

Investment Decisions in Unlisted Family Businesses

Gérard Hirigoyen* and Djibrilla Moussa Ousseini

IRGO, PUSG, University of Bordeaux, 35 Avenue Abadie, 33100 Bordeaux, France

Abstract

This article contributes to understanding the investment decision in the unlisted family business (UFB). It particularly highlights the roles of the performance target and long-term survival goal, providing empirical support both for the Prospect Theory and for the Post Keynesian Theory developed by Myron Gordon. Results clearly show that the UFB's main objective is very far removed from that of maximizing shareholders' financial wealth. Overall, this article shows the necessity to consider the goal of long-term survival as a key factor for developing a governance theory that is relevant to UFBs.

Keywords: Investment decision; Unlisted family business; Prospect theory; Survival goal

Introduction

According to Gordon [1], the key point in corporate governance is not to maximize market value, but to sustain the company through maximizing the probability of long-term survival. An improvement in this long-term survival probability is only possible through the investment policy of the company. The existing literature on capital and investment decisions in firms refers back to the works by Fisher, in particular to his book "Theory of Interest" [2]. Later, research into the investment strategies of companies has typically been carried out in the context of the Expected Utility Theory developed by von Neumann and Morgenstern [3]. These studies typically describe a representative firm, and assume that companies are technologically identical [4]. In practice, they only apply to listed corporations. The hypotheses on which they are based do not correspond in any way to the realities of life for the vast majority of companies that, both in the United States and Europe, are family businesses. The latter form of organization is very different from that of large listed companies, and works differently from the principles outlined by corporate governance theorists. The importance of family control as a particular type of ownership structure has motivated abundant theoretical and empirical literature, which attempts to identify the specificities associated with this organizational form. However, it is clear that investment decisions in family firms have received little attention, despite the fact that family businesses account for a large proportion of investments.

The UFB works differently; it has its own financial structure [5-7]. In an organization such as the UFB, the maximization of market value hypothesis is simply inappropriate. As Fama and Jensen [8] demonstrate, market value principles do not apply to all forms of organization. For example, they do not take into account the fact that family shareholders are not only interested in financial return but also in other forms of non-financial incentives such as socio emotional wealth¹. Authors such as Kay [9] suggest, correctly, that directors of family businesses do not focus all their attention on the stock market – in other words maximizing market value is not the goal of the company. Another major problem with the maximization of market value hypothesis is that it does not take into account the timescale of investments. According to this hypothesis, investors have nothing in particular to gain from investing in the long term. The time horizon of investment in the company, whether it is a day, a week, a month, a year or several years,

¹The concept of socioemotional wealth refers to non-financial aspects of the business that meet the emotional needs of the family such as identity, the ability to exercise influence as a family and the preservation of the family dynasty [67].

has no impact at all on the required return. Moreover, the principle may even encourage short-term investment. When a company fails to achieve the return required by shareholders in the short (or very short) term, the forces of supply and demand lead to a fall in its value.

This article develops and tests a model that explains investment decisions in UFBs and, in particular, the required rate of return on the investment and the factors that determine it. Its novelty lies in its dual objectives: it looks at companies that take the organizational form of a family business, and that are also unlisted on an organized market. Hypotheses that are developed are based on the literature on family businesses and work carried out into behavioral finance. The results of this article show that the goal of survival describes more accurately the investment behavior of UFBs than the goal of maximizing market value for shareholders. Furthermore, the results show that the hypothesis of risk aversion is not always relevant in the context of UFBs. These latter may, sometimes, become favorable to risk and even risk seekers. The following section provides hypotheses of the study and their empirical verification based on a representative sample of 12,043 French UFBs of 74 different sectors over the period 2004-2011. The results and discussion that follow describe and explain the specific characteristics of investment decisions and their impact on governance in the UFB.

Theoretical Framework

It is first necessary to review literature on the distinctive investment decisions in family firms, before describing, as never reported in previous works, the specific roles of the performance target and long-term survival goal of the UFB.

Distinctive investment decisions in family firms

Do family firms and non-family firms differ in investing? The application of Neoclassical Investment Theory to family business does not really correspond to the aspirations of family shareholders. Many family shareholders do not require short-term profitability; for many,

***Corresponding author:** Gérard Hirigoyen, PhD, Professor, IRGO, PUSG, University of Bordeaux, 35 Avenue Abadie, 33100 Bordeaux, France, Tel: 0033652247079; E-mail: gerard.hirigoyen@u-bordeaux.fr

Received December 02, 2016; **Accepted** January 02, 2017; **Published** January 06, 2017

Citation: Hirigoyen G, Moussa Ousseini D (2017) Investment Decisions in Unlisted Family Businesses. Int J Econ Manag Sci 6: 395. doi: [10.4172/2162-6359.1000395](https://doi.org/10.4172/2162-6359.1000395)

Copyright: © 2017 Hirigoyen G, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

the key issue is the longevity of the company. These family shareholders do not give the company a low value because it does not offer high return in the short term. In general, the time frame of these investors is not a month or a year; it may extend even beyond their own lifetime [10]. Consequently, they do not focus their attention on the daily or monthly movements of the stocks prices.

Authors, such as Bouzgarrou [11], examine whether the financing decision of French family acquirers is affected by the firm control motive or by the risk reduction motive. They found that it is more likely to use debt financing rather than equity financing when the family voting rights are high, indicating the role of control motive in family firms.

