes and capital structure: Evidence from firms' tax reform act of 1986, *The Review of Financial Studies*, 5(2):331-255.
- GOMEZ-MEJIA, L.R., NUNEZ-NICKEL, M. and GUTIERREZ, I. (2001) The Role of Family Ties in Agency Contracts, *Academy of Management Journal*, 44:81-95.
- GOMEZ-MEJIA L.R, LARRAZA-KINTANA M. and MAKRI M. (2003) The determinants of executive compensation in family-controlled public corporations, *Academy of Management Journal*, 46(2):226-237.
- GOMEZ-MEJIA, L.R., HAYNES, K., NUNEZ-NICKEL, M., JACOBSON, K. and MOYANO-FUENTES, J. (2007) Family's owned firms: risk loving or risk averse?, *Administrative Science Quarterly*, 44:81-96.
- GOMPERS, P., ISHII, J. and METRICK, A. (2004) Incentives vs. Control: An analysis of the U.S Dual-Class Companies, *National Bureau of Economic Research, NBER Working Paper No. W10240*. Available at SSRN: <http://ssrn.com/abstract=492353>
- GÓRRIZ, C.G. and VINCENTE, S.F. (2005) Family Ownership and Performance: the Net Effect of Productive Efficiency and Growth Constraints, *ECGI Working Paper No. 66/2005*.
- GRIFFITH, J. M. (1999) CEO ownership and firm value, *Managerial and Decision Economics*, 20(1):1-8.
- GROSSMAN, S. and HART, O. (1986) Corporate Financial Structure and Managerial Incentives, in *The Economics of Information and Uncertainty. Ed. J.J. McCall Chicago, III.: University of Chicago Press*.
- HARIJONO, H., ARIFF, M. and TANEWSKI, G. (2004) The Impact of Family Control of Firms on Leverage: Australian Evidence, *EFMA 2004 Basel Meetings Paper*. Available at SSRN: <http://ssrn.com/abstract=487706>

- HARVEY C., LINS K. and ROPER A. (2004) The effect of capital structure when expected agency costs are extreme, *Journal of Financial Economics*, 74:3–30.
- HARRIS, M and RAVIV A. (1988) Corporate governance: voting rights and majority rules, *Journal of Financial Economics*, 20:203-235.
- HARRIS, M. and RAVIV A. (1990) Capital Structure and the Informational Role of Debt, *Journal of Finance*, 45:321-49.
- HART, O. (2001) Financial contracting, *Journal of Economic Literature*, 39:1079– 1100.
- HERMALIN, B.E. and WEISBACH, M.S. (1998) Endogenously Chosen Boards or Directors and Their Monitoring of the CEO, *American Economic Review*, 88:96-118.
- HILL, C. and SNELL, S. (1988) External Control, Corporate Strategy, and Firm Performance in Research-Intensive Industries, *Strategic Management Journal*, 9:577-590.
- HILL, C. and SNELL, S. (1989) Effects of Ownership Structure and Control on Corporate Productivity, *Academy of Management Journal*, 32(1):25-46.
- HIMMELBERG, C., HUBBARD R.G. and PALIA D. (1999) Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance, *Journal of Financial Economics*, 53:353-384.
- HITT, M., HOSKISSON, R. and HARRISON, J. (1991). Strategic competitiveness in the 1990s: Challenges and opportunities for U.S. executives, *Academy of Management Executive*, 5(2):7-22.
- HOLDERNESS, C.G., SHEEHAN D. (1988) The role of majority shareholders in publicly held corporations, *Journal of Financial Economics*, 20: 317-348.
- JAMES, H.S. (1999) Owner as Manager, Extended Horizons, and Family Firm, *International Journal of the Economics of Business*, 6:41-56.
- JENSEN, M.C. (1986) Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, *American Economic Review*, 76(2):323-329.
- JENSEN, M.C. and MECKLING, W. (1976) Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3:305-360.
