NUOVE FRONTIERE DEL REPORTING AZIENDALE

La comunicazione agli stakeholders tra vincoli normativi e attese informative

a cura di Silvano Corbella Luciano Marchi Francesca Rossignoli



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a cura di Silvano Corbella Luciano Marchi Francesca Rossignoli



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GOVERNANCE, CONTROLLI INTERNI E RISK MANAGEMENT

2. CORPORATE GOVERNANCE AND ENTERPRISE RISK MANAGEMENT: EVIDENCE FROM SMES

by Cristina Florio*, Gaia Melloni** and Francesca Rossignoli***

Abstract

Enterprise Risk Management (ERM) has received little research attention in the context of Small and Medium Enterprises (SMEs) even though SMEs may benefit from it at least as much as large companies. This study aims to contribute to the existing literature by investigating the role of Corporate Governance (CG) in fostering (inhibiting) ERM within the SMEs context. The empirical study is based on a survey questionnaire submitted to a sample of Italian SMEs. Drawing on previous studies, a holistic measure of ERM is developed relying on risk identification, assessment, and monitoring. SMEs' CG features are depicted in terms of ownership (family versus non-family owned business), board of directors (collective board versus sole director) and managers (presence of external versus internal managers). Main results indicate that the absence of the family ownership and the presence of a board of directors are effective drivers of the ERM development in the SMEs context whilst the presence of external managers is not significant. Additional tests focused on the single ERM components confirm the main results. The research has both theoretical and practical implications shedding light on the fundamental role played by CG features in shaping ERM practices in the SMEs context.

Keywords: Small and Medium Enterprises (SMEs), Enterprise Risk management (ERM), Corporate governance, Italy.

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2.1. Introduction

Extensive literature underlines the importance of Risk Management (RM) and recognizes that its primary objective 'is not to prevent or prohibit taking risk, but to ensure that the risks are consciously taken with complete knowledge and clear understanding' (Raghavan, 2005: 528); Neville (2011). By exploiting its function, RM shall contribute to the achievement of a firm's overall business objectives, and ultimately of satisfying business performance in terms of operating efficiency and profits (Hollman and Mohammad-Zadeh, 1984). More recently, both professional guidelines (e.g., COSO, 2004) and academic literature (e.g., Liebenberg and Hoyt, 2003; Hoyt and Liebenberg, 2011; Pagach and Warr, 2011; Beasley et al., 2008) suggest to adopt an holistic view to RM according to the so called Enterprise Risk Management (ERM) approach.

ERM is defined as 'a process, effected by the entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within the risk appetite, to provide reasonable assurance regarding the achievement of objectives' (COSO, 2004). The idea of ERM is to implement the RM process across the organization and ensure that it is carried out by people at every level of organization, with the ultimate purpose of creating a complete picture of all internal and external threats and developing strategies that determine the response to key risks. All the companies need an effective ERM system, as a logical and orderly process aimed at identifying, assessing, and monitoring business risks, no matter the firm's size (Brustbauer, 2016; Leopoulos et al., 2006; Raghavan, 2005).

In spite of the growing empirical evidence on ERM in large companies, however, the determinants and consequences of ERM in Small and Medium Enterprises (SMEs) have received little research attention (Brustbauer, 2016; Henschel, 2010; Verbano and Venturini, 2013; Falkner and Hiebl, 2015). This is surprising as SMEs may benefit from ERM at least as much as large companies. Previous studies suggest that ERM may help improving SMEs

performance by activating better decision-making processes, accessing new financial resources, obtaining competitive advantages, employing scarce resources more efficiently, identifying optimal investment opportunities, and protecting company reputation (Blanc Alquier and Lagasse Tignol, 2006; Azende, 2012; Lukianchuk, 2015; Raghavan, 2005; Hollman and Mohammad-Zadeh, 1984). Moreover, SMEs may not be considered as a scaled-down version of large companies, with smaller but the same needs and features: SMEs differ from large companies in multiple aspects. According to Raghavan (2005), SMEs face specific risks as, in the constitution phase, they over-depend on one person or a few key-people and may lack of professionalism. Moreover, during their entire life, SMEs' capacity of leveraging on the financial structure may be limited, as well as the capacity of collecting accounts receivables from bigger costumers, making crucial the overall relationship with the local banking system. Finally, previous literature has demonstrated that while large companies often consider growth a strategic objective. SMEs perceive it as a source of risk, especially due to the need to cover growing costs (Gilmore et al., 2004). Focusing on RM practices, conceptual contributions affirm that in large corporations they may be formalized, yet in SMEs they are likely to be very informal (Gao et al., 2013). In large companies, a specialized RM department made up of several employees and directed by a risk manager may work, yet SMEs may dedicate limited human and technical resources to such function. RM likely lies with the owner and/or a top staff officer, perhaps on a part-time basis (Hollman and Mohammad-Zadeh, 1984; Gao et al., 2013; Petroni, 1999). A recent survev developed by Federation of European Risk Management Associations (FERMA) (2015) on 1,300 global SMEs reveal five reasons why RM in SMEs is quite different to large corporations: SMEs risk appetite is often misaligned with RM capabilities; business processes are often unstructured as SMEs heavily rely on management talent; RM competencies are often lacking (e.g., it may be difficult to incorporate uncertainty into decision making); the resources available to manage risks are often not enough. As a consequence, SMEs tend to absorb risks up and down the value chain (e.g., they both absorb suppliers' risks and comply with requirements by clients because of low bargaining power). Moreover, 60% of respondent SMEs sustain they are facing a wide, increasing, and complex array of risks; 70% do not consider their RM oversight as mature; 80% have not invested in RM training for executives, nor have RM activities integrated with performance compensation. All these data provide evidence of both the difficulties that SMEs face while dealing with RM, and the differences occurring between SMEs and big-sized companies. In light of such differences, the empirical evidence on

determinants and consequences of RM collected referring to the latter cannot be extended to the former. Rather, with their exclusive features SMEs deserve specific investigation.