These characteristics have not been sufficiently taken into account in economics, finance and management research – all of the disciplines that take an interest in corporate governance. Even in the field of family businesses, few studies have examined them. Among those authors who have studied investment decisions in the family business, it is important to mention, also, the works by Bianco et al. [12] who focused on the impact of uncertainty, Anderson et al. [13] who analyzed the potential influence of risk aversion and the long-term orientation of family shareholders on investment decisions, and Hirigoyen and Labaki [14] who looked at the role of regret in disinvestment decisions.

In this article, we examine two more important factors that facilitate our understanding of the criteria on which UFBs based their investment decisions, namely the performance target and the long-term survival goal.

The performance target: The performance target plays a crucial role in the investment decisions of firms. Kahneman and Tversky [15] question Expected Utility Theory as a descriptive theory for decision-making under uncertainty and outline a new theory that they call Prospect Theory. This theory shows how individuals make decisions when faced with risk. When there is a decision to be made, the decision-maker always begins with transforming each alternative into a series of prospects, and then evaluates each prospect according to a value function, which is assumed to be centered on the reference point. This value function is assumed to:

- be concave above the reference point or target (the prospect is perceived as a gain), thus implying risk aversion;
- be convex below the reference point or target (the prospect is perceived as a loss), thus implying an appetite for risk;
- Have a higher slope below, compared to above the reference point, thus implying that the appetite for risk below the target is greater than the risk aversion above it.

In the specific context of family businesses, Zellweger et al. [16] have more recently tested whether individual behavior as described by Kahneman and Tversky [15] is at play when family and nonfamily managers take financing decisions with impact on the capital structure of their firms. Their results showed that family companies are partly loss averse and take investment decision based on reference points, and provided distinct insight into investment and financing behavior of family firms.

The long-term survival goal

Several studies of family businesses have given prime position to the survival of the company [17-22]. In their study of the objectives of family businesses, Tagiuri and Davis [17] found that 80% of them considered long-term survival as an important objective. Moreover,

36% of them identified it as an overriding goal, and 44% saw it as a major objective. Much of the work on family businesses shows that, rather than maximizing their profitability, such businesses aim to ensure their longevity with a view to securing the future for younger generations. For some authors, such as Martinez et al. [23], prioritizing long-term profits (required for survival) over short-term gains explains the longevity of this form of company. The wide range of literature on family firms shows the importance of transmission in ensuring the continuity of family control. This is particularly critical in ensuring longevity, as only 10% to 15% of businesses survive to the third generation [24,25].

Longevity can be a useful asset for the company. The work of Tàpies and Fernández Moya [22] shows that long-term survival is regarded not only as the outcome of the company's long-term goals, but also as an asset. Long-term survival can, therefore, be seen in terms of the transmission of trust, an indicator of quality and proof of the family's commitment and its social responsibility. It has a positive influence on external relations, helps to consolidate the value of the company and enhances pride in belonging to the family. Long-term survival is a valued asset, not only in terms of economic viability, but also in terms of the relations that the company has with its environment and its various stakeholders. For Tàpies and Fernández Moya [22], the development of long-term goals is a process that is fostered by family values. Long-term survival appears not only as the goal of this process or as a goal to be achieved, but also as an asset that strengthens the family and the family business. This asset can easily find finance through what Sirmon and Hitt [26] called "survivability capital", which they link to the willingness of family members to provide the company with free or low-cost labor and/ or cash in order to avoid bankruptcy.

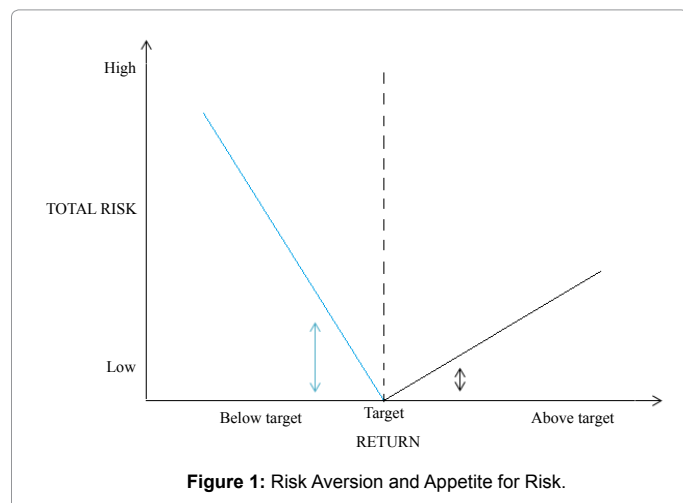
Beyond the domain of the family business, Gordon [1] develops a Post-Keynesian Theory, which argues that companies seek to survive. To achieve this, they put aside (in the form of reserves) cash assets. When business is good they put even more aside, while in times of difficulty they use their reserves. The key point is not to maximize market value, but to sustain the company through maximizing the probability of long-term survival. For Gordon [1], his Post-Keynesian Theory explains the behavior of firms better than Neoclassical Theory. Companies distribute fewer dividends, choose less risky investments, and require lower return. Moreover, their capital costs are lower than the costs predicted by Neoclassical Theory [27]. This description corresponds well with specific behaviors that have been identified in the literature on family businesses. The search for longevity, characterized by long-term investment, offers the company a lower cost of capital and a gain in competitive advantage [28].

In order to take account of the impact of these two factors (performance target and long-term survival goal) on investment decisions in the UFB, a set of hypotheses were developed that formed the basis for a theoretical model.