- JENSEN, M.C, and RUBACK, R. (1983) The Market for Corporate Control: The Scientific Evidence, *Journal of Financial Economics*, 11:5-50.
- KELLERMANN, F.W. and EDDLESTON, K. (2006) Corporate entrepreneurship in family firms: A family perspective, *Entrepreneurship Theory and Practice*, 30(6): 809-830.

- KETS DE VRIES, M. (1993) The Dynamics of Family Controlled Firms: The Good and Bad News, *Organizational Dynamics*, 21(i):59-71.
- KIM, W.S. and SORENSEN E. H. (1986) Evidence on the Impact of the Agency Costs of Debt on Corporate Debt Policy, *Journal of Financial and Quantitative Analysis*, 21(2):131-44.
- KING, M.R. AND SANTOR, E. (2007) Family Values: Ownership Structure, Performance and Capital Structure of Canadian Firms, *Working Papers 07-40, Bank of Canada*.
- KORTEWEG A. (2004) Financial leverage and Expected Stock Returns: Evidence from pure exchange offers. Available at SSRN: <http://ssrn.com/abstract=597922>
- KOWALEWSKI, O., STETSYUK, I., SCHAEFER, D. and TALAVERA, O. (2007) Influence of Founding-Family Ownership and Managerial Regime on Firm Performance: Evidence from Companies on WSE. Available at SSRN: <http://ssrn.com/abstract=979521>
- LA PORTA, R., LOPEZ-DE-SILANES F., SHLEIFER A. and VISHNY, R. (1997) Legal determinants of external finance, *Journal of Finance*, 52:1131–1150. Reprinted in *Empirical Corporate Finance, The International Library of Critical Writings in Financial Economics*, Richard Roll (series editor) and Michael J. Brennan (editor), 2000.
- LA PORTA, R., LOPEZ-DE-SILANES F., SHLEIFER A. and VISHNY, R. (1998) Law and finance, *Journal of Political Economy*, 106:1113–1155. Reprinted in J. Schwalbach ed., *Corporate Governance; Essays in Honor of Horst Albach*, Publications of the Society for Economics and Management at Humboldt-University Berlin, Berlin, 2001.
- LA PORTA, R., LOPEZ-DE-SILANES, F. and SHLEIFER, A. (1999) Corporate ownership around the world, *Journal of Finance*, 54:471–517.
- LA PORTA, R., LOPEZ-DE-SILANES F., SHLEIFER A. and VISHNY, R. (2000) Investor Protection and Corporate Governance, *Journal of Financial Economics*, 58(1):1–25.
- LA PORTA, R., LOPEZ-DE-SILANES F., SHLEIFER A. and VISHNY, R. (2002) Investor Protection and Corporate Valuation, *Journal of Finance*, 57 (3):1147-1170.
- LANSBERG, I. (1999) *Succeeding generations, Harvard Business School Press, Boston, MA*.
- LE BRETON-MILLER I. and MILLER D. (2006) Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability, *Entrepreneurship Theory and Practice*, 30(6):731-746.
- LEE, J. (2006) Family Firm Performance: Further Evidence, *Family Business Review*, 19(2):103-114.

- LELAND, H. and PYLE, D. (1977) Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance*, 32:371–387.
- LESTER R.H., CANNELLA A.A. and MILLER D. (2006) Inter organizational Familiness: How family firms use interlocking directorates to build community-level social capital, *Entrepreneurship Theory and Practice*, 30(6):755-776.
- LEVINSON, H. (1971) Conflicts that plague family business, *Harvard Business Review*, 90-98.
- LINS, K.V., HARVEY, C. R. and ROPER, A. H. (2003) The Effect of Capital Structure When Expected Agency Costs are Extreme, *AFA 2002 Atlanta Meetings*.
- 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*.
- LYMAN, A. R. (1991) Customer Service: Does Family Ownership Make a Difference?, *Family Firm Review*, 4(3):303-324.