The paucity of empirical studies on SMEs is less surprising, however, given that SMEs provide no or very few public information in addition to the compulsory financial statement, and this circumstance makes the efforts necessary to investigate ERM in that context much higher, as empirical research can be developed only by means of interviews and questionnaires. In this regard, Mafrolla et al. (2016: 671) underline how little research on the ERM implementation in unlisted corporations is justified by the need to collect primary data, 'which is expensive in terms of time and money, and suffers the feasibility of sample and collection bias'. Also, Arena et al. (2010: 659) draw the attention on the fact that 'ERM can be different things in different organizations, or even within the same organization at different times'. As each company may rely on different key-people, analytical tools, and procedures, the operationalization of the ERM concept in a reliable, all-embracing. and value-driven measure is quite challenging. If this challenge affects studies on large companies where ERM is to some extent regulated by ad hoc (e.g., ERM Integrated Framework issued by the Committee of Sponsoring Organization of the Treadway Commission (COSO, 2004; COSO, 2012) and/or national Corporate Governance (CG) Codes (Florio and Leoni, 2017), it constraints even more the empirical investigation of the ERM approach and practices in SMEs, where the adoption of ERM practices is mainly voluntary and unregulated (Mafrolla et al., 2016).

This study aims to contribute to the understanding of ERM in SMEs by empirically analysing the role of CG in fostering (inhibiting) RM. The role of CG in shaping RM practices is recognized by RM guidelines and reports worldwide and notwithstanding the company's size (NSW Department of State and Regional Development, 2005; CPA Australia, 2009; COSO, 2009; COSO, 2004; OECD, 2014; OECD, 2010; OECD, 2011). Moreover, previous literature shows the existence of a relationship between CG characteristics and ERM implementation in large companies. For instance, Baxter et al. (2013) demonstrate that higher quality ERM is associated with the presence of an audit committee charged with direct risk oversight, the appointment of chief risk officers/risk committees, and the presence of longer tenured boards of directors. Desender (2011) reveals that the position of the chief executive officer in the board has an important influence on the level of ERM, while board independence induces higher levels of ERM only when the chief executive officer differs from the chairman. Paape and Speklé (2012) find that publicly traded firms and organisations with both a chief risk officer and an

audit committee have more mature ERM systems. Interestingly, the effect of ownership on ERM is not clear: Liebenberg and Hovt (2003) find no significant differences in the ownership characteristics between companies that adopt or not an ERM system, whilst Paape and Speklé (2012) provide no evidence of an effect of institutional ownership, but observe that owner-managed firms are less prone to invest in ERM. With reference to Italian private companies, Mafrolla et al. (2016) demonstrate that companies with more concentrated ownership are more reluctant to implement ERM practices, while institutional ownership is not relevant. CG characteristics of SMEs are much different than those of large companies, even in case they are private firms: prior literature highlights that within SMEs ownership, board, and top management often overlap, with the same people, or people from the same family, involved at all levels (Brunninge et al., 2007; Mustakallio et al., 2002; Nordqvist and Melin, 2002). Furthermore, we cannot expect to find the same CG structure (e.g., committees and key-people) and complexity of large companies, in the context of SMEs.

Despite existing recommendations and the findings of several studies about ERM in large corporations, whether ERM derives from CG features in the context of SMEs is still an empirical question. With the purpose of analysing the association – if any – existent between CG features and ERM, we develop an empirical study on a sample of SMEs working in the Italian county of Vicenza that responded to an ad hoc questionnaire.

On the one hand, we focus on three CG features typifying SMEs, namely: i) ownership, in terms of family versus non-family owned business (Sciascia and Mazzola, 2008); ii) board of directors, in terms of the appointment of a collective board of directors versus a sole director; iii) managers, in terms of the presence of external versus internal managers (Brunninge et al., 2007). On the other hand, we consider ERM as a logical and systematic process aimed at identifying, assessing, and monitoring business risks, following the approach proposed by Brustbauer (2016).

Our research contributes to the existing literature on SMEs by opening the "black box" of the association between CG and the overall ERM system by considering a number of CG issues that go beyond the traditional distinction between family and non-family ownership (Brustbauer, 2016) to take into account also the combination of some managerial aspects. Moreover, additional tests investigate the impact of specific CG features on the three components of the ERM system, namely risk identification, assessment and monitoring.

The rest of the paper is organized as follows. Section 2 briefly reviews previous literature on RM in SMEs. Section 3 develops the hypotheses on

the association between CG features and ERM in SMEs. Section 4 explains the research design, focusing on the regression model, the questionnaire, and the sample selection. Section 5 reports descriptive statistics, empirical results, and additional analyses. Section 6 concludes the paper, underlines its limitations and provides some suggestions for further research development.

2.2. Prior research

The issue of RM in the context of SMEs has attracted much interest in the last decade, both from regulators, practitioners, and academics belonging to different disciplines, such as management, small business management, finance, and engineering (Falkner and Hiebl, 2015; Verbano and Venturini, 2013; CPA Australia, 2009; NSW Department of State and Regional Development, 2005; Smit and Watkins, 2012). Several RM guides for SMEs have been issued in different contexts (CPA Australia, 2009; NSW Department of State and Regional Development, 2005), as well as conceptual frameworks on SMEs risks exposure and the RM process within SMEs (Hollman and Mohammad-Zadeh, 1984; Raghavan, 2005). Such interest is fully understandable giving the fundamental role of SMEs in the worldwide business arena: for instance, in the European context SMEs represent the 99.8% of the total number of companies, employ 67.4% of workers, and produce 58.1% of the total gross value added (Ecorys, 2012).

However, despite the wide diffusion and importance of SMEs 'from an economic and social perspective, and the fact that they are structurally weaker and exposed to the danger of failure when facing unexpected risks', few empirical studies have been developed with reference to RM in SMEs. This suggests that 'RM for SMEs is still a "spot" subject' (Verbano and Venturini, 2013: 194; Falkner and Hiebl, 2015).

