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How investors evaluate firm entrepreneurial orientation? Empirical evidences from alternative investment market

by

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HOW INVESTORS EVALUATE FIRM ENTREPRENEURIAL ORIENTATION? EMPIRICAL EVIDENCES FROM ALTERNATIVE INVESTMENT MARKET

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Abstract

The aim of this paper is to investigate the relationship between firm performances after the IPO and their entrepreneurial orientation (EO). In our work we want to test if more entrepreneurial oriented firms show better market performances signalling that investors valuate it positively. To this purpose, we focus on a particular sample of entrepreneurial firms, i.e. companies that went public on the Alternative Investment Market (AIM) through IPO during the period from 1995 to 2006. Along the lines of Miller (1983), Covin and Slevin (1991) and Lunpkin and Dess (1996), firms' entrepreneurial orientation is measured in terms of risk taking, innovation and proactivity. Following the literature in management on investor valuation we use the percent price premium as dependent variable of our model. Our results confirm a positive impact of risk-taking and proactivity on investors' valuation.

1. INTRODUCTION

A wide body of literature has focused on the entrepreneur as the main actor of the entrepreneurship phenomenon. In particular, many researches have concentrated on the main attributes of the entrepreneur trying to relate some traits of the individual with firm performance. More recently, a branch of the literature has moved the attention on the entrepreneurial behavior at the organizational level. A firm level model of entrepreneurship seems to be more appropriate as entrepreneurial effectiveness is arguably a firm-level phenomenon that involves the whole organization and goes beyond the abilities of an individual. Following studies such as Miller (1983), Covin and Slevin (1991) and Lumpkin and Dess (1996), firms showing an entrepreneurial orientation are risk taking, innovative and proactive. In this vein, the conceptual model developed to account for the firm behaviour highlights how various combinations of individual, organizational and environmental factors may affect firm performance.

One of the main objective of literature on this topic has been the understanding of the entrepreneurial orientation-performance relationship. Covin and Slevin (1991) and Lumpkin and Dess (1996) developed conceptual models to understand the relationship between entrepreneurial orientation (EO) and firms performance. These models indicate a variety of factors, such as external environment, organizational structure, corporate culture and strategy, which may simultaneously affect the entrepreneurial orientation-performance relationship.

Following the EO framework, scholars have attempted to give empirical evidence to the EO effect on firm performance, mainly measured in terms of sales growth (Wiklund, 1999; Lumpkin and Dess, 2001; Wiklund and Shepard, 2005; Walter et al., 2006; Covin et al., 2006; Keh et al., 2006) but also as employment growth (Wiklund, 1999; Walter et al., 2006; Wiklund and Shepard, 2005) and firm profitability (Becherer and Murer, 1997; Lumpkin and Dess, 2001; Walter et al., 2006; Wiklund and Shepard, 2005; Keh et al., 2006). However, literature has yet to consider the effects of EO on market performances.

In our work we extend the literature investigating the relationship between entrepreneurial orientation (EO) and firm market performance in a peculiar entrepreneurial setting, i. e. an IPO on a secondary market. By focusing on companies

listed on the Alternative Investment Market (AIM), in our work we want to test whether more entrepreneurial oriented firms show better market performances signalling that investors valuate it positively.

Our research may contribute to the literature in several ways. First, although empirical evidence has shown that the relationship between an EO and performance is not always positive but it varies for different types of business, the general belief is that firms benefit from an entrepreneurial behaviour. On the one hand, this may lead manager to act entrepreneurially in order to increase firm performances. On the other hand, investors may evaluate positively a firm showing an EO in the expectation of high return. For this reason in this paper we want to verify if investor give value to the EO of companies towards entrepreneurship in the prospect of high returns.

Secondly, the literature has shown that the EO-performance relationship is moderate by both external and internal factors. In particular, many studies have postulated a strong EO-performance relationship in hostile and technologically sophisticated environments (Naman and Slevin, 1993; Covin and Slevin, 1998). Hence, a growing interest has been devoted to companies operating in unique environments such as small businesses (Wiklund, 2005; Keh, 2006) and university spin-off (Walter et al., 2006). In this work we extend this stream of research by focusing on IPO companies which therefore operate in a peculiar environment, characterised by high level of uncertainty. Actually, a firm undertaking an IPO and entering the arena of public offerings faces new challenges and pressures, such as the acceptance and monitoring activities from a new variety of stakeholders.

