

XII CONGRESO IBERO-ITALIANO DE MATEMÁTICA FINANCIERA Y  
ACTUARIAL  
JULIO 2011, LISBOA

**THE IMPACT OF FAMILY CONTROL ON FIRM'S  
RETURN**

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**Abstract**

Family firm is a field of growing interest. The aim of this article is to understand whether CEOs identity impacts family firm's stock returns. From a sample of Portuguese and Spanish family firms findings show that who manages the firms result in significantly different risk exposure. Moreover, we find that the abnormal return found by Fahlenbrach (2009) to founder-controlled firms disappear when we use value-weighted portfolios and include two new factors: market aggregate illiquidity and debt intensity to the four-factor Carhart model. Finally, our results explain why the majority of family firm is controlled by its founder.

**Keywords:** *Family Firms; CEOs identity; Stocks Return; Asset Pricing Models.*

## 1. INTRODUCTION

Family firms are present all over the world. Recent research shows that family firms have not only a significant contribution to the world economy and wealth creation, but also perform at least as non-family firms (Chami, 2001).

Anderson and Reeb (2003), Barontini and Caprio (2006), and Villalonga and Amit (2006) found that family firms have higher operating performance than their counterparts. However, evidence about the influence of ownership structure on stock returns is still scarce.

Mukherjee and Padgett (2006), Cella (2009) and Fahlenbrach (2009) found that firms run by a family display abnormal return relative to market model, Fama & French three-factor model and Carhart four-factor model. These results suggest that family firms' investors require an extra return not capture by the factors included in the models due to its singular characteristics.

However, family firms are not a homogeneous group. Villalonga and Amit (2006) found that founder CEOs, heir managed and professional CEOs in family firms display different valuation.

In this study we want to understand why the majority of family firms are headed by its founder. And why family firms' management is passed on from the founder to heirs or professional managers? There are significant differences in firm behavior and valuation depending on CEOs identity?

We have three main aims: 1) to understand how CEOs identity influences family firms risk exposure, 2) to analyze which factors are relevant to explain family firms' stocks return by CEO identity, 3) to examine whether family firms abnormal return is explained by the market illiquidity and debt intensity.

In this context, we analyze the Carhart four-factor model adding two factors which are relevant for explaining excess stock return: aggregate market illiquidity and debt intensity. The afore-mentioned model had already been used to study this issue by Corstjens *et al.* (2006), and Fahlenbrach (2009). The two new factors introduced have strong empirical support not only to explain excess return but also family firm characteristics.

We analyze two countries with small-scale financial markets: Portugal and Spain, during the period from January of 1999 to December of 2008. These two markets have strong interest, not only due to the predominance of family firms, but also due to their differences compared to Anglo-Saxon economies on which most studies on this issue are focused.

Therefore, our results fill the gap in financial literature and can be extrapolated to countries with similar financial markets, on which there is no comprehensive study.

We contribute to the extended literature in several ways. First, we introduce two new explicative factors in order to understand if the market misprices family firms or if the Carhart four-factor model is insufficient to explain its stock return.

Second, we analyze if CEOs identity has impact on the firms' stock return. Researchers focus attention on return's differences between family and non-family firms. However due to agency costs is important to understand whether CEOs identity is linked to firms' stock return.

Third, we shed light on the debate surrounding family firms' valuation. It is difficult to correctly value family firms because its information is scarce. This study helps investors to deeply understand family firms. Finally, we also contribute to growing literature, not only because we analyze an unusual topic, but also because we focus on two small financial markets.

The rest of the paper is organized as follows. Section 2 briefly reviews prior literature on this issue and outlines the hypotheses of this study. Section 3 describes the sample structure, dataset and methodology. Section 4 shows the empirical results. Finally, section 5 highlights the main conclusions.

## **2. THEORETICAL BACKGROUND**

Family firms are present all over the world, playing a vital role to economies' growth (Chami, 2001).

The first study to highlight the importance of ownership structure appeared in 1932, by Berle and Means. However, only after 2000, researchers focused their attention on

family firms to detect its competitive advantages and limitations (Sraer and Thesmar, 2007).

There are several reasons which explain this temporal difference. First, it is difficult to obtain sufficient ownership data to classify firms into family and non-family firms. Second, it is complex to collect data for a large sample. Researchers normally solve this problem analyzing publicly traded corporations to which there is more information transparency. Finally, there are innumerable definitions of family firms, which make comparisons across studies difficult.

Analyzing the concepts of family firms, we find two fundamental elements: ownership and management. Merging the various definitions, we can state that a firm is classified as a family firm whenever it is owned by a family and one or more family members belong to the board of directors<sup>1</sup>. This definition is similar to those of Anderson and Reeb (2003), Villalonga and Amit (2006), Sraer and Thesmar (2007).

Researchers devote more attention to family firm issues regarding agency conflicts, succession, and operational performance (Anderson and Reeb, 2003). More recently, due to financial market globalization and instability, studies related to the impact of family firms on stocks' return and risk exposures have been published.

Using the behavioral theory, Gomez-Mejia *et al.* (2007) found that family firms' first concern is with the family's socioemotional wealth in detriment to the firm's value-maximization. Family members look for reputation, identity, history and values continuation, and perpetuation of the family dynasty. Likewise its exposure to risk is distinct from non-family firms.

In fact, Corstjens *et al.* (2006), Mukherjee and Padgett (2006), Cella (2009), and Fahlenbrach (2009) found that family and non-family firms have different risk exposure.

The singular characteristics of family firms, namely the lack of information transparency, long-term perspective, affiliation between investors and board of directors, governance structure and risk proclivity set it apart from its non-family

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<sup>1</sup> More details of family firm definitions are shown in Miller *et al.* (2007).

counterparts. The market gives family firms an abnormal return, which is not captured by traditional factors of asset pricing models.

Not only family ownership may have influence on the firm's stock return, but also CEOs identity. Managers are responsible for the firm's decision, and consequently its welfare and uncertainty (Westhead and Howorth, 2006).

Attending to agency theory, managers' natural tendency is to allocate the firm's resources in their self-interests, especially when they are not the firm owners or highly controlled by them (Jensen and Meckling, 1976).

This agency problem between the agent and the principal is normally mitigated in family firms as both positions belong to family members or the family highly controls the agent (Burkart *et al.*, 2003).

However, the impact of the founder CEO, other family member or an external professional manager on the firm decisions, valuation and risk may be different.