Previous research has focused on the diffusion of RM practices, the benefits arising from RM, and the drivers to the RM implementation. Henschel (2010) explores the current state of RM in German SMEs and concludes that they are characterized by very different levels of RM sophistication, especially in terms of RM process in a strict sense (e.g., risk evaluation by category, frequency and time horizon of risk identification). They also show low levels of responsibility for implementing and reviewing RM, risk communication and documentation. Two contributions focus on the Italian context: in a quite dated study, Petroni (1999) describes different behaviour towards RM according to firm size. The smallest companies (0-19 employees) seemed to be insurance-oriented and not much concerned about RM, they analysed

risks in an approximate fashion and assumed compliance with the regulations in force as the main decision-making criterion. The biggest companies (100-299 employees) were more likely to assume a global approach to RM, adopt overall risk policy, business interruption policies, and self-insurance. Companies in the middle (20-99 employees) considered RM primarily as a risktransfer related activity, again favouring insurance contracts; they assume decisions mainly based on other firms' behaviour, brokers' advice, and adherence to legislation. More recently, Aureli and Salvatori (2013) have analysed ten case-studies and confirmed the general perception that SMEs do not appoint risk managers or establish a specific RM function or department. Despite the lack of formalization of the RM process, the authors indicate that different subjects are involved in RM, e.g., the board of directors, first level managers, and the planning and control department. The critical issues in RM implementation underlined by the interviewees are related to the limited autonomy in, and budget for, RM organization, and the lack of control over the company risk exposure. As for the RM process, companies recur to one or more techniques like brainstorming, meetings, process analysis, and scenario analysis to identify risks, while they rely on excel sheets (instead of ad hoc software) for risk assessment. Finally, the authors investigate the RM approach and classify two SMEs out of ten as having a holistic RM system in place, three SMEs as following a mix of traditional and integrated approaches, and five companies as relying on a traditional RM system. All such contributions rely on questionnaire survey data to depict the development of RM practices. Although interesting, they are all descriptive studies and do not attempt to explain why companies are more or less prone to adopt RM practices.

A few studies have investigated the actual benefits perceived by SMEs from the development of a RM system, assuming different perspectives. With reference to a sample of Romanian and Cypriot SMEs, Yiannaki (2012) shows that companies handling both risk and crisis management according to a proposed tailored model of balance scorecard obtain a significant improvement of their financial performance. On a sample of Austrian SMEs, Brustbauer (2016) demonstrates that strategic orientation items (i.e., investments in new production and process technologies, expansion to new markets, and introduction of new products) increase significantly when shifting from a passive to an active ERM approach.

Finally, to the best of our knowledge, only the study by Brustbauer (2016) provides empirical evidence on the drivers of the ERM development, showing that firm size, firm sector, and ownership structure are preconditions that

affect the SMEs approach toward specific solutions adopted for risk identification, risk assessment, and risk monitoring.

From the review of the literature on RM in SMEs, it emerges that the empirical evidence about the role of CG in shaping RM within SMEs is still scant and fragmented. The only exception is the recent study by Brustbauer (2016), who demonstrates that the ownership structure affects companies' behaviour toward ERM, with non-family firms being more likely to implement risk-assessment programs and contingency plans, as well as to place a stronger emphasis on risk identification by qualified employees. We contend that the influence of CG in shaping ERM in the specific context of SMEs is worth of further investigation, as from the arguments developed below.

2.3. Research hypothesis

2.3.1. Ownership

There is multiple evidence that the individual characteristics of SMEs owners and SMEs ownership structure have a significant impact on the business direction of an organization as well as on RM practices (Acar and Goc, 2011; Brustbauer, 2016; Gao et al., 2013).

Empirical evidence shows that SMEs owners tend to have a higher perception of risks (Acar and Goc, 2011). Brustbauer (2016) demonstrates that the ownership structure affects companies' behaviour toward ERM, with non-family firms being more likely to implement ERM practices, such as risk-assessment programs, contingency plans and risk identification by qualified employees. This result is of particular interest for our study as prior literature also shows that Italian SMEs are often owned and managed by family (Corbetta and Montemerlo, 1999). Families involved in business generate a particular organizational context, given that the family may affect risk taking in opposite ways. In the literature, there is a lack of agreement on RM practices acted by family owners, thus providing justification for investigating the impact of family ownership on ERM.

There are several arguments supporting the view that family firms engage in risky projects and ventures (Zahra, 2003; Aldrich and Cliff, 2003; Rogoff and Heck, 2003; Zahra et al., 2004). Furthermore, family–business literature stresses the positive role played by family ownership in transmitting both competences and knowledge, which are especially useful to manage risks (Zahra, 2005). In the same vein, other studies have suggested that family

fosters entrepreneurial behaviour (e.g., Astrachan, 2003; Litz, 1995; Rogoff and Heck, 2003) that is characterized by risk taking and management.

However, the main stream of the literature (Huybrechts et al., 2012) argues that family is generally considered a risk-reducing device for several reasons. In general, family firms are reluctant to assume risk because they are often conservative (Aronoff and Ward, 1997; Kets de Vries, 1993; Sharma et al., 1997). Such conservativeness leads to be resistant towards change and face specific risks, such as losing family wealth accumulated over generations (Sharma et al., 1997; Hall et al., 2001). Specifically, family firms often show a higher risk aversion level than non-family firms (Mishra and McConaughy, 1999; McConaughy et al., 2001).

Furthermore, some studies list unique internal characteristics that affect RM in family owned firms. Firstly, some studies argue that the family can generate a situation of internal instability in the business, thereby creating serious problems which amplify the risks (Colli, 2013). The intangible features that create the "familiness" quality of these firms (Habbershon et al., 2003) can be a source of uncertainty (Zahra, 2005). Secondly, family-business stream of literature argues that family firms are characterized by flexible structures (Zahra et al., 2007) and lack systems and rules with high levels of informality (Rothwell, 1992; Vossen, 1998).

The risk aversion of family firms, jointly with the fact that family ownership can foster uncertainty while informal mechanisms of governance are not suitable to manage risks, leads us expect that family ownership impacts negatively on ERM. Drawing on these studies and previous findings by Brustbauer (2016), we propose the following hypothesis:

Hypothesis 1: Family ownership is likely to affect enterprise risk management negatively.

2.3.2. Board of directors

The importance of CG structures in shaping ERM has been widely demonstrated by empirical studies although focused on big-sized and/or listed companies (Beasley et al., 2005; Gordon et al., 2009; Desender, 2011). In particular, previous studies suggest that an effective ERM system is dependent on active participation and monitoring by an organization's board of directors (Gordon et al., 2009; Sobel and Reding, 2004; Kleffner et al., 2003).