Moreover, our study may also contribute to the literature in enhancing the approach to the measurement of the different dimensions involved in the EO concept as we can rely on IPO prospectuses as a source of data. To the purpose of operationalizing EO and test the conceptual framework of entrepreneurial orientation, empirical researches have adopted mainly three approaches: managerial perceptions, firm behaviours and resource allocations (see Lyon *et al.*, 2000 for an extensive review). The first approach is the most widely used and requires interviews or surveys to measure EO as management perceptions. The second approach, firm behaviours, is focused on competitive behaviours of companies and involves the content analysis of published news. The third approach examines resource allocations to operationalize strategy concepts. The main source of data is company's financial statements. To our purposes the latter approach seems to be the most appropriate. The idea to

operationalize strategy concepts looking at resource allocation can be ascribed to Gale (1972) and Miller and Friesen (1978). This approach has pros and cons. On the one hand, an advantage is that measures are standardised and can be compared across time and firms. Furthermore they are easy to confirm. On the other hand, a drawback can be that resource allocation measures may not accurately reflect firm activities and are not suitable for in-depth analysis on managerial practices and strategies. However we can complement this data with information from the IPO prospectus which, accordingly, is the primary source of data for our study. It is an important document which gives detailed information about the firm such as the operating history, firm products and ownership structure. Additionally, it includes biographical information regarding the founder, CEO and the firm executive management.

The reminder of our paper proceeds as follows. In section two we discuss the theoretical framework and hypothesis. The sample, measure and the econometric model are then presented in the methodological section. Section three describes the results of our analyses. Finally, in the concluding section we discuss our interpretation regarding our findings.

2. LITERATURE REVIEW AND HYPOTHESIS

In order to investigate the linkage between entrepreneurial orientation and market performance for IPOs we combine two streams of literature. On the one hand we apply the concept of EO developed in the area of entrepreneurship and management. On the other hand we refer to the literature on IPOs in the area of corporate governance and management. In other words, we use entrepreneurial orientation as a framework for examining the relationship between firm behaviour and market performance within initial public offering firms.

Along the lines of the pioneering and widely cited works by Miller (1983), Covin and Slevin (1991) and Lumpkin and Dess (1996), entrepreneurial orientation refers to the processes as methods, practices, behaviours and strategies managers adopt to act entrepreneurially. Various dimensions have been used for characterising and describing companies' entrepreneurial orientation. Most of the works define firms showing an entrepreneurial orientation as risk taking, innovative and proactive. Risk taking consists of activities such as borrowing heavily, committing a high percentage

of resources to projects with high risks but high returns and entering in unknown markets. Innovativeness refers to attempts to embrace creativity, experimentation, novelty, technological leadership, research and development in both products and processes. Proactiveness relate to forward-looking, first-mover efforts to introduce new products or projects in the market anticipating competitors. Other two dimensions, used to describe EO but less recurrent in the literature, are autonomy and aggressiveness. Autonomy refers to actions aiming at establishing a new business while aggressiveness refers to attempts to overtake rivals.

The works by Miller (1983), Covin and Slevin (1991) and Lunpkin and Dess (1996) contributed to define the theoretical framework for linking entrepreneurial orientation and firm performance. The prevailing and ultimate reason in the topic of entrepreneurship is indeed the idea that entrepreneurial activity stimulates economic performance of individual firms and, as a consequence, general economic growth. In sum, firm performance seems to be affected by i) organizational factors as size, structure, strategy, strategy-making processes, firm resources, culture, and top management team (TMT) characteristics; ii) environmental factors as dynamism, munificence, complexity, industry characteristics, and hostility; iii) entrepreneurial orientation as risk taking, innovativeness, proactiveness, and, in some cases, autonomy and competitive aggressiveness.