Villalonga and Amit (2006), and Sraer and Thesmar (2007) found, to U.S firms, that founder CEO, heir managed and professional CEOs in family firms display different valuation.

The founder CEO differs from other family member or an external professional manager in several aspects. The founder sees the firm as his life's achievement (Fahlenbrach, 2009). He has created the firm, and consequently sees it not only as an extension of his wealth, but also his job, reputation, market recognition, and patrimony (Anderson and Reeb, 2003).

The founder has an intrinsic motivation to pursue optimal shareholder-value maximization strategy. He brings unique and value-adding skills to the firm, power and influence in the decision-making. Decisions are made on a long-run horizon avoiding "manager's myopia" of short-term results (Chami, 2001, Schulze *et al.*, 2003).

However, the founder has difficulty not only to transmit the firm's information to his heirs and other shareholders, but also to pass on the firm.

His heirs may be less efficient CEOs. For one side, family members can be in the firm and CEOs position due to their parents' obligation. They may not have sufficient motivation to run the firm. Therefore they may consume perquisites or invest in

personal projects when the firm has free cash flows, leading to expropriation of its wealth and increasing risk (Aronoff and Ward, 1996, Nieto *et al.*, 2009).

For another side, family members as CEOs may try to prove that they can do a better job than the founder, changing the firm strategy. The problem is that they may not know the previous strategy, nor the firm experience or the market need.

Family members' lack of sufficient knowledge leads to firm's wealth expropriation and value destruction and, in turn, increases the firm's probability of bankruptcy. In fact, on average, only 30% of family firms make it to the second generation (Aronoff and Ward, 1996).

An extern professional hired as a CEO may be more capable and talented than the founder or other family member due to his better knowledge of the market and the job. However, he is normally expensive, especially to small-size firms.

Moreover, since he may not feel sufficiently rewarded, he tries to achieve consumption goals leading to investors' wealth expropriation (Anderson and Reeb, 2003). He may try to run the firm, increasing its size to achieve higher market reputation.

The following hypothesis naturally follows:

*Hypothesis 1: CEO's identity is important to explain family firm's risk exposure.*

We analyze the following risk exposures: market risk, company size and growth potential, performance persistence, market illiquidity and debt intensity.

Firms controlled by the founder and heirs may have less exposure to market risk since these firms are not only influenced by the macroeconomic factors, but also by specific singularities.

We also expect that founder and other family members as CEOs tend to run small-size firms. Contract an external professional implies not only the cost of salary but also the cost of his control. As smaller firms experience higher financial problems, the family retains the firm control when it has a small-size (Corstjens *et al.*, 2006).

To large-size firms, the better knowledge of a professional manager may compensate his costs. It may be benefic to increase the firm's financial wealth and the family's social wealth.

Growing firms are normally controlled by its founder. The founder aim is to pass on the firm to his heirs. However, as it is an extension of the founder's wealth and it is also a part of his life, he retains its control till being sick or the firm is stable (Sraer and Thesmar, 2007).

Information about family firms is scarce, especially when the founder is its CEO, since he tries to concentrate all ownership and information (Heflin and Shaw, 2000). Likewise, investors may react later to new information about these firms, leading to short-term return persistence.

Moreover, we anticipate that family firm's shares tend to be more illiquid when the firm is controlled by the family than by an extern (Rojo-Ramírez, 2009). Firms run by a professional tend to be more open to new shareholders and, likewise, its shares are more liquid and less sensitive to market illiquidity (Miralles and Miralles, 2006).

We expect that debt, as it is an important external mechanism for controlling agency conflicts, is more used by professional-managed firms (Burkart *et al.*, 2003). The family uses debt with precaution since it increases the firm's probability of failure and, consequently, the loss of their socioemotional wealth (Guiménez-Zuriaga, 2005).

Finally, Fahlenbrach (2009) found a significant positive abnormal return for founder CEOs. The singular characteristics the founder brings to family firms may be not capture by the usual factor of asset pricing models.

### **3. DATA**

#### **3.1 SAMPLE SELECTION AND DATA SOURCES**

We examine the question of family control impact on firm's stock return using a sample of publicly traded Portuguese and Spanish family firms. The data was collected from January of 1998 to December of 2008.

Portugal and Spain are two small-scale financial markets with a predominance of family firms. Studies analyzing this type of countries are scarce, giving especial

importance to the present study. Our results can be extrapolated to countries with similar characteristics, where there is no comprehensive study on this area.

First, we analyzed ownership information to classify firms into family firms. From Amadeus and Reuters databases we collected, for each year in analysis, the names of the firm's owners and managers. Then we manually classify firms.

A firm is classified as family firm whenever there is fractional equity ownership of the founding family and the presence of family members on the board of directors. We delete non-family firms, firms with missing information, and firms which started as family firm and have changed to non-family one or vice-versa.

Our final sample consists of 270 and 415 observations to Portugal and Spain, respectively. The structure of the sample is present in table 1.

**Table 1: Sample Structure**

	<b>Portugal</b>	<b>Spain</b>
<b>1999</b>	29	35
<b>2000</b>	30	39
<b>2001</b>	30	43
<b>2002</b>	29	47
<b>2003</b>	28	45
<b>2004</b>	26	45
<b>2005</b>	27	46
<b>2006</b>	26	41
<b>2007</b>	23	39
<b>2008</b>	22	35
<b>Total number of observations</b>	270	415

Number of firms per year and country.

For each firm selected, we looked for information on its website to identify CEOs identity. We classify CEO in founder, other family member or an independent professional. We do not identify descendents because not always the firms display that



specific information, so we prefer to call other family members than have misspecification problems.

**Table 2: CEO identity**

	<b>Portugal</b>	<b>Spain</b>
<b>Founder</b>	51,74%	52,66%
<b>Family</b>	22,91%	22,32%
<b>Professional</b>	25,35%	25,02%

Percentage (average from 1999 to 2008) of family firms controlled by its founder, other family member or an independent professional by country.

Analyzing table 2, which presents the sample structure by type of CEO, we find that family firms are normally controlled by its founder or other family member. The founder tends to maintain the firm control and decision power, since he has a special motivation to run the firm. Only in 25% of firms there is an extern professional manager. These results are similar to those of Sraer and Thesmar (2007) to French family firms.