It is thus not surprising that several studies on SMEs have focused on board structure: Neville (2011) indicates that SMEs good governance is associated with the existence of the board of directors. On the one hand, the board is an institutional mechanism to protect the interests of shareholders, on the other one, it is a source of expertise and competencies other than that possessed by the typical owner-manager (Majocchi and Strange, 2012; Corbetta and Montemerlo, 1999). The presence of a board of directors helps in achieving the necessary strategic changes (Brunninge et al., 2007). With reference to the Italian context, Aureli and Salvatori (2013) reveal that SMEs with a holistic RM approach tend to centralize risks at the board level and involve first level management in RM. For all these reasons, we test the following hypothesis:

Hypothesis 2: The presence of a board of directors is likely to affect enterprise risk management positively.

2.3.3. Managers

Another fundamental CG feature that may influence ERM practices is linked to presence of external or internal managers. Previous studies stress the importance to hire external members either at board and/or managerial level (Sirmon et al., 2008; Westhead and Howorth, 2007): these external members may play a role to overcome the internal lack of resources and complement the management team with experience, knowledge and skills, and external influences (e.g., Castaldi and Wortman, 1984; Gabrielsson and Huse, 2005). In the SMEs context, Brunninge et al. (2007) investigate how outside directors and managers promote strategic change in SMEs, while Arregle et al. (2012) demonstrate how external parties in the governance may serve as a catalyst for their internationalization. Drawing on these studies, we thus test the following research hypothesis:

Hypothesis 3: The presence of external managers is likely to affect enterprise risk management positively.

2.4. Research design

2.4.1. Regression model and variables

To verify whether CG features affect ERM development in SMEs, we estimate multivariate ordered probit regression models in the following form:

$$\begin{aligned} \pmb{ERM_{it}} &= \alpha + \beta_1 nofamily_{it} + \beta_2 board_{it} + \beta_3 manager_{it} + \beta_4 size_{it} + \\ \beta_5 roa_{it} + \beta_6 leverage_{it} + \beta_7 age_{it} + \sum_{j=8}^{17} \beta_j industry_{it} + \varepsilon \end{aligned} \tag{1}$$

The dependent variable captures the level of ERM development within sampled SMEs. Measuring the development of ERM practices is a demanding task that has been faced differently by different researchers. A dichotomous approach has been preferred with reference to big, listed companies in the US, where ERM has often been proxied by looking at single aspects like the appointment of a chief risk officer or a risk committee (Liebenberg and Hoyt, 2003; Hoyt and Liebenberg, 2011; Pagach and Warr, 2011; Beasley et al., 2008). However, recent papers summarise ERM sophistication by designing composite scores and indexes, to consider various aspects of the ERM system (Desender, 2011; Florio and Leoni, 2017; Baxter et al., 2013; Ormazabal, 2010). In terms of data sources, some studies make reference to annual reports (Ellul and Yerramilli, 2013) or agency ratings (McShane et al., 2011), while others rely on surveys to chief audit executives (Beasley et al., 2005; Beasley et al., 2008). When we move our attention from big US companies to Italian SMEs, the tools available to proxy for ERM are much more limited. First, SMEs do not issue CG reports, neither disclose they much voluntary information on ERM and CG in mandatory annual reports. Therefore, a secondary data collection based on public information is not possible, and to the purpose of a large-sample study the data on ERM and CG shall be collected by means of a questionnaire. Moreover, a recent study by Florio and Leoni (2017) demonstrates that key-ERM figures like the chief risk officer are present only in few Italian listed companies and even the risk committee is quite new CG systems, thus we cannot expect to find similar ad hoc figures in SMEs. Therefore, to capture ERM development in the context of SMEs we combine the approaches proposed by the recent studies developed by Brustbauer (2016) and Florio and Leoni (2017). More specifically, we make reference to the questionnaire designed by Brustbauer (2016), who measures ERM by asking companies 12 questions to understand the approach and tools adopted to the aim of risk identification, risk assessment, and risk monitoring (4 questions each). The advantage of referring to this

questionnaire (see paragraph 3.2), is that it allows obtain quite a comprehensive picture of the ERM specific approaches and practices adopted by each company while asking a limited number of questions. To obtain a more comprehensive view of ERM instead of a fragmented one (i.e., ERM item by ERM item), we then follow the approach by Florio and Leoni (2017) and create an overall ERM measure: as responses to the questionnaire are provided on a 7-point Likert scale, we create a unique categorical variable ranging from 12 to 84 points.

The test variables in Equation (1) depict the CG individual features hypothesized as possible ERM drivers and are all dichotomous variables. In order to test Hp1, we consider firm ownership and distinguish between family and non-family firms by classifying a company as family owned if one or more family components are among the first three proprietors of the company itself. We define the test variable *nofamily* equal to 1 if the company is owned by subjects different from a family, and 0 if it is family owned. As previous literature suggests that non-family firms are more likely to adopt ERM tools (Brustbauer, 2016), we expect *nofamily* is positively associated with ERM. Hp2 is tested by considering if the SME has appointed the board of directors, as the main CG organism entrusted to assume strategic and operating managerial choices. The variable board is thus equal to 1 if the company has a board of directors, and 0 otherwise. Hp3 is tested by considering whether at least one key-manager has been recruited in his/her position from externally (i.e., he/she has not reached this role following a process of internal growth). The variable manager is therefore equal to 1 if the general manager and/or the manager responsible for the strategy and planning function and/or the manager responsible for the administration, finance and control function has been hired from outside the company, and 0 otherwise.