- MARTIN, K. and MCCONNELL, J. (1991) Corporate Performance Corporate Takeovers and Management Turnover, *Journal of Finance*, 46:671-688.
- MASULIS, R.W. (1988) Corporate Investment and Dividend Decisions under Differential Personal Taxation, *Journal of Financial and Quantitative Analysis*, 23(4):369-385.
- MAURY, B. (2006) Family Ownership and Firm Performance: Empirical Evidence from Western Europe Corporations, *Journal of Corporate Finance*, 12 (2): 321-341.
- MAYER, C. and SUSSMAN, O. (2004) A New Test of Capital Structure, *AFA 2005 Philadelphia Meetings*. Available at SSRN: <http://ssrn.com/abstract=643388>
- McCONAUGHY, D.L., WALKER, M.C., HENDERSON, G.V. and MISHRA, C.S. (1998) Founding Family Controlled Firms: Efficiency and Value, *Review of Financial Economics*, 7 (1):1-19.
- McCONAUGHY, D.L., MATTHEWS H.C. and FIALKO, A.S. (2001) Founding Family Controlled Firms: Performance, Risk, and Value, *Journal of Small Business Management*, 39(1):31-49.
- MCCONNELL, J. and SERVAES, H. (1990) Additional Evidence on equity ownership structure and firm performance, *Journal of Financial Economics*, 27, 595 – 612.
- MCKINLEY, W., MONE, M. A., and MOON, G. (1999) Determinants and development of schools in organizational theory, *Academy of Management Review*, 24, 634–648.

- MEYER M, and ZUCKER L. (1989) Permanently failing organizations, *Sage: Newbury Park, CA*.
- MILLER, D., MILLER, I., LESTER, R., CANNELLA, J. and ALBERT, A. (2007) Are family firms really superior performers?, *Journal of Corporate Finance*, 13 (5):829 – 858
- MISHRA, C. and McCONAUGHY D. (1999) Founding Family Control and Capital Structure: The Risk of Loss of Control and the Aversion to Debt, *Entrepreneurship Theory and Practice*, 23(4):55-64.
- MYERS, S.C. (1977) Determinants of corporate borrowing, *Journal of Financial Economics*, 5:147–175.
- MYERS, S.C. (1984) The capital structure puzzle, *Journal of Finance*, 39(3):575-592.
- MYERS, S.C., 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.
- MODIGLIANI, F. and MILLER, M. (1958). The cost of capital, corporation finance, and the theory of investment, *American economic Review*, 48:261-197.
- MODIGLIANI, F. and MILLER, M. (1963) Corporate income taxes and the cost of capital: A correction. *American economic Review* (june), pp. 433-443.
- MORCK, R., SHLEIFER, A., AND VISHNEY, R. (1988) Management ownership and market valuation: An empirical analysis, *Journal of Financial Economics*, 20, 293-315.
- MORCK, R., STRANGELAND D., AND YEUNG B. (2000) Inherited Wealth, Corporate Control and Economic Growth, *R. Morck (ed.): Concentrated Corporate Ownership, University of Chicago Press*, 319-369.
- MORCK, R., YEUNG, B. (2003) Agency Problems in Large Family Business Groups, *Entrepreneurship Theory and Practice*, 27(4):367-382.
- MORRIS, D.M. (1989) Family Businesses: High Candidates for Financial Distress, *Small Business Reports*, 14(3):43-45.
- MURADOGLU, Y.G., SIVAPRASAD, S. (2007) An Empirical Analysis of Capital Structure and Abnormal Returns, *Cass Business School Research Paper*. Available at SSRN: <http://ssrn.com/abstract=948393>
- PAISNER M. (1999) Sustaining the Family Business, *Perseus Reading, MA*.
- PALIA, D. AND RAVID, S. (2002) The role of founders in large companies: entrenchment or valuable human capital?, *Working Paper (Rutgers University)*.