Financial information was collected from DataStream database. We use: individual daily and monthly closing price, and daily trading volume, and annual market value and book-to-market ratio for all for all Portuguese and Spanish publicly traded firms.

We used official databases, namely *Banco de Portugal*, and *Bolsa y Mercado Españoles*, to collect information about monthly closing price for PSI20 (Portuguese Market Index) and IBEX35 (Spanish Market Index), and monthly treasury bill rate.

Based on these data, we calculate the firm's monthly return as the relative spread between its closing price in month  $t$  and in previous month. Excess return of founder-controlled, other family-controlled and professional managed firms is the difference between its portfolio return and the risk free rate, which is the monthly treasury bill rate observed.

We build zero-cost portfolios by buying shares of founder-controlled firms and selling shares of other family-controlled or professional managed firms, and buying shares of other family-controlled firms and selling shares of professional managed firms.

Two portfolios are created: one equally-weighted ( $R$ ) and another value-weighted ( $R_p$ ).

Market risk factor ( $R_m - R_f$ ) is the difference between the market return and the risk free rate. The market return is calculated as the variation of the monthly close price of PSI20, to Portugal, and IBEX35, to Spain.

SMB (Small minus Big), also called size factor, is the portfolio of return differences between the smallest and the biggest firms in the sample. To measure the firm size we use its market value. HML (High minus Low) is the portfolio of return differences between the 30% highest and 30% smallest book-to-market firms in the sample. Both risk factors are created following the Fama & French (1993) approach.

WML (Winners minus Losers) measures the performance persistence in the short-run. This portfolio is formed by taking the differences between an equally-weighted average of the firms with the highest and the lowest 30% eleven-month return lagged one month.

Iliq is the aggregate market illiquidity. First we use the illiquidity ratio of Amihud (2002) to calculate the monthly illiquidity of each stock traded. Then we calculate the market illiquidity as the equally-weighted portfolio of individual illiquidity to each stock traded at least 15 days by month (not necessarily consecutively). We eliminate outliers cap at a maximum value of 30% of individual illiquidity (Acharya and Pederson, 2005, Miralles and Miralles, 2006).<sup>2</sup>

Finally, Debt is the market debt intensity, calculated as the monthly average of individual debt intensity. First we calculate to each stock the ratio between debt and market value. We also eliminate outliers at the 1% upper and lower tails of individual debt intensity (Fama & French, 1992).

### **3.2 SAMPLE DESCRIPTION**

Table 3 shows descriptive information of our sample, specifically mean, maximum and minimum values, and standard deviation.

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<sup>2</sup> We also use normalized market illiquidity following Pástor and Stambaugh (2003) and Miralles and Miralles (2006) approach. Although this variable (in alternative of aggregate illiquidity) is insignificant to explain the dependent variables. These results are available upon request.

Panel A shows the results for the Portuguese sample, and panel B for the Spanish sample.

**Table 3: Descriptive Statistics**

	Mean	Maximum	Minimum	Std. Dev.
<i>Panel A: Portugal</i>				
<b>Founder</b>	0,006	0,150	-0,183	0,057
<b>Founder<sub>p</sub></b>	0,002	0,211	-0,216	0,063
<b>Family</b>	0,005	0,120	-0,187	0,047
<b>Family<sub>p</sub></b>	0,004	0,197	-0,256	0,067
<b>Other</b>	0,023	0,922	-0,221	0,147
<b>Other<sub>p</sub></b>	0,007	0,6201	-0,303	0,087
<b>R<sub>m</sub> – R<sub>f</sub></b>	-0,006	0,179	-0,211	0,056
<b>SMB</b>	0,018	0,517	-0,127	0,071
<b>HML</b>	-0,020	0,236	-0,383	0,079
<b>WML</b>	1,038	2,102	0,564	0,291
<b>Iliq</b>	2,674	4,697	0,763	0,779
<b>Debt</b>	0,002	0,004	0,001	0,001
<i>Panel B: Spain</i>				
<b>Founder</b>	0,006	0,176	-0,118	0,051
<b>Founder<sub>p</sub></b>	0,006	0,137	-0,183	0,063
<b>Family</b>	0,007	0,125	-0,077	0,034
<b>Family<sub>p</sub></b>	0,003	0,141	-0,133	0,053
<b>Other</b>	0,006	0,263	-0,135	0,059
<b>Other<sub>p</sub></b>	0,009	0,190	-0,193	0,062
<b>R<sub>m</sub> – R<sub>f</sub></b>	-0,002	0,158	-0,173	0,057
<b>SMB</b>	-0,000	0,079	-0,076	0,030
<b>HML</b>	-0,009	0,073	-0,136	0,031
<b>WML</b>	0,607	1,294	0,412	0,121
<b>Iliq</b>	0,344	0,961	0,059	0,218
<b>Debt</b>	0,001	0,002	0,001	0,000

Descriptive statistics, namely mean, maximum, minimum and standard deviation for equally-weighted (R) and value-weighted portfolios (R<sub>p</sub>) excess return of founder-controlled (Founder, Founder<sub>p</sub>), other family-controlled (Family, Family<sub>p</sub>), and professional-managed firms (Other, Other<sub>p</sub>), market risk factor (R<sub>m</sub> – R<sub>f</sub>), mimicking portfolio factor return of size (SMB), book-to-market (HML) and performance persistence in the short-run (WML), aggregate market illiquidity (Iliq) measured by Amihud's illiquidity ratio, and debt intensity (Debt).

On average, professional-managed Portuguese firms exhibit higher return than founder-controlled and other family controlled firms. To Spain, results are similar when we use value-weighted portfolios, but using equally-weighted portfolios we find that, on average, founder-controlled and professional managed firms present similar returns.

These results suggest that is not indifferent to use equally-weighted or value-weighted portfolios, especially to Spain. The firm's market value has impact on conclusions.

Due to market recession, the market index as suffer significant return losses. Likewise the market risk factor is, on average, negative.

For both countries, there is evidence of an anomaly of the book-to-market effect. The negative coefficient of the mean HML factor contradicts the results found on the U.S. and other markets (Chan *et al.*, 1991, Fama & French, 1992). New companies may find it difficult to thrive on the Portuguese and Spanish market since investors prefer to invest in established firms for which they have more information.

Finally, market illiquidity is more evident to Portugal than to Spain, while debt intensity is similar to both countries.

The correlation matrix is shown in table 4.