As previous literature suggests that RM implementation may be guided by factors different from CG, the regression model controls for a number of firm characteristics. More specifically, we control for size (*size*), whose importance is noted by all existing frameworks on RM (e.g., NSW Department of State and Regional Development, 2005; COSO, 2004). Indeed, firm size is likely to both affect the scope of firm risks, differentiating their nature, timing, and extent, and constrain the resources available for the RM system (Baxter et al., 2013; Liebenberg and Hoyt, 2003; Paape and Speklé, 2012; Desender, 2011; Pagach and Warr, 2011). With reference to US listed companies, existing empirical studies demonstrate that bigger firms are more likely to implement ERM systems (Beasley et al., 2005; Hoyt & Liebenberg, 2011; Liebenberg & Hoyt, 2003). The same result has been found by Mafrolla et al. (2016) and by Petroni (1999) with reference to Italian private

companies and SMEs, respectively. Moreover, Falkner and Hiebl (2015: 140) underline that 'the sophistication of risk management may increase and/or the risk-taking attitude of SME owners may change with growing firm size. This may indicate that risk management systems in SMEs are not stable over time, but contingent to certain developments'. In an empirical investigation of German SMEs, however, Henschel (2010) finds that micro and small firms records lower scores compared to medium companies only on a few aspect of RM organization, but not of RM process. As the existing literature suggests that more profitable firms can invest more resources in RM systems, we include in the regression model a control for the performance (roa) previously achieved. With reference to Italian private companies. Mafrolla et al. (2016) find a positive impact of a one-year change in operating performance on ERM implementation. Differently, Florio and Leoni (2017) demonstrate that Italian listed companies showing more advanced ERM systems recorded higher operating profitability compared to companies with no or less sophisticated ERM in the medium term preceding the analysis, yet not in the short term. Following the last approach, in this study firm performance is proxied by the average return on assets ratio (ROA) of the previous 5 years. We control for firm leverage (leverage) as existing literature suggests that firms with greater leverage are more likely to suffer from financial distress than firms with low leverage (Liebenberg and Hoyt, 2003; Pagach and Warr, 2011), and therefore they shall pay more attention to RM. In the context of SMEs further issues arise as they tend to be undercapitalized and to rely on financial debts. Indeed, previous literature emphasizes that bank loans are often the main source of finance available to SMEs, which highly depend on external finance due to the aversion of the proprietor or the family owners to open the participation to share capital to external parties. Highly leveraged SMEs may therefore adopt proper ERM tools to show the banks and other potential money-lenders that they are monitoring their risk exposure and prompt to face negative events. Also, having a sound RM system in place may favour SMEs while negotiating collaterals required by the banks and interest rates, especially considered that SMEs show a preference for fixed-rate loans (Vickery, 2008; Petrakis, 2005). However, Mafrolla et al. (2016: 677) argue that highly leveraged companies 'might lack the finances to invest in high-quality ERM'. Furthermore, we control for company age since its foundation (age). Young firms systematically differ from older firms in their business practices as they generally have greater uncertainty about their future profitability (Li, 2008; Kotha et al., 2011; Huang et al., 2014). Also, previous studies show that firm age appears to reduce risk taking propensity (e.g., Nguyen, 2012). Finally, we control for

industry (*industry*), as companies pertaining to different fields of activity may be more or less prone to adopt ERM practices (McShane et al., 2011; Baxter et al., 2013; Bertinetti et al., 2013; Brustbauer, 2016). Evidence is mixed, however: Petrakis (2005) shows that the characteristics of the industry are very important in Greece because unstable demand or rapid technological change may influence the individual risk perception, while referring to the German context Henschel (2010) finds that significant differences appear only as far as planning sophistication and instruments for performance measurement are concerned. All variables included in the model and data sources are illustrated in Table 1.

Table I – Variable definitions

Variables	Description	Source
ERM mea	sures	•
ERM	Categorical variable measuring the RM development. It potentially ranges from 12 to 84.	Questionnaire
risk_ia	Categorical variable measuring the risk identification development. It potentially ranges from 4 to 28.	Questionnaire
risk_ass	Categorical variable measuring the risk assessment development. It potentially ranges from 4 to 28.	Questionnaire
risk_mon	Categorical variable measuring the risk monitoring development. It potentially ranges from 4 to 28.	Questionnaire
CG featur	res	
nofamily	Binary variable equal to 1 if none of the first three firm owners is represented by family components, and 0 otherwise.	Questionnaire
boara	Binary variable equal to 1 if none of the firm has a Board of Directors, and 0 otherwise.	Questionnaire
manager	Binary variable equal to 1 if at least one between the general manager, the manager responsible for the strategy and planning function, and the manager responsible for the administration, finance and control function has been hired from outside the company, and 0 otherwise.	Questionnaire
Firm char	racteristics	•
size	Natural logarithm of the firm turnover.	Questionnaire, year 2014
roa	Continuous variable measuring the average operating performance of the acquirer in the last 5 years, proxied by the return on assets ratio (ROA).	AIDA, years 2010-2014
leverage	Continuous variable measuring the level of firm indebtedness, proxied by the ratio of total assets to equity at the end of the year.	AIDA
age	Continuous variable measuring the firm age since its foundation.	Confindustria Vicenza
industry	Categorical variable representing the industry to which the firm belongs according to the ATECO 2007 classification. Equal to 1 for Food and beverages, 2 for Textile and leather, 3 for Paper and printing, 4 for Chemical and pharmaceutical, 5 for Steel, 6 for Electronics, 7 for Commerce, 8 for Rubber and plastic, 9 for Mechanical and vehicles, and 10 for Other industries.	Confindustria Vicenza

AIDA is the Italian company information and business intelligence database provided by Bureau van Dijk.

2.4.2. Questionnaire

This study relies on a survey, defined as a quantitative research methodology aimed at gathering information about the perceptions, attitudes, opinions, behaviours, experiences, or other aspects of a group of individuals by means of open-ended or closed-ended questions structured in a standard questionnaire layout and submitted by direct administration, telephone, interviews, mail, or website (Leedy and Ormrod, 2010; Creswell, 2014).

The questionnaire used in our data collection includes mainly closedended questions and can be divided into 3 sections. In the first section, we collect information about the entity's ownership, in particular information about family ownership. In the second section, we focus the entity's managerial features, in particular the presence of the board of directors and top managers recruiting process. The last section captures the entity's ERM system. It is based on the contribution by Brustbauer (2016), who analysed the ERM implementation in SMEs considering three dimensions: risk identification, risk assessment, and risk monitoring. Each dimension considers 4 items, and the responses to each question are requested on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The final ERM indicator (ERM) is defined by adding the scores assigned to the different items of each dimension, so as to obtain an all embracing measure of ERM development as suggested by recent literature (Desender, 2011; Florio and Leoni, 2017; Baxter et al., 2013; Ormazabal, 2010). The items considered in the third section of the questionnaire are listed in Table 2.

Table 2 – Wording of the ERM items.