Actually, by analysing the literature on IPOs we observe similar findings. First, scholars in this field have highlighted the role of organizational factors as age, size, structure, firm resources, founder and top management team characteristics in enhancing the market performance of initial public offering companies. For example, Welbourne and Andrews (1996) examine how human resource management decisions at the moment of the IPO affect both short-term and long-term performances. The authors found that human resources variables predict both initial investor reaction and long-term survival. Certo et al. (2003) studied investors reactions to the CEO ownership of stock options and equity. Their study was grounded in behavioural decision theory which suggests that compensation may influence CEO propensity for taking risk. The authors found that both stock and equity ownership interact to influence the premiums that investors applied to the IPO firms. Lester et al. (2006) examined the impact of prestigious top management teams characteristics on investor valuation at the time of an IPO and found that mainly the TMT educational level has a positive influence on IPOs market performance. Second, IPO literature found how

also environmental factors as dynamism, munificence, complexity and industry characteristics influence the valuations that investors apply to IPO companies. For example, Lester et al. (2006) suggested the importance of an industry structure on a firm performance. In particular, the authors found that investors apply lower valuations to firms operating in industries with high levels of dynamism and higher valuations to firms operating in industries with high levels of complexity. Certo et al. (2003) found a positive relationship between firms operating in high-tech industries and investor valuation while Welbourne and Andrews (1996) found that investor value positively companies in services sectors.

Despite the literature on entrepreneurial orientation found support for a positive impact of EO on operating and financial performances, literature on IPOs still has to consider the effects of EO on investor valuation. For this reason in this work we claim that entrepreneurial orientation should be taken in consideration in the analysis on IPO performances and enter the model on investor valuation. Concerning the individual dimensions of EO, previous works suggested that each can have a universal positive influence on performance. Since the seminal works by Shumpeter, innovative companies have been recognized as highly competitive and thus shown high performances. Proactive companies have first-mover advantages and thus are able to outperform competitors. Although risk taking companies have more volatile results, it has been shown that risky strategies are more profitable in the long run.

3. METHODOLOGY

Dataset and Sample

To the purpose of verify if firm entrepreneurial orientation may influence investor valuations we focus on a particular sample of entrepreneurial firms, i.e. companies listed on the AIM. A number of different reasons make AIM's companies interesting for our purposes. Firstly, the firms listed on the AIM are formed around new business ideas. Hence these firms are in the entrepreneurial phase, characterized by high innovativeness, entrepreneurial creativity, and a high level of uncertainty. Moreover, the AIM is a secondary market dedicated to young and growing companies. They range from young, venture capital-backed start-ups to young international companies looking to use a public market to fund further expansion and raise their global profile.

Thirdly, an Initial Public Offering is one of the most notable entrepreneurial settings, being characterized by a high degree of uncertainty. A firm undertaking an IPO and entering the arena of public offerings faces new challenges and pressures, such as the acceptance and monitoring activities from a new variety of stakeholders. Finally, the AIM is the most successful growing market in the world. Since its launch in 1995, over 2,500 companies have joined AIM. Today, more than 1500 companies from any industry sector are quoted on it. Hence, in literature there is a growing interest in this market. For example, Kurshed *et al.* (2003) shows that the AIM is the first market where operating performance is not found to be declining after the IPO. On the contrary, they find that the performance of firms on the Official List deteriorates significantly after the issue.

Our main source of data is the EurIPO[1] database which collects data on 3,000 operating companies that went public on the main European markets (London, Euronext, Frankfurt and Milan) through IPO during the period 1985-2006. We focus on the companies listed on the AIM from 1995 to 2006. Our IPO's dataset combines public available information (e.g., year of establishment, industry sector, region), accounting data from balance sheets (the main variables of consolidated financial statements in a range -3, +3 years from the listing date) and data related to both the offer and the ownership structure from IPO prospectuses (e.g., private equity financing, risk factors, biographical information regarding the founder, CEO, the firm's board of directors and management).

The most of data were collected from IPO prospectuses. Companies follow strict rules and guidelines in compiling a prospectus. For this reason a repeatability of information is guaranteed and, thus, it is possible to make comparison across time and across companies. Furthermore, the document is first written by members of the management and then certificated by lawyers and accountants. We thus can reasonably trust in the validity and reliability of data collected.

[1] EurIPO is a database containing information on European public companies realized at the University of Bergamo. The dataset is organized in three sections: Accounting, collecting data from the balance sheets, e.g., assets, equity, sales, EBIT and capital expenditure; Offer, which brings together data on the offering, such as pricing methodology, number of share, cost of the IPO and Book Value; Ownership, gathering information on main shareholder, founder, CEO and board of directors. Additional information referring to intellectual property rights are also included.