**Table 4: Correlation Coefficients**

	<b>Founder</b>	<b>Family</b>	<b>Other</b>	<b>Founder<sub>p</sub></b>	<b>Family<sub>p</sub></b>	<b>Other<sub>p</sub></b>	<b>R<sub>m</sub>-R<sub>f</sub></b>	<b>SMB</b>	<b>HML</b>	<b>WML</b>	<b>Iliq</b>	<b>Debt</b>
<i>Panel A: Portugal</i>												
<b>Founder</b>	1											
<b>Family</b>	0,531	1										
<b>Other</b>	0,219	0,150	1									
<b>Founder<sub>p</sub></b>	0,874	0,573	0,193	1								
<b>Family<sub>p</sub></b>	0,592	0,864	0,144	0,625	1							
<b>Other<sub>p</sub></b>	0,427	0,278	0,603	0,444	0,291	1						
<b>R<sub>m</sub>-R<sub>f</sub></b>	0,710	0,603	0,222	0,816	0,623	0,484	1					
<b>SMB</b>	-0,054	-0,148	0,562	-0,124	-0,217	0,054	-0,191	1				
<b>HML</b>	0,046	0,108	-0,116	0,164	0,063	0,047	0,245	-0,046	1			
<b>WML</b>	-0,023	0,026	-0,084	0,021	0,037	-0,000	0,111	-0,109	0,105	1		
<b>Iliq</b>	-0,166	-0,032	-0,068	-0,089	-0,108	-0,102	-0,054	0,019	-0,005	0,002	1	
<b>Debt</b>	-0,197	-0,234	-0,078	-0,128	-0,193	-0,053	-0,149	-0,063	0,011	-0,333	0,315	1

	<b>Founder</b>	<b>Family</b>	<b>Other</b>	<b>Founder<sub>p</sub></b>	<b>Family<sub>p</sub></b>	<b>Other<sub>p</sub></b>	<b>R<sub>m</sub>-R<sub>f</sub></b>	<b>SMB</b>	<b>HML</b>	<b>WML</b>	<b>Iliq</b>	<b>Debt</b>
<i>Panel B: Spain</i>												
<b>Founder</b>	1											
<b>Family</b>	0,692	1										
<b>Other</b>	0,765	0,597	1									
<b>Founder<sub>p</sub></b>	0,761	0,513	0,633	1								
<b>Family<sub>p</sub></b>	0,709	0,780	0,653	0,492	1							
<b>Other<sub>p</sub></b>	0,683	0,423	0,751	0,654	0,518	1						
<b>R<sub>m</sub>-R<sub>f</sub></b>	0,755	0,476	0,670	0,891	0,468	0,724	1					
<b>SMB</b>	-0,136	0,054	-0,091	-0,379	-0,080	-0,349	-0,470	1				
<b>HML</b>	-0,111	-0,052	-0,169	-0,102	-0,113	-0,167	-0,046	0,406	1			
<b>WML</b>	0,010	-0,060	-0,019	-0,081	-0,060	-0,065	-0,078	0,070	-0,013	1		
<b>Iliq</b>	-0,101	-0,108	-0,027	-0,081	-0,041	-0,020	-0,089	-0,101	-0,092	-0,117	1	
<b>Debt</b>	-0,267	-0,231	-0,149	-0,252	-0,259	-0,169	-0,223	0,018	0,116	0,260	0,212	1

Correlation coefficient between equally-weighted (R) and value-weighted portfolios (R<sub>p</sub>) excess return founder-controlled (Founder, Founder<sub>p</sub>), other family-controlled (Family, Family<sub>p</sub>), and professional-managed firms (Other, Other<sub>p</sub>), market risk factor (R<sub>m</sub> – R<sub>f</sub>), mimicking portfolio factor return of size (SMB), book-to-market (HML), and performance persistence in the short-run (WML), Momentum, (Mom), aggregate market illiquidity (Iliq2) measured by Amihud's illiquidity ratio, and debt intensity (Debt).

For both countries, correlation between dependent variables – excess return of founder-controlled, family-controlled and professional-managed firms – is high, but it is not significant since these are alternative variables. There is also a high correlation between dependent variables and market-risk factor, which was expected.

To Spain, it is also important to point out the correlation between SMB and HML factors, suggesting that market value and book-value vary in the same way.

None of the remaining variables are highly correlated, at least not to a significant extent.

### 3.3 METHODOLOGY

To validate our hypotheses we select an existing asset pricing model – Carhart four-factor model - and include some new factors – market aggregate illiquidity and debt intensity - to improve the models estimation.

#### **Carhart Model:**

$$r_{pt} = \alpha_{it} + \beta_{pt} \times (R_m - R_f)_t + s_{pt} \times SMB_t + h_{pt} \times HML_t + p_{ip} \times WML_t \quad (1)$$

The four-factor model of Carhart (1997) is an extension of the market-model proposed by Sharpe (1964), and developed by Lintner (1965), Treynor (1965) and Black (1972), and the three-factor model of Fama & French (1993).

This model uses four factors to explain portfolios' expected return: market risk ( $R_m - R_f$ ), company size (SMB) and growth potential (HML), and performance persistence (WML).

Firms' return naturally follows the market risk tendencies (Black *et al.*, 1972). The firm's size is also a relevant factor to explain expect return. Smaller firms are normally less efficient, have more debt intensity, and therefore have higher probability of failure (Banz, 1981, Fama & French, 1992). Likewise, investors receive a premium to invest in this kind of firms.

A premium is given to investors of high book-to-market stocks, because are firms with fewer growth opportunities, and higher risk of failure (Chan *et al.*, 1991, Fama & French, 1992).

The performance persistence in the short-run explains firms' return as well. Investors' adaptation to new information is slow, and so they may have gains by creating a portfolio buying winner's stocks in the short-run and selling loser's stocks (Jegadeesh and Titman, 1993, Rouwenhorst, 1998, Liew and Vassalou, 2000, Soares e Serra, 2005).

These factors are usually accepted in the context of asset pricing. However, in the context of corporate governance it may be necessary to include new factors to adapt to firm's singular characteristics.

In this context we propose two new factors: market aggregate illiquidity and market debt intensity. These new factors will be included in the previous model.