Risk identification

Qualified employees focus exclusively on identifying risks.

Our company employs external experts to identify risks.

Our company writes a report on identified risks.

Our company seeks professional advice as needed.

Risk assessment

Our company continuously compares itself with competitors.

We survey our customers for their satisfaction with the products we offer.

We act according to a strict business plan.

Our company has implemented a risk-assessment program.

Risk monitoring

Our company's business objectives are clearly defined.

To prevent errors, we use a checklist.

We always check work when finished.

We have a contingency plan for emergencies.

Source: Brustbauer (2016)

2.4.3. Institutional setting and sample

The analysis has been carried out in the province of Vicenza that is located in the North East of Italy. This geographical area is characterized by a particular economic context where business is mainly driven by SMEs, and in particular by family firms (Lionzo, 2009).

Prior literature highlighted the good performance of Italian North East regions with a high share of small firms, in contrast with the poor and decreasing rate of growth of the traditional large firms of the North-Western part of the country (Camagni and Capello, 1999). The economic success of North East regions has been attributed to the high flexibility of SMEs with respect to market uncertainty, their innovativeness in terms of customized production, and the existence of industrial district economies accompanying territorial specialization. A relevant characteristic of the local business system, which is linked to the prevalence of SMEs, is the existence of industrial districts: the first regarding machinery and equipment, the second concerning gold products, and the third regarding textile and tanning industry.

Some features of Vicenza are particularly relevant for our analysis about ERM: a high presence of SMEs (Lionzo, 2009) and a deep orientation towards the internationalization (Majocchi and Zucchella, 2003). Such features are of great interest for interpreting the approach to ERM, given that they influence the available financial resources to be invested in ERM along with the plethora of risks to which a company is exposed. In particular, SMEs suffer from internal constraints related to the scarcity of the financial, managerial and information resources necessary to face risks and uncertainty (Mariotti and Piscitello, 2001).

Data collection is based on two sources: the first one is a private dataset derived from the survey described in paragraph 3.1; the second one is represented by a panel of official financial reporting data of the surveyed firms for the period 2009-2014, which were downloaded from the database AIDA.

The survey has been conducted on firms located in the Province of Vicenza and affiliated to the local industrial association, namely Confindustria Vicenza, which supported the data collection helping us get in touch directly with the respondents. We selected SMEs according to the definition provided by the European Commission (2003, Art. 2) and included in the sample companies 'which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million'. We excluded microenterprises with less than 10 employees and less than EUR 2 million annual turnover and/or annual

balance sheet. Among the SMEs we selected industrial and market-service, thus excluding agriculture and public administration.

SMEs were contacted by an e-mail sent by Confindustria Vicenza to the institutional e-mail address of the company, to the concern of the entrepreneur and/or top managers. The questionnaire was made available on a dedicated website, accessible by a link included in the e-mail itself. One month after the first contact, a second e-mail was sent to non-respondents, and then they were also contacted by telephone by a research assistant. The questionnaire remained available for 5 months, since mid November, 2015 to mid April, 2016.

We initially submitted the questionnaire to 512 firms. We asked the entrepreneur or the manager who runs the firm (e.g., general manager, chief executive officer/managing director, or sole director) to fill in the questionnaire, guaranteeing the confidentiality of his/her identity with the aim to maximize the reliability of information. 141 questionnaire have been collected with a response rate of 28%, in line with previous empirical studies (Brustbauer, 2016; Henschel, 2010). Out of the 141 respondent firms, the full set of data (from the questionnaire and from the database AIDA) is available for 105 firms, as showed in Table 3.

Table 3 – Sample selection.

	Total
Number of SMEs located in Vicenza	2.952
Number of firms required for the questionnaire	512
Number of respondent firms	141
Response rate	28%
Number of firms with all data available	105

2.5. Results

2.5.1. Descriptive statistics

The descriptive analysis for each dependent and independent variable designed to the purpose of this study is presented in Table 4.

The dependent variable *ERM* is constructed as a score that may range from 12 to 84. The variable has an average value of 64, signalling quite a good level of ERM development by sampled SMEs on average; however, the standard deviation is 9.4, underlying quite a high variability among sampled SMEs.

Referring to the independent variables, Table 4, Panel B, shows that 53% of the firms in the sample are not family owned companies. 87% of companies have constituted a board of directors, while less than 40% have hired from outside the company at least one manager among the general manager, the manager responsible for the strategy and planning function, and the manager responsible for the administration, finance and control function.

The distribution of firms by industry (Table 4, Panel B) is consistent with the importance of the main industrial districts of the territory. Almost 24% of the firms are centred in the Steel industry that includes the gold industry; slightly more than 10% are operating in the Electronics industry that matching with the Mechanics and vehicles industry (17%) represent the most innovative industrial districts of the territory. The Textile and leather industry plays an important role in the local business, and more than 11% of the sampled companies work in that industry.

We perform some collinearity diagnostics, reported in Table 5. Spearman rank correlations show no or just weak correlations between test and control variables (below 0.39). Moreover, mean VIF is around 1 and the Condition Number is lower than 10. According to conventional rules, such values signal multicollinearity is not a serious concern in the model, thus permitting the use of multiple regression analysis to test the hypotheses.

Table 4 – Descriptive statistics.

Panel A: Summary statistics for ERM measures, CG, and firm characteristics.

Variable	Mean	SD	Min	Max	
ERM	64.02	9.46	41	84	
risk_ia	19.14	4.18	6	28	
risk_ass	22.61	3.16	13	28	
risk_mon	22.27	4.06	7	28	
size	4.18	4.12	22	17.25	
roa	23.93	29.04	-47.91	155.67	
leverage	5.30	15.91	-36.30	143.60	
age	34.62	22.90	2	193	
N	105				

Variable definitions appear in Table 1.

Panel B: Frequency distribution of CG features, and industry.