Specification of the econometric model

The relationship between entrepreneurial orientation and investor valuation is investigated through the estimation of the following model:

$$Investor\ valuation_i = \beta_0 + \beta_1\, Risk\ Taking_i + \beta_2\, Innovation_i + \beta_3\, Proactiveness_i + \beta_4\, Control_i + \varepsilon_i$$

Where $Risk\ Taking_{i,}$ $Innovation_i$ and $Proactiveness_i$ are vectors of variables describing the three dimensions of the entrepreneurial orientation as highlighted in the theoretical framework while $Control_i$ is a vector of control variables.

Dependent variable

In order to consider the effects of EO on market performances, we refer to the literature in management on investor valuation (Welbourne & Andrews, 1996; Rasheed et al., 1997; Certo et al., 2003; Lester et al., 2006) and use the percent price premium as dependent variable of our model. As suggested by Welbourne and Andrews (1996) the absolute stock price at the time of the IPO is misleading since it fails to account for the worth of firm assets. As an alternative, price premium, which is the amount of the stock price considered beyond the book value, allows to control for assets and, thus, provides a more robust estimate of investor perceived future value. We calculated percent price premium as stock price less book value over stock price, where the stock price equals the offer price at the time of the IPO, and book value is the book value of the firm's equity as reported in the prospectus. The offer price is the price paid by institutional investors and determines the capital a firm raises in its IPO. As a consequence, investors tend to reward encouraging prospects with higher premiums. To control for underpricing an alternative measure for stock price is the closing stock price on the first day of trading.

Explanatory variables

As far as independent variables are concerned, we grouped the measures of EO in three categories: risk taking, innovativeness and proactiveness.

Firstly, the risk-related variables are *Risk Factors, Profit* and *Business-risk.* A prospective investor should be aware of the risks of investing in a company and should make the decision to invest only after careful consideration. For this reason, companies are required to mention the factors of risk for the business in the IPO prospectuses. Some examples of risk factors listed in IPO prospectuses include issues related to technological change, retention of key personnel, protection of intellectual property rights and demand volatility. Following previous researches we use the number of *Risk Factors* reported in the IPO prospectus as a proxy for the business risk level as perceived by investors (Beatty and Zajac, 1994; Welbourn and Endrews, 1996; Certo et al., 2001; Lester et al., 2006). The second risk-related variable included in the model is profit per share before the IPO. Many listing companies report losses, in most of the cases due to their short operating history. As a consequence, a high variance in performances and uncertainty characterise AIM firms. We thus assume that the lower is the profit per share (or loss per share) the higher is the firm's risk position. As such, *Profit* could affect investor perceived firm's value. We also include in our model *Business-risk* as an additional variable. As reported in previous studies, measures of propensity for risk taking include an indicator of business risk, such as the standard deviation of a firm's return on assets over time (Oviatt and Bauerschmidt, 1991; Miller and Leiblein, 1996; Lyon et al., 2000).

Secondly, we introduce in our model an innovation-related variable to investigate the influence of innovation activity on investor valuation. Actually, innovation is a signal for a firm's strategic competitive value and investors may valuate positively firms' innovation efforts in the expectation of high returns. In our model we, thus, use a measure of innovation output, *IPR*, which represent the number of intellectual property rights held by the company. Although some companies do not disclose this information, we gather data on *IPR* from the prospectus. We thus assume that investors can valuate the innovation propensity of a company only in the case of disclosure in the IPO prospectus.

As far as proactiveness is concerned, we explore the role of Top Management Team (TMT) characteristics and capabilities and try to find if they have some impacts on investors' valuation. Essentially, the literature on EO shows how firms' proactiveness can be measured in terms of TMT's risk-taking proclivity, decision making style and competitive posture. As measures of TMT's risk posture we, firstly, include the variables *Board Equity* in our model, accounting for the share of equity owned by the

board of directors. Furthermore, we add a dummy variable, *CEO share*, taking value 1 if the CEO is also a shareholder. As previous researches suggest (Mehran, et al., 1999; Sanders, 2001; Certo et al., 2003), the CEO equity level may influence CEOs' risk-taking behaviour. Consistently with the agency theory (Jensen and Meckling, 1976), high levels of board of directors' ownership align the interests of TMTs and shareholder. Thus TMTs have an incentive to diminish the risk exposure of the company which is, in turn, associated with their portfolio risk level. We suggest that IPO investors are likely to take into consideration the risk properties of directors' equity. Secondly, *CEO founder* is considered as an additional variable for measuring executives' proactive behaviour. Investors can evaluate positively the fact that CEO is also the firm founder, as this gives a signal of executives risk proclivity.