**New Models:**

$$r_{pt} = \alpha_{it} + \beta_{pt} \times (R_m - R_f)_t + s_{pt} \times SMB_t + h_{pt} \times HML_t + p_{ip} \times WML_t + \lambda_{ip} \times Iliq_t \quad (2)$$

$$r_{pt} = \alpha_{it} + \beta_{pt} \times (R_m - R_f)_t + s_{pt} \times SMB_t + h_{pt} \times HML_t + p_{ip} \times WML_t + \eta_{ip} \times Debt_t \quad (3)$$

$$r_{pt} = \alpha_{it} + \beta_{pt} \times (R_m - R_f)_t + s_{pt} \times SMB_t + h_{pt} \times HML_t + p_{ip} \times WML_t + \lambda_{ip} \times Iliq_t + \eta_{ip} \times Debt_t \quad (4)$$

Investors are not only concerned with risk and firm's characteristics, but also with stock's and market illiquidity. Illiquidity denotes that investors may have no opportunity to trade large quantities quickly without significant price movements (Acharya and Pederson, 2005, Miralles e Miralles, 2006).

Firms' shares more illiquid stocks are more sensitive to market illiquidity and so the market has to give a risk premium to these investors.

We also include debt intensity (Debt) as an explanatory factor. Bhandari (1988) and Fama & French (1992) shed light to the importance of the variable debt to explain the firm's excess return. Recent models of asset price exclude this factor of their models.



However, in the context of corporate governance debt has two main aims: solving agency conflicts and facilitating the firm's growth, especially for the smallest ones.

#### 4. RESULTS AND DISCUSSION

Firstly we make a univariate analysis by exploring if there are differences in the mean return of founder-controlled, other family-controlled or professional-managed firms. Results are shown in table 5.

**Table 5: Return Differences of Mean Test**

	<b>1</b>	<b>2</b>	<b>Difference (1-2)</b>
<i>Panel A: Portugal</i>			
<b>Founder-Family</b>	0,0063	0,0050	0,0013
<b>Founder-Other</b>	0,0063	0,0231	-0,0168
<b>Family-Other</b>	0,0050	0,0231	-0,0181 *
<b>Founder<sub>p</sub>-Family<sub>p</sub></b>	0,0018	0,0042	-0,0024
<b>Founder<sub>p</sub>-Other<sub>p</sub></b>	0,0018	0,0069	-0,0051
<b>Family<sub>p</sub>-Other<sub>p</sub></b>	0,0042	0,0069	-0,0027
<i>Panel B: Spain</i>			
<b>Founder-Family</b>	0,0064	0,0072	-0,0008
<b>Founder-Other</b>	0,0064	0,0062	0,0003
<b>Family-Other</b>	0,0072	0,0062	0,0010
<b>Founder<sub>p</sub>-Family<sub>p</sub></b>	0,0055	0,0034	0,0021
<b>Founder<sub>p</sub>-Other<sub>p</sub></b>	0,0055	0,0090	-0,0035
<b>Family<sub>p</sub>-Other<sub>p</sub></b>	0,0034	0,0090	-0,0056

Return differences for equally-weighted (R) and value-weighted portfolios (R<sub>p</sub>) between founder-controlled (Founder/Founder<sub>p</sub>), other family-controlled (Family, Family<sub>p</sub>) and professional-managed firms (Other, Other<sub>p</sub>).

By observing panel A, we find that family-controlled firms, by its founder or other family member, present on average less return than professional-managed firms. However the difference is not significant, suggesting that there are no relevant differences in family firm's return depending on CEOs identity.

Similar results are obtained to Spain (panel B). In this case, the differences in the mean return depend on the type of portfolios used – equally or value-weighted portfolios.

We estimate the previous models described using the GMM (Generalized Method of Moments) approach of Mackinlay and Richardson (1991) to mitigate potential problems of linear regression models.

The regression results for Portugal are present in table 6. Panel A shows the results for equally-weighted portfolios, and panel B for value-weighted.

**Table 6: Results of founder-controlled, family-controlled and professional managed firms' return to Portugal**

	C	$R_m - R_f$	SMB	HML	WML	Iliq	Div	$R^2$	Adj. $R^2$
<i>Panel A – Equally-Weighted Portfolios</i>									
<b>Model 1</b>									
Founder	0,022 *	0,772 ***	0,061	-0,093 *	-0,017			53,59%	51,97%
Family	0,012	0,505 ***	-0,025	-0,023	-0,007			36,77%	34,57%
Other	0,018	1,013 ***	1,282 ***	-0,333	-0,020			46,03%	44,15%
Fonder-Family	0,010	0,267 **	0,086	-0,070	-0,010			8,78%	5,61%
Founder-Other	0,005	-0,242	-1,221 ***	0,240	0,004			36,58%	34,37%
Family-Other	-0,006	-0,508 **	-1,307 ***	0,310	0,014			41,76%	39,73%
<b>Model 2</b>									
Founder	0,047 ***	0,765 ***	0,062	-0,092 *	-0,017 *	-0,009 **		55,20%	53,24%
Family	0,012	0,505 ***	-0,025	-0,023	-0,007	0,000		36,77%	34,00%
Other	0,047	1,005 ***	1,283 ***	-0,332	-0,020	-0,011		46,39%	44,04%
Fonder-Family	0,035 *	0,259 **	0,087	-0,069	-0,010	-0,009 *		10,84%	6,93%
Founder-Other	-0,001	-0,240	-1,221 ***	0,240	0,004	0,002		36,59%	33,81%
Family-Other	-0,036	-0,499 **	-1,308 ***	0,309	0,014	0,011		42,12%	39,58%
<b>Model 3</b>									
Founder	0,061 ***	0,753 ***	0,049	-0,086 *	-0,025 **		-14,558 **	54,90%	52,92%
Family	0,059 **	0,482 ***	-0,040	-0,014	-0,017		-18,003 **	39,73%	37,09%
Other	0,010	1,017 ***	1,284 ***	-0,334	-0,019		2,761	46,04%	43,67%