Model and hypotheses

Based on the work of Kahneman and Tversky [15] and works that followed three hypotheses can be formulated. First, when the company exceeds its performance target, it is risk averse: the required return is high when the total risk is high. When it does not meet its target, it has a desire (appetite or inclination) for risk: the required return is low when total risk is high. Finally, risk-return trade-off are greater below, rather than above target performance (Figure 1).

When it exceeds its target performance, the company is risk



adverse. It prefers less, rather than more risk. In this case risk is clearly undesirable. It requires, therefore, a risk premium that increases as total risk increases.

Hypothesis 1: When the UFB exceeds its target performance, the required return is higher when the investment risk is high.

Below target performance, the company is open to risk. It prefers more, rather than less risk. In this case, risk is clearly desirable.

Hypothesis 2: When the UFB does not meet its target performance, the required return is higher when the investment risk is low.

In the family business, the sacrifice (in return per additional unit of risk) that it is willing to make when it does not meet its target performance is greater than the return it requires (per additional unit of risk) when it exceeds its target performance. In other words, when the business exceeds its target performance, risk aversion is weaker than its appetite for risk when it does not meet the performance target.

Hypothesis 3: The risk/ return trade-off made by the UFB is greater when it does not meet its target performance, than when it exceeds its performance target.

Based on these hypotheses, it appears that the relationship between the required return and investment risk is non-linear. It is affected by the company's position relative to its target performance.

The search for longevity or long-term survival complements these hypotheses. As the above shows, family businesses accept lower return when their survival is under threat. In other words, family shareholders are willing to sacrifice financial return in order for their business to survive; this reflects a negative trade-off between the threat to survival and the required return.

Hypothesis 4: In the UFB, the required return is lower when the threat to survival is high.

The threat to survival also plays a moderating role in the relationship between investment risk and the required return. March and Shapira [29] studied risk perception from an internal (to the company) perspective. Empirical observations highlighted that directors had a perception and conception of risk that was inconsistent with the traditional view; these characteristics help in understanding the financial behavior of

companies. It appears, in particular, that a large majority of directors share the view that the company's survival must never be put at risk. Over 90% of the directors that were interviewed said that they would never take a risk that might compromise the company's survival.

Based on these observations, March and Shapira [30] developed a model that takes survival as the target or reference point.

$$s_t = (R_{t-1} + E_t) / D(P_d^*)$$

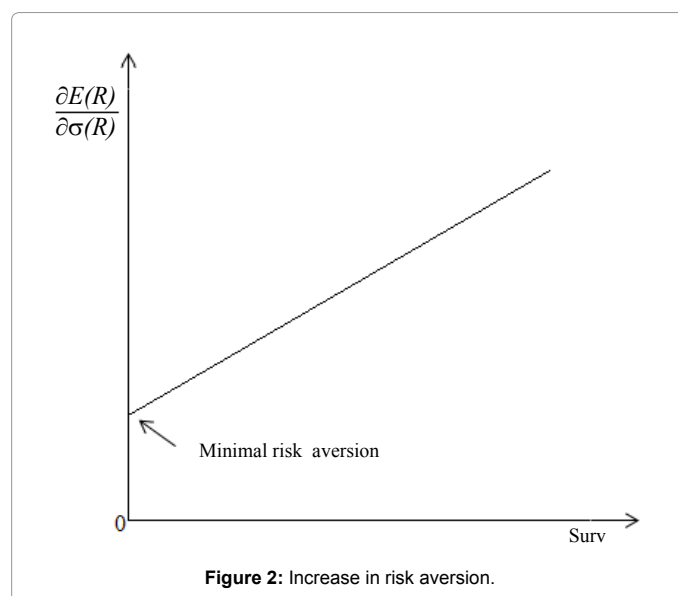
Where S_t represents the risk; R_{t-1} represents the accumulated resources at time $t-1$, E_t represents estimated return for period t ; $D(P_d^*)$ is the standard deviation of the normal distribution associated with probability P_d^* , the probability of losing all of the accumulated resources, i.e., the probability of complete failure.

In this model, the probability of survival remains constant. March and Shapira put forward the hypothesis that companies try to maintain a probability of survival that is at least equal to 50%. It is, therefore, uncertainty about the probability of survival that changes the trade-off between the required return and risk. High uncertainty increases the trade-off, leading to greater return for a given level of risk. Conversely, low uncertainty about the probability of survival weakens this trade-off, leading to lower return for a given level of risk.

Hypothesis 5: The trade-off between the return required by the UFB and the level of investment risk depends on the level of the threat to its survival.

It is possible to formulate two hypotheses about the relationship between the return required by the UFB and its level of investment risk, by combining the works of March and Shapira [30], and Kahneman and Tversky [5]. When the UFB exceeds the performance target, risk aversion increases as the threat to its survival increases (Figure 2). Conversely, when the company performs below expectations, its appetite for risk decreases as the threat to its survival increases (Figure 3).

The UFB therefore becomes more risk adverse when its survival is threatened. It becomes more reluctant to take risks and requires, for the same level of risk, a higher and higher premium as the threat to its survival increases.