Control variables

We further include a set of control variables which may have an impact on investors' valuation. *Firm Size* refers to the logarithm of sales and assets. *Firm Age* is measured as one plus the age of the firm at the moment of the IPO in logarithmic scale. By *Venture Capitalist* we identify those IPOs which rely on venture capital investments (Lester et al., 2006); it is a dummy variable which takes value 1 if venture capitalists were in the ownership structure of the firm at the moment of the IPO, 0 otherwise. *Insiders* represents the proportion of executive members on the board of directors affecting market valuations in term of advising and monitor activities (Gompers, 1995; Certo et al., 2001). Following the primary 1-digit standard industrial classification (SIC) code for the IPOs analysed, nine industry dummies were included in the model to control for industry-specific factors, as industry cycles and trends, that may influence the rate of growth of individual firms.

Descriptive statistics for the sample are provided in Table I. Data in panel a) (Independent and Control Variables*)* summarize the results for both the independent and control variables. Panel b) (Industry) reports the industry classification referring to the 1-digit SIC Classification. The Services companies (e.g., hotels, business services, health, legal and social services) are highly represented in our sample (52.73%). Manufacturing cover more than 20% of the sample while each of the other economic groups gathers about less than 10% of the IPOs.

Table I- Descriptive Statistics

a) Independent and Control Variables

Variable Name	*N. observation*	*Mean*	*Std dev*	*Min*	*Max*
Risk Factors	323	7.985	4.150	0.000	21.000
Profit	315	0.017	1.029	-1.306	17.985
Business-risk	210	0.698	2.690	0.000	28.548
IPR	295	0.495	0.501	0.000	1.000
Board Equity	310	0.310	0.221	0.000	0.972
CEO Share	313	0.502	0.501	0.000	1.000
CEO Founder	310	0.519	0.500	0.000	1.000
Sales	305	14.433	2.305	4.766	18.848
Total Assets	321	15.071	1.422	7.489	19.392
Age	219	1.545	1.118	0.000	4.905
VC	323	0.672	0.470	0.000	1.000
Insiders	312	1.746	1.110	0.000	8.000

b) Industry

Variable Name	*Frequency*	*Percent %*	*Cumulative Percent %*
Agriculture, Forestry and Fishing	1	0.36	0.36
Mining and Construction	23	8.36	8.73
Manufacturing	62	22.55	58.91
Transportation, Communication Electric, Gas and Sanitary Service	9	3.27	34.55
Wholesale Trade and Retail Trade	27	9.82	44.36
Finance, Insurance and Real Estate	8	2.91	47.27
Services	145	52.73	100
Total	275	100	

4. RESULTS

Table II reports the correlation matrix of the variables, showing that some correlations should be taken into account in the interpretation of the results. Particularly, *Business-risk* and *Profit* show a correlation index equal to -0.416. *Total Assets* and *Sales* also turn out to be correlated (0.427). However, we also checked for variable dependence by examining the variance inflation factor (VIF). The VIF for of our regression equation is found to be 1.91, below the guideline of ten, suggesting that multicollinearity does not affect the analytical model (Chatterjee and Price, 1991).

Table II – Correlation Matrix

Variable Name	*IV*	*Risk Factors*	*Profit*	*Business risk*	*IPR*	*Board Equity*	*CEO Founder*	*CEO Share*	*Sales*	*Total Assets*	*Age*	*VC*	*Insiders*
IV	1.000												
Risk Factors	0.190	1.000											
Profit	-0.261	-0.234	1.000										
Business-risk	0.072	0.207	-0.416	1.000									
IPR	0.006	0.232	-0.112	-0.019	1.000								
Board Equity	-0.004	-0.039	0.033	0.080	0.092	1.000							
CEO Share	-0.136	-0.183	0.195	-0.103	-0.120	-0.130	1.000						
CEO Founder	-0.089	-0.108	0.125	-0.016	0.015	-0.078	0.396	1.000					
Sales	-0.002	-0.397	0.305	-0.138	-0.298	0.088	0.148	0.091	1.000				
Total Assets	-0.250	-0.187	0.248	-0.376	-0.145	0.097	-0.141	-0.112	0.427	1.000			
Age	-0.151	-0.328	0.151	-0.034	-0.184	0.005	0.018	-0.121	0.262	0.108	1.000		
VC	0.109	0.179	-0.054	-0.141	0.133	-0.095	-0.115	0.020	0.109	0.203	-0.234	1.000	
Insiders	0.092	-0.060	0.065	-0.032	0.097	-0.076	0.307	0.261	0.098	-0.255	-0.053	-0.018	1.000

The results of the econometric estimation are presented in Table III.