	C	R <sub>m</sub> - R <sub>f</sub>	SMB	HML	WML	Iliq	Div	R <sup>2</sup>	Adj. R <sup>2</sup>
Fonder-Family	0,001	0,271 ***	0,089	-0,072	-0,008		3,445	8,87%	4,87%
Founder-Other	0,050	-0,264	-1,236 ***	0,249	-0,006		-17,319	36,86%	34,09%
Family-Other	0,049	-0,536 **	-1,325 ***	0,320	0,002		-20,764	42,16%	39,62%
<b>Model 4</b>									
Founder	0,069 ***	0,753 ***	0,053	-0,087 *	-0,022 *	-0,007 *	-10,297 *	55,78%	53,44%
Family	0,055 **	0,482 ***	-0,043	-0,014	-0,018	0,004	-20,354 **	40,13%	36,95%
Other	0,025	1,017 ***	1,292 ***	-0,337	-0,014	-0,013	10,539	46,48%	43,64%
Fonder-Family	0,014	0,271 **	0,096	-0,074	-0,004	-0,011 **	10,057	11,53%	6,83%
Founder-Other	0,044	-0,264	-1,239 ***	0,250	-0,008	0,006	-20,836	36,95%	33,60%
Family-Other	0,030	-0,536 **	-1,335 ***	0,324	-0,004	0,017	-30,893	42,90%	39,87%
<b>Panel B – Value-Weighted Portfolios</b>									
<b>Model 1</b>									
Founder	0,018 *	0,940 ***	0,024	-0,026	-0,014			67,24%	66,10%
Family	0,014	0,748 ***	-0,098	-0,078	-0,008			40,77%	38,71%
Other	0,015	0,822 ***	0,180 *	-0,080	-0,011			26,33%	23,77%
Fonder-Family	0,004	0,192	0,122	0,052	-0,006			6,05%	2,78%
Founder-Other	0,003	0,118	-0,156	0,054	-0,004			3,44%	0,08%
Family-Other	-0,001	-0,074	-0,278 **	0,002	0,003			4,45%	1,12%

	C	R <sub>m</sub> - R <sub>f</sub>	SMB	HML	WML	Iliq	Div	R <sup>2</sup>	Adj. R <sup>2</sup>
<b>Model 2</b>									
Founder	0,028 *	0,937 ***	0,024	-0,026	-0,014	-0,004		67,43%	66,00%
Family	0,031	0,743 ***	-0,097	-0,078	-0,008	-0,006		41,29%	38,71%
Other	0,038	0,816 ***	0,181 *	-0,080	-0,010	-0,009		26,92%	23,71%
Fonder-Family	-0,003	0,194	0,122	0,052	-0,006	0,003		6,18%	2,06%
Founder-Other	-0,010	0,121	-0,157	0,054	-0,004	0,005		3,66%	-0,56%
Family-Other	-0,007	-0,073	-0,279 **	0,002	0,003	0,002		4,49%	0,30%
<b>Model 3</b>									
Founder	0,027	0,935 ***	0,021	-0,024	-0,016		-3,529	67,30%	65,87%
Family	0,064 **	0,723 ***	-0,114	-0,069	-0,019		-18,930 **	42,36%	39,84%
Other	0,001	0,829 ***	0,185 *	-0,083	-0,008		5,165	26,40%	23,18%
Fonder-Family	-0,036	0,212 *	0,135	0,045	0,002		15,401 *	7,53%	3,47%
Founder-Other	0,026	0,106	-0,164	0,058	-0,008		-8,694	3,67%	-0,56%
Family-Other	0,062	-0,106	-0,299 **	0,014	-0,011		-24,096	5,79%	1,66%
<b>Model 4</b>									
Founder	0,031	0,935 ***	0,023	-0,025	-0,015	-0,003	-1,620	67,44%	65,71%
Family	0,067 **	0,723 ***	-0,112	-0,070	-0,018	-0,003	-17,244 *	42,46%	39,41%
Other	0,013	0,829 ***	0,191 *	-0,085	-0,004	-0,011 *	11,431	27,23%	23,36%
Fonder-Family	-0,036	0,212 *	0,135	0,045	0,003	-0,000	15,624 *	7,53%	2,62%
Founder-Other	0,018	0,106	-0,168	0,060	-0,011	0,007	-13,051	4,12%	-0,97%

	C	$R_m - R_f$	SMB	HML	WML	Iliq	Div	$R^2$	Adj. $R^2$
Family-Other	0,054	-0,106	-0,303 **	0,015	-0,014	0,008	-28,675 *	6,17%	1,19%

Regression of the excess return of founder-controlled (founder), other family-controlled (Family) and professional-managed (other) firms on the excess market return ( $R_m - R_f$ ) and mimicking returns of size (SMB), book-to-market (HML) and performance persistence in the short-run (WML) factors, momentum (Mom), aggregate market illiquidity (Iliq2), and debt intensity (Debt).

Model 1 is the Carhart four-factor model, model 2 is the model 2 including aggregate market illiquidity factor, model 3 is de model 2 including market debt intensity factor, model 4 is the model 2 including aggregate market illiquidity and market debt intensity factors.

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively.

By observing panel A – equally-weighted portfolios - we confirm the validity of our hypothesis for Portugal: CEOs identity is important to explain the firm's risk exposure.

Founder-controlled firms display a higher (lower) factor loading on market risk (aggregate market illiquidity) than other family-controlled firms. When the family firm is passed on to other family members, its strategy tends to change.

First the firm's shares are normally more dispersed, and consequently are less illiquid. Moreover, as descendents tendency is to consume perquisites or invest in personal projects the firm's risk increases, not only due to macroeconomic environment. As we state before, only 30% of family firms make it to the second generation (Aronoff and Ward, 1996). This may be explained to higher exposure to other risks.

The difference between founder-controlled and professional-managed firms is regarding the size factor. As we expected, founder-controlled firms tend to be smaller, since these firms experience higher financial problems, and have no financial wealth to hire a professional manager. This result is similar to those of Corstjens *et al.* (2006).

Other family-controlled firms display a lower factor loading on market risk and size, for the reasons already explained.

When we look for singular analysis, it means, by type of CEO, we conclude that founder and other family-controlled firms exhibit an abnormal return of 7% and 6% per month, respectively. This return does not disappear when we introduce the two new factors, suggesting that financial investors require an extra return not capture by the factor model to invest in family-controlled firms. However, this abnormal return is not evident when we create a zero-cost portfolio.

Analyzing value-weighted portfolios (panel B) the results for zero-cost portfolios created are similar and our hypothesis is also validated.

Although to individual analysis we find a major difference. The abnormal return of founder-controlled firms disappears when we introduce the debt intensity factor. This result suggests that this extra return is explained by the market value and the market debt intensity. May be it is given to smaller founder-controlled firms because these firms tend to have higher risk of failure, less information transparency, and more financial problems and operational inefficiencies.