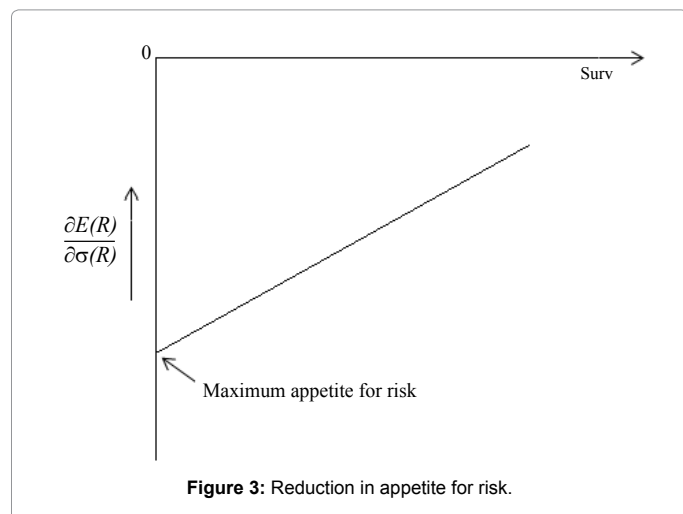


Figure 3: Reduction in appetite for risk.

Hypothesis 5.a: When the UFB exceeds its performance target, the trade-off between return and risk is stronger when the threat to survival is high.

The UFB becomes less open to risk when its survival is threatened. It becomes more reluctant to take risks and sacrifices, for the same level of risk, return that becomes increasingly low as the threat to its survival increases.

Hypothesis 5.b: When the UFB does not meet its performance target, the trade-off between return and risk is weaker when the threat to its survival is high.

A model, combining the expected return on investment in the family business and the factors that determine it, was built to test these hypotheses. In the model, the family business is seen as an inheritance in which investment is not only motivated by the pursuit of maximum profit, but also by the search for longevity or long-term survival. It is therefore assumed that, in addition to risk and return, the level of threat to the survival of the company is a key characteristic that must be included in order to fully describe the value function of investment in the UFB. Under these conditions, and in accordance with the developed hypotheses, the required rate of return of an investment can be modelled as follows:

$$E(R)_i = \alpha + \beta \cdot \sigma(R)_i + \gamma \cdot \text{Surv}_i + \delta \cdot \sigma(R)_i \cdot \text{Surv}_i \quad (1)$$

Where i represents the investment; $E(R)_i$ is the required rate of return on the investment; $\sigma(R)_i$ is the total risk associated with the investment; Surv_i is the threat to survival associated with the investment; α is a coefficient that measures the required rate of return, by setting levels of risk and threat to survival to 0; β is a coefficient that measures the trade-off between return and risk, by setting the level of threat to survival to 0; γ is a coefficient that measures the trade-off between return and the threat to survival, by setting the risk level to 0; δ is a coefficient that measures the impact of the level of threat to survival on the trade-off between risk and return.

This model is likely to challenge traditional theories that support a linear relationship between the required return and risk. Naturally, it must be tested before any theoretical implications can be drawn. The next section presents the methodology.

Methodology

Consistent with the hypothetical-deductive approach, the model was tested with field data. Quantitative analyses were performed using data from a sample of 12,043 French UFBs of 74 different sectors over the period 2004-2011. These data came mainly from annual reports that were extracted from the Diane database. It should be noted that semi-structured interviews were also conducted, which helped to guide the theoretical work. Some excerpts from these interviews are included in the discussion.

Presentation of the sample

How to identify family businesses in a database of all businesses? In this study, like others [31-36], the selected criteria were the holding of capital and family involvement. This choice was supported by the predominance of these two criteria in the literature [37] and the fact that other criteria are both difficult to verify and require significantly more resources to investigate. Here, as in Gallo and Estapé [36] and consistent with the majority of other research, the selected criteria are that the family must hold at least 50% of the capital, and there should be at least one family member involved in the management of the company. Naturally, the company should also be unlisted.

Measurement of the variables

This section presents and explains how the variables, that are required return, total risk, target performance, and the threat to the survival, were measured and evaluated in this article.

The required return: To measure the required rate of return, this research uses the method of real returns, using book values as a proxy. This method is the only reasonable option, for two main reasons. On the one hand, the UFB is more sensitive to accounting information than market information. Furthermore, only accounting measures of performance are available for such companies. The idea is that the book rate of return is a good proxy for economic return. Researchers such as Danielson and Press [38] have confirmed that in most companies, the book rate of return is an appropriate proxy for the internal rate of return of investments. Furthermore, the findings of Johansson and Rolseth [39] demonstrated the superior performance of book variables over forecast data. Other proponents of the method are Magni and Peasnell [40] who suggest calculating a weighted average of financial return (weighted average ROE) and Salamon [41] who advocates a “cash recovery rate”. Returns were measured on an annual basis, for two main reasons: annual returns correspond better to the long-term investment horizons of family businesses than daily, weekly or monthly returns; and they overcome common anomalies, such as the size effect [42-44]. Thus, for each company sampled, average annual financial return over the period in question (2004–2011) is used as a proxy for the required rate of return.

Investment risk: Total risk was measured for two main reasons: most family entrepreneurs have a large of their fortune invested in the firm, and family entrepreneurs do not display an effective separation between private and business wealth. As in the vast majority of other research, it was based on the standard deviation of the distribution of returns. For each company sampled, the standard deviation of the distribution of annual financial returns over the period in question (2004–2011) was used as a proxy of total risk.