Variable	Equal to	Freq.	Percent	Cum.
nofamily	0	49	46.67	46.67
	1	56	53.33	100.00
	Total	105	100.00	
board	0	14	13.33	13.33
	1	91	86.67	100.00
	Total	105	100.00	
manager	0	65	61.90	61.90
	1	40	38.10	100.00
	Total	105	100.00	
industry	1 Food and beverages	7	6.67	6.67
	2 Textile and leather	12	11.43	18.10
	3 Paper and printing	5	4.76	22.86
	4 Chemical and pharmaceutical	7	6.67	29.52
	5 Steel	25	23.81	53.33
	6 Electronics	11	10.48	63.81
	7 Commerce	8	7.62	71.43
	8 Rubber and plastic	7	6.67	78.10
	9 Mechanical and Vehicles	18	17.14	95.24
	10 Others	5	4.76	100.00
	Total	105	100.00	

2.5.2. Multivariate analysis

The results of the multivariate analysis on the drivers of ERM, reported in Table 6, show that the absence of family ownership (nofamily) positively impacts on the level of ERM (p<0.1), thus supporting Hp1. Such result indicates that family ownership reduces ERM development in line with Brustbauer (2016). Further, the presence of a board of director (board) is significantly associated with ERM development (p<0.01) consistently with Hp2. The result confirms the idea that the board (i.e. a formal and collective body in the governance structure) plays a crucial role in the developing and functioning of ERM, in line with Aureli and Salvatori (2013). No significant relationships are detected between the presence of externally hired managers (manager) and ERM practices. Thus, Hp3 is not supported. This finding is not in line with the idea that external key figures may support ERM (Brunninge et al., 2007).

As far as control variables are concerned, we notice that despite previous literature strongly suggests to control for size, previous performance, leverage, and company age while investigating the drivers of the ERM development, no one of such variables results as significant in our models.

Overall, the analysis lends large support to our theoretical argumentation on the role of CG in shaping ERM in SMEs and is in line with previous studies (e.g., Huybrechts et al., 2012; Gordon et al., 2009; O'Regan and Ghobadian, 2005; Brustbauer, 2016; Aureli and Salvatori, 2013; Brunninge et al., 2007).

	Table $5-5$	Spearman	rank correi	lation matrix
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	ERM	risk_id	risk_ass	risk_mon	nofamily	board	manager	size	roa	leverage	age
ERM	1										
risk_id	0.8118*	1									
risk_ass	0.8141*	0.4694*	1								
risk_mon	0.8504*	05419*	0.6374*	1							
nofamily	0.1135	0.1382	0.0703	0.0799	1						
board	0.2790*	0.1778	0.2565*	0.2225*	-0.1984*	1					
manager	-0.0437	-0.1917	0.0852	-0.0010	-0.0131	0.0769	1				
size	0.0871	0.0417	0.1073	0.0901	0.0517	0.1359	0.2673*	1			
roa	0.0080	-0.0817	0.1357	-0.0693	-0.0529	-0.0102	0.0162	0.0781	1		
<i>leverage</i>	-0.1065	-0.0842	-0.1173	-0.0700	0.0579	-0.2685*	-0.0353	-0.0189	-0.1862	1	
age .	0.1726	0.1226	0.0847	0.1908	-0.0892	0.1059	0.1058	0.1877	0.1006	-0.0524	1

Variable definitions appear in Table 1.

The Table reports Spearman rank correlation coefficients.

^{*} denotes significance at the 5% level.

Table 6 – Drivers of ERM in SMEs.

	(1)	(2)	-
	erm_cv	erm_fullCG	
nofamily		0.4015*	-
		(0.2153)	
board		1.0989***	
		(0.3269)	
manager		-0.1275	
		(0.2118)	
size	-0.0265	-0.0297	
	(0.0257)	(0.0259)	
roa	-0.0008	-0.0020	
	(0.0035)	(0.0035)	
leverage	-0.0053	-0.0074	
	(0.0068)	(0.0068)	
age	0.0018	0.0031	
	(0.0047)	(0.0048)	
industry dummies	Yes	Yes	
N	105	105	
pseudo R ²	0.013	0.031	

Ordered probit regression model. Standard error in parentheses.

All variables are defined in Table 1.

2.5.3. Additional analysis: The drivers of single ERM components

The main regression analysis investigates the CG drivers of the overall ERM system implemented by sampled SMEs. Following the approach by Brustbauer (2016), the ERM is thus defined with reference to three different components: risk identification (*risk_id*), risk assessment (*risk_ass*) and risk monitoring (*risk_mon*). Therefore, in an additional test we verify whether the single ERM components are driven by different CG features. To such extent, we estimate the following ordered probit regression model:

$$\begin{aligned} risk_id/risk_ass/risk_mon_{it} &= \alpha + \beta_1 nof amily_{it} + \beta_2 board_{it} + \\ \beta_3 manager_{it} + \beta_4 size_{it} + \beta_5 roa_{it} + \beta_6 leverage_{it} + \beta_7 age_{it} + \\ \sum_{i=8}^{17} \beta_i industry_{it} + \varepsilon \end{aligned} \tag{2}$$

Summary statistics of the ERM components, reported in Table 4, Panel A, show that *risk_id* has a mean score of 19, while *risk_assessment* and *risk_monitoring* obtain the higher mean score of around 22. Compared to the

^{***} p<0.01, ** p<0.05, * p<0.10

maximum score attainable by each company (i.e., 28 points), such descriptive signals quite a good level of development of all the ERM components.

The results of the regression analysis demonstrate the existence of a relationship between CG variables and risk identification (*risk_id*) largely in line with the main analysis as shown in Table 7. In particular, in support of Hp1 and Hp2, a positive and significant relationship is found between both the variables *nofamily* and *board*, on the one hand, and the variable *risk_id*, on the other hand. However, the analysis shows a negative association between *manager* and *risk_id*, suggesting that hiring an external manager negatively impacts on risk identification practices at 5% level. Therefore, Hp3 is rejected.

With reference to risk assessment (*risk_ass*), Table 7 shows that the results are partially consistent with the main analysis. We support Hp2 by showing a positively and statistically significant association between *risk_ass* and both *board*: the presence of a board of directors fosters risk assessment practices. Pertaining the absence of family ownership, the variable *nofamily* has a positive but not statistically significant impact on the level of risk assessment, thus Hp1 is not supported.

Finally, the results of the additional test considering risk monitoring (*risk_mon*) totally support the main analysis as from Table 7: the absence of a family ownership and the presence of a board of directors are significant drivers of risk monitoring, supporting Hp1 and Hp2.