Contrary to this conclusion, to other family-controlled firms the abnormal return is only significant when we include the market debt intensity. Shareholders of these firms ask for an extra return of 7% per month. As we explain before, other family members may have less information, motivation and knowledge to run the firm, and this lack of information is perceived by the market.

Table 7 presents the same analysis to the Spanish sample.



**Table 7: Results of founder-controlled, family-controlled and professional managed firms' return to Spain**

	C	R <sub>m</sub> - R <sub>f</sub>	SMB	HML	WML	Mom	Iliq	Div	R <sup>2</sup>	Adj. R <sup>2</sup>
<i>Panel A – Equally-Weighted portfolios</i>										
<b>Model 1</b>										
Founder	-0,012	0,845 ***	0,674 ***	-0,370 ***	0,022				67,58%	66,45%
Family	0,011	0,410 ***	0,528 ***	-0,228 ***	-0,012				36,16%	33,93%
Other	-0,004	0,908 ***	0,878 ***	-0,585 ***	0,007				58,95%	57,52%
Founder-Family	-0,022 **	0,435 ***	0,145	-0,143	0,034 *				39,62%	37,52%
Founder-Other	-0,008	-0,063	-0,204	0,214	0,016				3,06%	-0,32%
Family-Other	0,015	-0,498 ***	-0,349 *	0,357 **	-0,018				29,99%	27,55%
<b>Model 2</b>										
Founder	-0,012	0,846 ***	0,676 ***	-0,370 ***	0,023		0,002		67,58%	66,16%
Family	0,012	0,407 ***	0,524 ***	-0,229 ***	-0,013		-0,004		36,22%	33,42%
Other	-0,013	0,921 ***	0,901 ***	-0,580 ***	0,011		0,020		59,44%	57,66%
Founder-Family	-0,025 *	0,439 ***	0,152	-0,141	0,035 *		0,006		39,73%	37,09%
Founder-Other	0,001	-0,075	-0,225	0,210	0,012		-0,018		4,00%	-0,21%
Family-Other	0,026	-0,514 ***	-0,377 **	0,351 **	-0,023		-0,024		31,09%	28,06%
<b>Model 3</b>										
Founder	-0,004	0,828 ***	0,650 ***	-0,350 ***	0,029			-12,470	67,91%	66,50%
Family	0,015	0,399 ***	0,513 ***	-0,214 ***	-0,007			-8,223	36,48%	33,69%

	C	R <sub>m</sub> - R <sub>f</sub>	SMB	HML	WML	Mom	Iliq	Div	R <sup>2</sup>	Adj. R <sup>2</sup>
Other	-0,015	0,933 ***	0,913 ***	-0,615 ***	-0,004			18,646 *	59,50%	57,72%
Fonder-Family	-0,020 *	0,430 ***	0,137	-0,136	0,036 *			-4,247	0.396949	0.370499
Founder-Other	0,010	-0,105	-0,263 *	0,264 *	0,033			-31,115**	6,66%	2,57%
Family-Other	0,030 *	-0,534 ***	-0,400 **	0,400 ***	-0,004			-26,869**	31,76%	28,76%
<b>Model 4</b>										
Founder	-0,020	0,939 ***	0,925 ***	-0,605 ***	0,002		0,016	15,365	59,79%	57,65%
Family	0,016	0,398 ***	0,511 ***	-0,216 **	-0,008		-0,002	-7,807	36,49%	33,12%
Other	-0,020	0,939 ***	0,925 ***	-0,605 ***	0,002		0,016	15,365	59,79%	57,65%
Fonder-Family	-0,022	0,432 ***	0,143	-0,132	0,039 *		0,007	-5,804	39,86%	36,67%
Founder-Other	0,014	-0,109	-0,271 *	0,258 *	0,029		-0,010	-28,975***	6,95%	2,01%
Family-Other	0,036 **	-0,541 ***	-0,414 **	0,390 ***	-0,010		-0,018	-23,172**	32,33%	28,74%

**Panel B – Value-Weighted portfolios**

	<b>Model 1</b>							
Founder	0,008	1,049 ***	0,218	-0,205	-0,009		80,48%	79,80%
Family	0,008	0,550 ***	0,499 **	-0,340 ***	-0,016		27,69%	25,18%
Other	0,009	0,827 ***	0,145	-0,321 **	-0,007		54,50%	52,92%
Fonder-Family	-0,000	0,499 ***	-0,281	0,135	0,007		30,03%	27,60%
Founder-Other	-0,001	0,222 **	0,073	0,116	-0,002		5,55%	2,26%
Family-Other	-0,001	-0,277 **	0,353	-0,018	-0,009		15,28%	12,33%

	C	R <sub>m</sub> - R <sub>f</sub>	SMB	HML	WML	Mom	Iliq	Div	R <sup>2</sup>	Adj. R <sup>2</sup>
<b>Model 2</b>										
Founder	0,008	1,049 ***	0,219	-0,205	-0,009		0,000		80,48%	79,62%
Family	0,006	0,553 ***	0,504 **	-0,339 ***	-0,015		0,004		27,72%	24,55%
Other	0,004	0,834 ***	0,158	-0,319 **	-0,005		0,011		54,65%	52,66%
Fonder-Family	0,002	0,496 ***	-0,285	0,134	0,006		-0,004		30,05%	26,98%
Founder-Other	0,004	0,214 **	0,060	0,114	-0,004		-0,011		5,74%	1,60%
Family-Other	0,003	-0,282 **	0,345	-0,020	-0,011		-0,007		15,35%	11,63%
<b>Model 3</b>										
Founder	0,013	1,037 ***	0,202	-0,192	-0,004			-8,407	80,57%	79,7212
Family	0,022	0,517 ***	0,452 **	-0,301 ***	-0,003			-24,460	28,88%	25,77%
Other	0,006	0,834 ***	0,156	-0,330 **	-0,010			5,570	54,55%	52,55%
Fonder-Family	-0,010	0,520 ***	-0,250	0,109	-0,002			16,053	30,44%	27,39%
Founder-Other	0,007	0,203 *	0,047	0,139	0,006			-13,977	5,94%	1,82%
Family-Other	0,017	-0,317 **	0,297	0,030	0,007			-30,030 *	16,81%	13,17%
<b>Model 4</b>										
Founder	0,012	1,038 ***	0,204	-0,190	-0,003		0,003	-8,985	80,58%	79,55%
Family	0,018	0,521 ***	0,461 **	-0,294 **	0,001		0,011	-26,846	29,08%	25,31%
Other	0,002	0,838 ***	0,164	-0,324 **	-0,007		0,010	3,367	54,67%	52,26%
Fonder-Family	-0,007	0,517 ***	-0,257	0,104	-0,004		-0,009	17,861	30,53%	26,84%
Founder-Other	0,010	0,200 *	0,041	0,134	0,003		-0,008	-12,512	6,03%	1,04%