Target performance: This variable comes from Kahneman and Tversky's Prospect Theory [15]. One of the key points in the application of this theory is the identification of an empirical measure of the target

performance or reference point. As Kahneman and Tversky [15] point out, there is no general rule for determining target performance: it depends on the context. In this article, Fiegenbaum's approach [45] was adopted, as his work is very close to the analysis conducted here. Fiegenbaum [45], like Fiegenbaum and Thomas [46], considers that the median return of a sector is a suitable proxy of target performance for the companies that make up the sector. They base this choice on the traditional financial literature [47,48] and industrial organization theory [49-51]. Thus, for each company sampled, median sectorial return, calculated as the median of the average return of the companies making up the sector was used as a proxy of target performance.

Threat to survival: The threat to survival variable is inspired by the work of March and Shapira [30] and is calculated in two steps.

Firstly, the Altman score as a proxy for the probability of survival. As Bardos [52] highlights, score functions have become a crucial tool for the early detection of failure, and provide much-needed assistance in individual diagnosis. Scores provide a survival probability for each company. Many scores have been proposed, amongst which, the most famous and widely used, are the results of remarkable work [53-56]. The most widely used score and the one that has been most tested in academic research is that of Altman [54], which is as follows:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5 \quad (2)$$

Where,

$$X_1 = \frac{\text{Working capital}}{\text{Total Assets}}, X_2 = \frac{\text{Accumulated reserves}}{\text{Total Assets}}, X_3 = \frac{\text{Operating income (EBIT)}}{\text{Total Assets}}$$

$$X_4 = \frac{\text{Market value of equity capital}}{\text{Book value of total debt}}, X_5 = \frac{\text{Sales revenue}}{\text{Total Assets}}$$

The probability of survival increases with Z, while the probability of failure increases as Z decreases.

However, in general these scores can only be applied to listed companies, as they require market value information. To avoid the hazardous and scientifically invalid substitution of market values with book values, Altman's score function has been reformulated to make it applicable to unlisted companies [57]. The score was completely re-estimated using only book data, and resulted in a new score function:

$$Z' = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5 \quad (3)$$

Where,

$$X_4 = \frac{\text{Book value of equity capital}}{\text{Book value of total debt}} \text{ and } X_1, X_2, X_3, \text{ and } X_5 \text{ remain}$$

unchanged from the original score (Z).

This new Z' score function is therefore used as a proxy of the probability of survival.

Secondly, the coefficient of variation of the probability of survival as a measure of the threat to survival. In March and Shapira's model [30], uncertainty with respect to the probability of survival is the variable that moderates the relationship between return and risk. This uncertainty is measured by the standard deviation. However, it should be noted that in their model, the expected probability of survival is assumed to be constant. Here, no restrictions were placed on the expected probability of survival, which can vary from one company to another. Therefore, in order to take into account the effects of both expectations and uncertainty, the threat to the survival (Surv) is measured by the coefficient of variation of the probability of survival. It is obtained by dividing the standard deviation by the mean of the distribution:

$$Surv = \frac{\sigma(Z')}{E(Z')} \quad (4)$$

Where $\sigma(Z')$ and $E(Z')$ are respectively the standard deviation and the mean of the distribution of Altman scores (Z').

The higher the value of (Surv), the greater the threat to survival. Furthermore, the coefficient of variation, unlike the standard deviation, has the advantage of not being a unitary value and is always expressed as a percentage.

For each company sampled, the coefficient of variation of the Altman scores (Z') in the period in question (2004–2011) is used as a proxy for the threat to survival.

Results

This section begins with a description of the variables that were directly observed in the field and goes on to discuss the actual estimates of the theoretical model.

Direct observations

The initial empirical results come from direct observations, without inference or interpretation. Table 1 presents descriptive statistics for the overall sample of 12,043 UFBs.

There is an average required rate of return of 13.30%, with a maximum of up to 41.23% and a minimum of –08.80%.

Estimates of the model

Table 2 presents a summary of the results of the model's estimates.

Overall, the model is significant at the 1% threshold. The findings can be summarized as follows:

- (1) The required rate of return in the UFB depends on its position in relation to its target performance.
- (2) There is a positive and significant trade-off between the required rate of return and investment risk, when the UFB is above its target performance.
- (3) There is a negative and significant trade-off between the required rate of return and investment risk, when the UFB is below its target performance.
- (4) The required rate of return in the UFB depends on the level of threat to survival of the company.
- (5) The trade-off between the required rate of return and investment risk is greater when the threat to survival is high.

Characteristic	N	Min.	Max.	Avg.	Std.
Required return	12,043	–0.0880	0.4123	0.1330	0.1461
Risk	12,043	0.0334	2.3374	0.3841	0.5943
Threat to survival	12,043	0.0771	0.7780	0.2634	0.1841

Table 1: Descriptive statistics of the overall sample.

	Below target				Above target			
	α	β	γ	δ	α	β	γ	δ
Coef.	0.100	–0.331	0.084	–0.010	0.195	0.344	–0.046	0.035
Signif.	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000

Table 2: Estimates of the Model: $E(R)_i = \alpha + \beta \text{Risk}_i + \gamma \text{Surv}_i + \delta \sigma(R)_i$, $\text{Surv}_i + \epsilon_i$.

(6) The required rate of return in the UFB depends on the sector of activity.

(7) The trade-off between the required rate of return and investment risk depends on the sector of activity.

(8) The trade-off between the required rate of return and the threat to survival depends on the sector of activity.