Overall, this additional test provides strong evidence on the fact that the presence of a collective board of directors is a fundamental driver of ERM both as a whole and as single components: risk identification, assessment and monitoring. This result is in line with previous studies that demonstrate the fundamental role of the board of directors in developing the ERM system (Gordon et al., 2009; Sobel and Reding, 2004; Kleffner et al., 2003). It suggests that even in SMEs the board acts as a governance body apt to provide competence not only to achieve the necessary strategic changes (Brunninge et al., 2007), but also to foster ERM. Non-family ownership is an influential driver of single ERM components, whilst this is not the case for the presence of external managers as it has no impact on risk assessment and monitoring and a negative impact on risk identification. This last result suggests that external managers are probably hired for reasons other than their specific competences on ERM and deserves further empirical investigation.

Table 7 – Additional analysis on the drivers of risk identification, assessment, and monitoring in SMEs

	(1)	(2)	(3)	(4)	(5)	(6)
	risk_id_cv	risk_id_fullCG	risk_ass_cv	risk_ass_fullCG	risk_mon_cv	risk_mon_fullCG
nofamily		0.3650*		0.2306		0.3494*
		(0.2162)		(0.2154)		(0.2171)
board		0.7133**		1.0339***		0.9655***
		(0.3195)		(0.3256)		(0.3272)
manager		-0.4278**		0.1331		-0.0717
		(0.2141)		(0.2139)		(0.2144)
size	-0.0250	-0.0227	-0.0327	-0.0386	-0.0054	-0.0082
	(0.0259)	(0.0260)	(0.0259)	(0.0262)	(0.0259)	(0.0262)
roa	-0.0007	-0.0016	0.0038	0.0029	-0.0044	-0.0056
	(0.0035)	(0.0035)	(0.0036)	(0.0035)	(0.0036)	(0.0036)
leverage	-0.0021	-0.0041	-0.0052	-0.0063	-0.0038	-0.0055
	(0.0068)	(0.0068)	(0.0068)	(0.0068)	(0.0068)	(0.0068)
age	-0.0001	0.0021	-0.0009	-0.0012	0.0058	0.0070
	(0.0047)	(0.0048)	(0.0047)	(0.0048)	(0.0048)	(0.0048)
industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	105	105	105	105	105	105
pseudo R ²	0.025	0.042	0.024	0.045	0.016	0.035

Ordered probit regression model. Standard error in parentheses.

2.6. Conclusions

From the review of existing empirical evidence on RM in SMEs, it emerges that research about the role of CG in shaping ERM within SMEs is still scant and fragmented. This study aims at opening this "black box" and providing original empirical evidence of the association between CG and ERM by considering a number of CG issues that go beyond the traditional distinction between family and non-family ownership (Brustbauer, 2016) to take into account also managerial aspects.

The empirical evidence is obtained by a survey carried out in the context of SMEs in the county of Vicenza. The questionnaire measures ERM by asking companies 12 questions to understand the approach and tools adopted to the aim of risk identification, risk assessment, and risk monitoring (Brustbauer, 2016). The questionnaire also poses questions on ownership, board of directors and key managers.

The results indicate that the presence of a board of directors and the absence of the family ownership are effective drivers of the ERM

All variables are defined in Table 1.

^{***} p<0.01, ** p<0.05, * p<0.10

implementation. Conversely, the presence of external managers is not significant. An additional test investigates the impact of specific CG features on specific dimensions of the ERM system. It clearly demonstrates that the board of directors is a powerful determinant of more advanced risk identification, assessment and monitoring techniques. It also shows that the absence of the family ownership is positively associated with risk identification and monitoring, while the presence of managers hired from outside the companies shows some contradictory results that call for further investigations. Overall, the results support our theoretical argumentations on the role of CG in shaping ERM in SMEs, even though some results are counterintuitive.

Our empirical contribution is not free from limitations, which also represent future research opportunities. First, we rely on the approach proposed by Brustbauer (2016) and consider the ERM system in its three components of risk identification, assessment, and monitoring. Even if we develop a holistic measure of ERM that is in line with previous studies, future research could operationalize and measure ERM in different ways (Arena et al., 2010; Florio and Leoni, 2017). Second, we focus on some specific CG features related with ownership (family versus non-family owned business), board of directors (collective board versus sole director) and managers (presence of external versus internal managers). Future research could augment our results considering different CG features (e.g., board independence) as well as considering different management characteristics (e.g., education) which may affect the ERM components. Furthermore, the role of the family ownership on ERM development requires a deeper understanding. In particular, the involvement of family member in the CG calls for detailed evidence in respect to the effect on the ERM and each of its components. Finally, the external validity of our findings is necessarily anchored to the sample selected, namely SMEs located in the county of Vicenza. Future studies could extend our analysis to a different sample for comparative purposes. Overall, the research has both theoretical and practical implications shedding light on the fundamental role played by CG features in shaping ERM practices in the SMEs context.

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Il tema della comunicazione esterna agli *stakeholders* è da sempre, per l'aziendalista, un'area di studio di estrema attualità, nel cui ambito, l'attenzione degli studiosi e dei *practitioners* si è indirizzata alla comunicazione *econo-mico-finanziaria*, dove il bilancio di esercizio riveste un ruolo centrale quale strumento informativo di sintesi della dinamica gestionale. In tempi più recenti i confini della comunicazione esterna si sono ampliati nelle forme e nei contenuti, attribuendo un rinnovato interesse a tematiche in passato relegate a ruoli "di contorno": l'importanza della comunicazione in materia di sostenibilità ambientale e di salvaguardia delle risorse naturali, di tutela dell'occupazione e sicurezza dei lavoratori, di sviluppo socio-culturale del territorio, e così via. Sono poi oggetto di rinnovato interesse anche tutte le tematiche di bilancio più tradizionali, sia in ragione della entrata in vigore di nuovi standard contabili di riferimento, sia in ragione dell'attenzione oggi indirizzata alle cd. "non GAAP measurement".

Nel quadro delineato si è collocato il Convegno Sidrea 2018 dedicato al tema "Nuove frontiere del reporting aziendale. La comunicazione agli stakeholders tra vincoli normativi e attese informative". La presente pubblicazione accoglie una parte rilevante dei contributi presentati e discussi nel corso delle sessioni parallele del Convegno.

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