- PALIA D., RAVID S. AND WANG C. (2008) Founders versus non-founders in large companies: financial incentives and the call for regulation, *Journal of Regulatory Economics*, 33(1):55-86.
- PÉREZ-GONZÁLEZ, F. (2006) Inherited Control and Firm Performance, *American Economic Review*, 96:1559-1588.
- POLLAK, R. (1985) A Transaction Cost Approach to Familiar and Households, *Journal of Economic Literature*, 23:581-608.
- ROSS, S.A. (1977) The Determination of financial structure: The incentive-signaling approach, *Bell Journal of Economics*, 8:23-40.
- SHANKER, M.C. and ASTRACHAN, J.H. (1996) Myths and realities: family businesses' contribution to US economy - A framework for assessing family business statistics, *Family Business Review*, 9(2):107-123.
- SCHULZE, W.; DINO, R.; LUBATKIN, M. and BUCHOLTZ, A. (2001) Agency Relationships in Family Firms: Theory and Evidence, *Organization Science* 2(2):99-116.
- SCHULZE, W. S., LUBATKIN, M. H. and 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. and 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.
- SCOTT, J. (1977) Bankruptcy, Secured Debt, and Optimal Capital Structure, *Journal of Finance*, 32:1-19.
- SHLEIFER, A. and VISHNY, R. (1986) Large Shareholders and Corporate Control, *Journal of Political Economy*, 94(3):461-488.
- SMITH, B.F. and AMOAKO-ADU, B. (1999) Management succession and financial performance of family controlled firms, *Journal of Corporate Finance*, 5:341-368.
- STEIN, J. (1989) Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behaviour, *Quarterly Journal of Economics*, 103:655-669.
- STULZ, R. M. (1988) On takeover resistance, managerial discretion, and shareholder wealth. In: *Journal of Financial Economics*, 20:25-54.
- THOMSEN, S. and PEDERSON, T. (2000) Ownership Structure and Economic Performance in the Largest European Companies, *Strategic Management Journal*, 21:689-705.
- TIMMONS, J. (1990) *New Venture Creation, 2nd edition Boston: Irwin.*

- 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 HORNE, J.C. (1980) Financial Management and Policy, *Englewood Cliffs, N.J.: Prentice-Hall, fifth edition*.
- VILLALONGA, B. and AMIT, R. (2006) How do family ownership, management and control affect firm value?, *Journal of Financial Economics*, 80, 385–417.
- VILLALONGA, B., and AMIT, R. (2007) How Are U.S. Family Firms Controlled?, *Review of Financial Studies (forthcoming)*. (Previously titled "Benefits and Costs of Control-enhancing Mechanisms in U.S. Family Firms, Finance Working Paper No. 131, European Corporate Governance, Institute).
- VOS, E., and 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.
- WALSH, E.J. and RYAN, J. (1997) Agency and Tax Explanations of Security Issuance Decisions, *Journal of Business Finance and Accounting*, 24:943-961.
- WAKEFIELD MW. (1995) Antecedents of conflict in family firms - An empirical study, *University of Nebraska: Lincoln*.
- WESTHEAD P. and COWLING M. (1998) Family Business Research: The Need for a Methodological Rethink, *Entrepreneurship: Theory and Practice*, 23(1): 31-57.
- ZELLWEGER, T. (2006) Risk, Return and Value in the Family Firm, *Dissertation of the University of St. Gallen, Graduate School of Business Administration, Economics, Law and Social Sciences (HSG) to obtain the title of Doctor of Business Administration*.
- ZELLWEGER T., MEISTER, R. and FUEGLISTALLER U. (2007) The outperformance of family firms: the role of variance in earnings per share and analyst forecast dispersion on the Swiss market, *Financial Markets and Portfolio Management*, 21(2):203-220.
- ZIMMER, P. (1998) Finanzierung im Lebenszyklus der Unternehmung unter besonderer Berücksichtigung des asymmetrischen Information, *Doctoral dissertation, University of St. Gallen*.