It is clear that this is not profit-maximizing behavior (for the business) or a route to monetary wealth (for the shareholder), but rather a desire for longevity. The family shareholder accepts lower return in order for the company to increase its chances of survival. The theoretical foundation for this behavior lies in the Post-Keynesian Theory of Gordon [1], which argues that the purpose of business is not profit maximization, but rather maximizing the probability of survival. It also has foundations in the Psychological Ownership Theory put forward by Pierce et al. [58]. Several authors argue that the concept of "Psychological Ownership" could be very useful in understanding how family businesses function, in particular the ambivalence that is often found between rational and emotional aspects [59,60].

Discussion

The initial results of the analysis show that the threat to survival has an impact on the required return on investment. This result is contrary to Neoclassical Investment Theory. Indeed, as Gordon [1] pointed out, Neoclassical Investment Theory assumes that, at all times, businesses maximize the current market value of their shares regardless of the subsequent probability of failure [61-63]. This hypothesis of neutrality of the probability of bankruptcy (and not the costs of bankruptcy) can be found in the work of great authors such as Stiglitz [64,65]. The results obtained here show that the UFB does not behave in the same way. Its behavior is better explained by the literature on family businesses, which emphasizes the importance of the goal of survival, and the desire to hand the business on to future generations.

Furthermore, the results shed light on the strategy of maximizing the probability of survival with the coefficient of the product of the variables threat to survival and risk that is positive. It would seem to indicate that even if the return required decreases as the threat to survival increases, UFBs remain very cautious and become more demanding vis-à-vis risk.

To understand the impact of the threat to survival on the risk/return trade-off, we must distinguish between over-performing and underperforming companies. The former are risk averse, while the latter are risk-seekers. In over-performing companies, threat to survival increases risk aversion: the greater the threat, the greater the risk/return positive trade-off. In underperforming companies, the threat to survival decreases their appetite for risk: the greater the threat, the weaker the risk/return negative trade-off. The underperforming UFB can therefore move from risk-seeking behavior to risk-averse behavior. Indeed, risk-seeking behavior may be explained by a desire to address the problem of underperformance. However, when the threat to survival becomes too high, the economic objective of improved performance is abandoned in favor of the non-economic objective of maximizing the probability of survival.

These results are very similar to those of March and Shapira [29] who studied risk-taking from a managerial perspective. These authors show that target performance and bankruptcy are reference points for businesses. Consequently, risk-taking behavior depends on how far they are from their reference point.

UFBs do not, therefore, obey the classical rules of corporate finance and governance, which state that the company maximizes the market (monetary) value of its shares in order to satisfy its investors on financial markets. Instead, they appear to respond to the aspirations of family shareholders who wish to sustain the business, in order to pass it on to future generations. Such behavior may explain the resilience of this type of organization – specifically, how it manages to resist difficult times more easily than managerial types of business².

In practice, the findings of this study imply that family shareholders, with a strong affectio societatis, provides the family business with funds that could be termed 'patient capital', as the result of an investment policy that seeks long-term return without short-term constraints. The concept of patient capital is clearly consistent with the results of this study. As De Visscher et al. [66] argue, patient capital has both financial and non-financial dimensions. It is used not only to finance the company's investments but also to ensure continuity and preserve its values. In addition to a long-term investment horizon, patient capital provides the family business with a stable financial structure that is able to withstand occasional economic crises. It also offers a lower cost of capital – a competitive advantage that enables it to withstand difficult times when return may be low or even negative. Here, the main concern is longevity rather than maximizing financial wealth. As real life demonstrates, many family businesses only survive because family members are willing to work for much lower wages than they would otherwise receive, or because they use family assets to honor the company's debts. As the company constitutes an inheritance for future generations, the long term is given precedence over the short term: not in order to accumulate monetary wealth, but in order to perpetuate the family's values, build a dynasty and be able to provide for future generations.

Conclusion

In this paper we offer a contribution to the understanding of the investment decision in unlisted family businesses by considering financial (risk, return) and non-financial (reference point, long-term survival goal) characteristics of the investment.

Theoretical contributions

This research is before all a contribution to different bodies of literature: Literature on Family Firms, Prospect Theory, Post Keynesian theory, Cost of Capital Theory. It offers many insights to the construction of models on family firm governance, capital budgeting, and valuation. The study specifically calls into question several hypotheses underlying the traditional models such as market value maximization, neutrality of probability of failure, and perfect economic rationality. It provides empirical support for Prospect Theory (risk aversion and risk seeking assumptions) and Post Keynesian Theory developed by Gordon (probability of survival maximization). Furthermore, the results are consistent with the literature on socio emotional wealth.

Practical implications

The results of the study can directly be used for capital budgeting purposes. Instead of looking solely at risk and return of a given investment project, managers should also carefully study the impact of the investment on the long-term survival of the company. Indeed, the

²In a survey of the resilience of family firms faced with crisis, Bloch et al. [68] showed that "in periods of crisis, family businesses are significantly stronger than other groups and have better results". The results were published in their book *La stratégie du propriétaire [The owner's strategy]*.

findings of the research results show that the investment decisions of UFBs is more sensitive to threats to long-term survival of the company than to a potential drop in market value of its shares. The findings also show that investment risk may be desirable, when the company is below the target performance. It is out of the question to ignore these issues, as doing so may destroy value (in the multidimensional sense), rather than help to create it. Consequently, it becomes essential to involve governance bodies such as the family assembly, its council or its charter³ in investment decisions. Naturally, there is always a trade-off: to what extent is the family willing to sacrifice financial return in order to respect and preserve its values, ensure continuity and control, have someone to hand the business over to, and be able to take care of future generations – in short perpetuate the business?