	C	$R_m - R_f$	SMB	HML	WML	Mom	Iliq	Div	$R^2$	Adj. $R^2$
Family-Other	0,016	-0,317 **	0,297	0,030	0,008		0,001	-30,212 *	16,81%	12,40%

Regression of the excess return of founder-controlled (founder), other family-controlled (Family) and professional-managed (other) firms on the excess market return ( $R_m - R_f$ ) and mimicking returns of size (SMB), book-to-market (HML) and performance persistence in the short-run (WML) factors, momentum (Mom), aggregate market illiquidity (Iliq2), and debt intensity (Debt).

Model 1 is the Carhart four-factor model, model 2 is the model 2 including aggregate market illiquidity factor, model 3 is de model 2 including market debt intensity factor, model 4 is the model 2 including aggregate market illiquidity and market debt intensity factors.

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively.

The results obtained to Spain are quite different than those found to Portugal. However, we also validate our hypothesis which says that CEOs identity is important to explain the firm's risk exposure.

Founder-controlled firms display a higher factor loading on market risk and performance persistence than other family-controlled firms. Before we introduce the new factors in the four-factor model, we find that there is an abnormal return to family-controlled firm. However this extra return is explained by the market aggregate illiquidity.

Other family members have singular risk exposures, since they lack of sufficient information about how to run the firm. Additionally they may also have few motivations to do it, leading to destruction of the firm value. Nieto *et al.* (2009), for example, confirmed that founder' descendents destroy the firm operational performance. This information may be perceived by the market.

The difference between founder-controlled and professional-managed firms is regarding the size and growth potential factors. Smaller and growing firms are normally controlled by its founder. The founder retains the firm control when it has financial distresses and potential to increase. His natural tendency is to pass on the firm or contract a professional manager when the firm has outstanding performance (Sraer and Thesmar, 2007). Similar results were found to Portugal and by Corstjens *et al.* (2006).

Other family-controlled firms display a lower (higher) factor loading on market risk and size (growing potential), for the reasons already explained. Moreover, exhibit an extra return of 4% per month. In this case, the abnormal return does not disappear with the new factors introduced in the model, suggesting that investors of financial firms require an extra premium to invest in family-controlled firms, may be due to its higher risk of failure and tendency to destroy the firm value.

Analyzing value-weighted portfolios (panel B) the difference in risk exposure between CEOs identity is only regarding to market risk factor.

Founder-controlled firms display a higher factor loading on market risk than other family-controlled and professional-managed firms. Contrary to our expectations, the return risk of founder-controlled firms is very similar to market risk. This result

suggests that, to Spain, when we consider the firm' market value, the specific singularities of founder-controlled firms are not significant.

Comparing the results of other family-controlled firms and professional managed-firms, we confirm our anticipations, it means, family-controlled firms are not only influenced by the macroeconomic reasons but also by specific singularities, and financial investors perceive it.

In this case, there is no evidence of an abnormal return, suggesting that the firm market value is sufficient to explain the market misprices of family-controlled firms.

### **Portugal vs Spain**

There are significant differences in the results obtained for Portugal and Spain. Whilst for Portugal the major results persist using equally and value-weighted portfolios, for Spain the results are quite different when we use equally or value-weighted portfolios.

To Portugal, we find that family-controlled firms, by its founder or other family members, are smaller than the ones professional-managed. Moreover, other family-controlled firms present some singular risk, not explain by macroeconomic factors. In this case, the abnormal return for family-controlled firms found by Fahlenbrach (2009) is not evident when we use value-weighted portfolios.

To Spain, the abnormal return is obvious to other family-controlled firms when we use equally-weighted portfolios, but it disappears when we use value-weighted ones. Moreover, the differences in CEOs risk exposure is explained by market risk, size and growth potential when we use equally-weighted portfolios. However, when we weigh return using the market value, only market risk exposures is different depending on CEOs identity.

Although, for both countries we find that CEOs identity is important to explain the firm risk exposure, confirming our hypothesis.

## 5. CONCLUSION

Family firms are not only the oldest type of firms, but are also present all over the world. They play a vital role to the economy development. Likewise, understanding family firms is crucial.

Some studies have been carrying on to explain family and non-family firms differences. We want to go a step further by understanding if the firm's valuation depends on CEOs identity.

Several studies describe that founder CEOs are more focused on the firm long-run, more concerned with the firms' decision and investment opportunities. These results suggest that founder CEOs play a particular role in his organization.

In this study we want to understand why the majority of family firms are headed by its founder. And if there are significant differences in firm behavior and valuation depending on CEOs identity.

In this context we analyzed Portuguese and Spanish publicly traded corporations, during the period of January of 1999 to December of 2008. We not only use the four-factor model of Carhart, as Fahlenbrach (2009), but also introduce two new factors: market illiquidity and debt intensity. Likewise we increase the explanatory power of the model and adapt it to corporate governance perspective.

In contrast to findings by Fahlenbrach (2009) for the U.S., we do not find that founder CEO firms display an abnormal return. This extra return is explained either by using value-weighted portfolios or by market illiquidity and debt intensity – the two new factors introduced in the four-factor model of Carhart.

We do find that who manages the family firm results in significantly different in risk exposures. To Portugal, founder and other family members tend to run smaller firms. Moreover, we found a significant market risk premium when we invest in founder-controlled or professional-managed firms, instead of family-controlled firms.

To Spain, founder and other family CEOs tend to run smaller and growth firms. Although, when we use value-weighted portfolios only the market risk premium explains the differences of who manage family firms.

These different risk exposures seem to be explained by performance differences. Therefore this analysis is complementary to those of Anderson and Reeb (2003), Villalonga and Amit (2006), Nieto *et al.* (2009), among others.

Additional, our results are important to shareholders and directors who are concerned about the strong position of a founder CEO within the firm. The founder retains the firm's control since he brings value-adding skills.

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