In relation to *risk-taking* variables, as a first result we find a positive and significant ($p<0.1$) relationship between *Risk Factors* and investor valuation (*IV*). Furthermore, *Profit* proved to be significantly ($p<0.05$) and negatively related to *IV*. This means that companies showing a high risk exposure at the time of the IPO receive a higher valuation by investors than those which are considered less riskier. In other words, the higher the number of risk factors reported in the prospectus and the lower the profit of the company the higher the level of risk and, as our regression results suggest, the higher the investor valuation.

For what concerns proactivity-related variables, the *CEO Share* is a negative and statistically significant variable ($p<0.10$). This result is consistent with the *Risk-taking* variables' finding. The shareholder status of a CEO may give him an incentive to diminish the risk exposure of the company which is, in turn, associated with his portfolio risk level. Investors may valuate negatively the threat of a decrease in CEO risk-taking proclivity. Finally, Innovation, as proxied by the number of intellectual property rights (*IPR*), is not related to investor valuations in our model.

Table III - Results of OLS Regression

Statistical significance at 1%, 5%, and 10% as ***, **and * respectively. z statistics between parentheses.

Dependent variable = Investor Valuation (*IV*)			
Variable Class	*Variable Name*	*Estimations*	
	Constant	1.684	***
Risk taking	*Risk Factors*	0.012	*
	Profit	-0.368	**
	Business-risk	-0.011	
Innovation	*IPR*	-0.048	
Proactivity	*Board Equity*	0.035	
	CEO Share	-0.090	*
	CEO Founder	-0.014	
Control	*Sales*	0.027	**
	Total Assets	-0.069	***
	Age	-0.017	
	VC	0.018	
	Insiders	0.004	
	Industry	Yes	
F-test		2.36	***
R2		0.303	
Adj-R2		0.175	

As far as the control variables are concerned, the variable *Sales* is found to be positively and significantly ($p<0.05$) related to investor valuations. This means that investors give more value to larger companies than their counterpart. We interpret this result in the light of the life cycle theory. According to this theory, firms' growth path is supposed to follow an S-shaped curve, hence showing an exponential path followed by a logarithmic one. As the AIM is a market dedicated to small firms in the early stages of their growth, at the moment of the IPO firms in our sample are in the first part of the curve, thus characterized by exponential growth rates. In subsequent periods, firms which were in the birth phase continue to follow the exponential part of the curve and, thus, increase their rate of growth. In sum, it seems that investors expect an increase in the size expressed by *Sales* of larger companies in our sample in the expectation of fast rates of growth and, in turn, of firms' value. The variable *Total Assets* is negatively and significantly ($p<0.01$) related to investors valuation. Investors expect companies use the capital raised at the listing to realize new investments and, thus, increase total assets. This leads to a temporary diminishing in firms' profitability directly affected by the IPO.

5. CONCLUDING REMARKS

In this work the determinants of business performance are inferred from a broad range of variables. Following the EO framework, we investigated the relationship between entrepreneurial orientation (EO) and firm market performance, measured in terms of percent price premium. To this purpose, we focused on an IPO sample of companies listed on the Alternative Investment Market (AIM). Our results confirm a positive impact of risk-taking and proactivity on investors' valuation. More precisely, a higher risk position of companies, proxied by both number of risk factors and profitability, proved to influence the price premium paid by investors in the prospect of high returns. Furthermore, CEO risk-taking proclivity seems to have an impact on investor valuation. In particular, CEO equity ownership is negatively related to firm performance, as the prospect of risk-reducing firm strategies have a negative impact on the valuation of investors.

To conclude, we believe that further researches could extend the results of our analysis. The variables we used to explain firms' market performances are just a selection on the wider set of possible independent variables, which may be found in the literature. In this direction in future researches we will introduce further information related to the three dimensions of entrepreneurial orientation, in order to increase the set of explanatory variables and improve the model.

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