Limitations and future direction

The main limitation of this study is the failure, due to lack of relevant data, to take into account the generational level. While the study clearly suggests that investment decisions in UFBs do not constitute a profit-maximizing behavior (for the business) or a route to monetary wealth (for the shareholder), but rather a desire for long-term survival, the analysis of the actual link between profit seeking and desire for long-term survival requires obviously further investigations. One of the lines of investigation that could be the subject of further work, would be studying the differences that might exist between family companies controlled by family members of different generations (first, second, third, or more). Thus, we could distinguish, depending on the generational level, the different attitudes toward risk and the different motivations that guide the investment decision in the company.

References

- Gordon M (1994) *Finance, Investment, and Macroeconomics: The Neoclassical and a Post Keynesian solution*. Cambridge University Press, Cambridge.
- Fisher I (1930) *The Theory of Interest, as Determined by Impatience to Spend Income and Opportunity to Invest it*. Macmillan, USA.
- Von Neumann J, Morgenstern O (1944) *Theory of Games and Economic Behavior*. Princeton University Press, Princeton.
- Bourdieu J, Coeuré B, Sédillot B (1997) Investissement, incertitude et irréversibilité: Quelques développements récents de la théorie de l'investissement. *Revue économique* 48: 23-53.
- Gallo M, Vilaseca A (1996) Finance in Family Business. *Family Business Review* 9: 387-401.
- Mahéroult L (1998) Specific financial characteristics to non-listed family businesses. *Financial Review* 114: 59-75.
- Mahéroult L (1999) Financial behaviour of family firms: Empirical approach. *Économies et Sociétés* 33: 247-272.
- Fama E, Jensen M (1985) Organizational forms and investment decisions. *Journal of Financial Economics* 14: 101-119.
- Kay J (2003) Challenging the claims for the role of capital markets. *CES ifo Forum, Munich Economic Summit* 4: 17-20.
- James H (1999) Owner as manager, extended horizons and the family firm. *International Journal of the Economics of Business* 6: 41-55.
- Bouzgarrou H (2014) Financing decision in acquisitions: The role of family control. *Procedia Economics and Finance* 13: 3-13.
- Bianco M, Bontempi M, Golinelli R, Parigi G (2013) Family firms' investments, uncertainty and opacity. *Small Business Economics* 40: 1035-1058.
- Anderson R, Duru A, Reeb D (2012) Investment policy in family controlled firms. *Journal of Banking & Finance* 36: 1744-1758.
- Hirigoyen G, Labaki R (2012) Emotions and decision-making in the family business: The example of regret. *Journal of Family Business Strategy* 3: 118-126.
- Kahneman D, Tversky A (1979) Prospect theory: An analysis of decision under risk. *Econometrica* 47: 263-292.
- Zellweger T, Frey U, Halter F (2005) A behavioral perspective to financing decisions in family and nonfamily firms. Working paper, University of St. Gallen, Center for Family Business pp: 1-25.
- Tagiuri R, Davis J (1992) On the goals of successful family companies. *Family Business Review* 5: 43-62.
- Chrisman J, Chua J, Litz R (2003) A unified systems perspective of family firm performance: An extension and integration. *Journal of Business Venturing* 18: 467-472.
- Ang J (1991) Small business uniqueness and the theory of financial management. *Journal of Small Business Finance* 1: 1-13.
- Ang J (1992) On the theory of finance for Privately Held firms. *Journal of Small Business Finance* 1: 185-203.
- Van den Heuvel J, Gal S, Van Gils A, Voordeckers W (2007) Family businesses as emotional arenas: The influence of family CEO's empathy and external monitoring on the importance of family goals. *Family Firms Research Workshop*.
- Tàpies J, Fernández Moya M (2012) Values and longevity in family business: Evidence from a cross-cultural analysis. *Journal of Family Business Management* 2: 130-146.
- Martinez S, Hassanzadeh M, Bouzidi Y, Antheaume N (2011) Life Cycle Costing Assessment with both Internal and External Costs Estimate. In *Globalized Solutions for Sustainability in Manufacturing*, Springer, Berlin Heidelberg: 641-646.
- Ward J (1997) Growing the family business: Special challenges and best practices. *Family Business Review* 10: 323-337.
- Kets de Vries M, Miller D, Noël A (1993) Understanding the leader-strategy interface: Application of the Strategic relationship interview method. *Human Relations* 46: 5-22.
- Sirmon D, Hitt M (2003) Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice* 27: 339-358.
- Mramor D, Valentincic A (2001) When maximizing shareholders' wealth is not the only choice. *Eastern European Economics* 39: 64-93.
- Zellweger T (2007) Time horizon cost of equity capital, and investment strategies of generic firms. *Family Business Review* 20: 1-15.
- March J, Shapira Z (1987) Managerial perspectives on risk and risk taking. *Management Science* 33: 1404-1418.
- March J, Shapira Z (1992) Variable risk preferences and the focus of attention. *Psychological Review* 99: 172-183.
- Tagiuri R, Davis J (1982) Bivalent attributes of the family firm. Working paper, Harvard Business School, Cambridge, MA.
- Rosenblatt P, Mik L, Anderson R, Johnson P (1985) *The family in business: Understanding and dealing with the challenges entrepreneurial families face*. Jossey-Bass; 1st edition, San Francisco, CA.
- Stern M (1986) *Inside the family-held business*. New York: Jovanovich.
- Hollander B, Elman S (1988) Family-owned businesses: An emerging field of inquiry. *Family Business Review* 1: 145-164.
- Ward J, Aronoff C (1990) Just what is a family business. *Nation's Business* 78: 54-55.
- Gallo M, Estapé M (1994) *The Family Business in the Spanish Food and Beverage Industry*. IESE research paper, No. 265.

³The family assembly can be defined as a meeting of everyone considered being a member of the family. It ensures, among other things, that information is equally available to all family members. The family council represents the family assembly, as the board of directors represents shareholders. It usually consists of a smaller number of family members who are elected according to specific rules, and generally concerns important decisions that affect the family. The family charter is a document that is usually drawn up and revised by the family council, and contains the main principles governing family relationships and family-business relations.

37. Allouche J, Amann B (2000) L'entreprise familiale: un état de l'art. *Finance Contrôle Stratégie* 3: 33-79.
38. Danielson M, Press E (2003) Accounting returns revisited: Evidence of their usefulness in estimating economic returns. *Review of Accounting Studies* 8: 493-530.
39. Johansson A, Rolsteh L (2001) The effects of firm-specific variables and consensus forecast data on the pricing of wide Swedish firms' stocks. *Applied Financial Economics* 11: 373-384.
40. Magni C, Peasnell K (2012) Economic Profitability and the accounting rate of return. Working paper available at SSRN 2,027,607.
41. Salamon G (1982) Cash recovery rates and measures of firm profitability. *The Accounting Review* 57: 292-302.
42. Patterson C (1995) *The cost of capital: theory and estimation*. Westport: Quorum Books.
43. Handa P, Kothari S, Wasley C (1989) The relation between the return interval and betas: Implications for the size effect. *Journal of Financial Economics* 23: 79-100.
44. Handa P, Linn S (1993) Arbitrage pricing with estimation risk. *Journal of Financial and Quantitative Analysis* 28: 81-100.
45. Fiegenbaum A (1990) Prospect theory and the risk-return association: An empirical examination in 85 industries. *Journal of Economic Behavior and Organization* 14: 187-203.
46. Fiegenbaum A, Thomas H (1988) Attitudes toward risk and the risk-return paradox: Prospect theory explanations. *Academy of Management Journal* 31: 85-106.
47. Lev B (1969) Industry averages as targets for financial ratios. *Journal of Accounting Research*: 290-299.
48. Frecka T, Lee C (1983) Generalized financial ratio adjustment Processes and their implications. *Journal of Accounting Research* 21: 308-316.
49. Bain J (1956) *Barriers to New Competition*. Cambridge: Harvard University Press.
50. Caves R (1972) *New Trade Strategy for World Economy*. Toronto: Johnson, HG (Ed.).
51. Porter M (1980) *Competitive strategy*. New York: The Free Press.
52. Bardos M (2005) The scores of the Bank of France: Their development, their applications, their maintenance. *Bulletin of the Bank of France* 144: 63-73.
53. Beaver W (1966) Financial ratios as predictors of failure. *Journal of Accounting Research*: 71-111.
54. Altman E (1968) Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance* 23: 589-609.
55. Altman E (1983) Multidimensional graphics and bankruptcy prediction: a comment. *Journal of Accounting Research*: 297-299.
56. Ohlson J (1980) Financial ratios and the probabilistic prediction of bankruptcy. *Journal of accounting research* 18: 109-131.
57. Altman E (2002) *Corporate Distress Prediction Models in a Turbulent Economic and Basel II Environment*. Working paper, New York University.
58. Pierce J, Kostova T, Dirks K (2001) Toward a theory of psychological ownership in organisms. *Academy of Management Review* 26: 298-310.
59. Jaskiewicz P, Pieper T (2008) The relevance of emotional return for the longevity of family business: A theoretical model. European Family Business Center, European Family Business School, Germany.
60. Hirigoyen G (2009) Réconcilier finance et management dans les entreprises familiales. *Revue Française de Gestion* 8: 393-411.
61. Moussa Ousseini D (2015) *Le coût du capital dans l'entreprise familiale non cotée*. PhD Thesis: University of Bordeaux.
62. Moussa Ousseini D (2014) *The risk-return association in unlisted family businesses: the roles of the performance target and long-term survival goal*. Institute of Strategic and International Studies, Orlando.
63. Hirigoyen G, Moussa Ousseini D (2015) La décision d'investissement dans l'entreprise familiale non cotée. *Conférence Internationale de Gouvernance (CIG)*, Québec.
64. Stiglitz J (1969) A re-examination of the Modigliani-Miller theorem. *American Economic Review*: 784-793.
65. Stiglitz J (1974) On the irrelevance of corporate financial policy. *American Economic Review*: 851-866.
66. De Visscher F, Aronoff C, Ward J (2011) *Financing transitions: Managing capital and liquidity in the family business*. New York: Palgrave Macmillan.
67. Gomez-ML, Takács HK, Nunez-NM, Jacobson K, Moyano-FJ (2007) Socioemotional Wealth and Business Risks in Family-controlled Firms: Evidence from Spanish Olive Oil Mills. *Administrative Science Quarterly* 52: 106-137.
68. Bloch A, Kachaner N, Mignon S (2012) *La stratégie du propriétaire: Enquête sur la résilience des entreprises familiales face à la crise*. Pearson Education France.