# THE BUCHAREST UNIVERSITY OF ECONOMIC STUDIES

## FACULTY OF ACCOUNTING AND MANAGEMENT INFORMATION SYSTEMS

**Proceedings**
**of the 8th International Conference**
**ACCOUNTING AND MANAGEMENT INFORMATION SYSTEMS**
# AMIS 2013

EDITURA ASE

ISSN 2247-6245
ISSN-L 2247-6245

June 12-13, 2013
The Bucharest University of Economic Studies
Piata Romana No. 6, Sector 1,
Bucharest, Romania

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## PS1 Risk Management

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# THE CURRENT STATE OF RISK MANAGEMENT IN ITALIAN SMALL AND MEDIUM-SIZED ENTERPRISES

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**ABSTRACT**
*Risk management literature mainly refers to large companies. When it focuses on SMEs, risk management seems to be unstructured, reactive and solely in the hands of owner-managers. Further investigation is necessary, especially in Italy where SMEs are the backbone of the country. This research aims to identify the most important risks, SMEs' risk management organization, process and approach, as well as drivers, obstacles and benefits of a holistic risk management implementation. Ten case studies indicate that Italian SMEs are aware of the benefits of implementing holistic risk management practices, but constraints seem to be stronger than drivers. Companies are particularly concerned with financial risks, IT breakdown and exogenous events. Risk managers are never appointed and risk management processes are usually not formalized. Half of the companies behave fatalistically, others have introduced holistic risk management practices, and few cases show to be even more advanced.*

**KEYWORDS**
*Risk management, risk approach, small businesses; SMEs, Italy*

## INTRODUCTION

A lot has been said about risk management in the last decade, and as economic uncertainty grows the conversation over risk management is gaining popularity. Scandals, the financial crisis, natural disasters, and increasing uncertainty raise the question whether proper risk management practices are in place and to what extent they are being followed (Power, 2007). Several different risk management frameworks and guidelines have been developed, and most of the risk management literature that exists underlines the benefits of implementing a holistic and strategic approach to risk management for seamless integration with company performance management (Kaplan, 2009).

Banks, insurance companies and large corporations represent the main focus of professionals' and academia's attention. Actually, the available risk management standards and frameworks have been developed with reference to large companies.

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The paper is part of a common research project developed by the two authors, however Salvatori wrote the Introduction, par. 1.1 and 3, while Aureli wrote par. 1.2, 2, 4 and the Conclusions.

On the contrary, research on risk management rarely focuses on small and medium-sized enterprises (SMEs).

One could argue that risk management in SMEs is different from the one proposed and investigated in large companies, because of their specific features (such as the role of the owner-manager) and constraints (e.g. lack of financial, technical and human resources) (e.g. Henschel, 2006; Raghavan, 2005). Nonetheless, the importance of risk management does not decrease with the size of the company. Also SMEs have to face the challenge of how to remain viable amidst an increasing competitive market.

Previous research that focused on SMEs shows the important role of the owner-manager and the presence of a risk management process that is rudimentary at best. Risk management practices are poorly formalized and scarcely linked with the strategic planning (e.g. Henschel, 2006; ICAEW, 2005; Pradala and Bandula, 2012).

With reference to the current state of risk management in Italian SMEs, no recent research can be reported, with the exception of one conducted by Verbano and Petroni (1997), despite the fact that SMEs account for 98% of the entire business population and employed more than 60% of the total Italian work force in 1990s (OECD, 1998).

Thus, this paper addresses two research questions: what are the features of current risk management practices in Italian SMEs? Do SMEs adopt the same systems or frameworks of those adopted by large companies to manage risks? The answers are given by investigating some Italian SMEs working in the manufacturing sector. Partially following the research carried out by Henschel (2006), this study aims at understanding SMEs' state of risk management by examining: (a) the array of risks considered important, (b) the risk management organization, (c) the risk management process, (d) the risk management approach currently adopted, and finally (e) drivers, obstacles, and benefits associated to the implementation of a holistic risk management approach.

The paper is structured as follow. First of all, it provides a review of the literature that describes the rising importance of risk management, the features of a holistic risk management approach, and the state of the research about risk management in SMEs. Par. 2 describes the methodology chosen, followed by the description of the case studies (par. 3), discussion (par. 4), and conclusions. (par. 5).

## 1. LITERATURE REVIEW

### 1.1. Increasing importance of enterprise-wide risk management

Companies are increasingly required to manage risks and uncertainty, while they also recognize the benefits of implementing risk management systems in order to produce long-term value. In the managerial perspective, risk has been mainly defined as either the possibility of a negative economic consequence of an event (Crouhy *et al.*, 2006) or a situation with a two-sided outcome - i.e., potential loss or gain (Rahardjo and Dowling, 1998; Liebenberg and Hoyt, 2003). In any case, the concepts of risk and uncertainty are deeply related, since the former does not exist without the latter (Hetland, 2003).

Uncertainty generates the possibility that future events, both positive and negative, might produce a reality with unwanted or unexpected characteristics (Renn, 1998; McNamee, 1998). Risk management is not about how to avoid or reduce risks, but about the adequateness of risk taking: how to actively select the type and the level of risk that is appropriate for the firm to take (AICPA, 2008; Crouhy *et al*., 2006).

The roots of risk management date back to the 1960s in the insurance sector. Since then, many advancements have been made in order for companies to face a "riskier society", but many of these same advancements have been developed out of reaction to embarrassing corporate scandals, natural disasters and, last but not least, economic downturn.

Risk management approaches have evolved, shifting attention from just quantifiable risks to incorporating even more difficult risks to manage - unquantifiable risks. Moreover, risk management evolved from the so called "silos" approach, that addresses primarily insurable risks and financial risks within the single business unit or function, to an enterprise-wide one (Beasley *et al*., 2005) that allows the recognition of interdependencies among risks, the identification of the overall risk exposure and the connection to the strategy.

Although some authors interpret this process as an evolution in risk management practices (i.e. Sadgrove, 1997), others argue their actual coexistence (i.e. Mikes, 2005).

The emergence of holistic risk management is aligned with the shift from a reactive risk management approach to a proactive one (Smallman, 1996). The former considers just risks that are perceived as immediate threats and therefore quantified by decision rules based on predetermined risk tolerances. A proactive approach rather recognizes the limits of forecasting and, in turn, the inadequacy of the related risk retention and risk acceptance decisions. Therefore, companies must avoid, prevent, and reduce their exposure to risks.

The link between risk management and strategy has been emphasized, since risk pertains to the uncertainty involved in decision-making and nonetheless with strategic planning (Baird and Thomas, 1985). All frameworks that have been lately developed as enterprise-wide, such as the COSO ERM (COSO, 2004), AS/NZS 4360:2004, FERMA and ISO 31000:2009, share the premise that risk management strategy should be developed to align risk strategies, business objectives and key strategies.

Enterprise-wide risk management systems look at the array of risks to which a company is exposed in a holistic fashion, and they are based on specific activities - namely risk identification, assessment, responses and control. The risk identification activity can use a number of analytical (e.g. flow charts, cause and effect analysis, checklists of risk categories and factors) or creative tools (such as brainstorming, interviews, scenario planning, Delphi method). Once the sources of risk to which the company is exposed have been identified, risk evaluation and analysis support the prioritization.

Such activities are based on categorization of risks and the estimation of both their likelihood and impact. When the quantification of impact is not possible, the company recurs to quantitative (e.g. statistical) and qualitative methods (e.g. experience). The prioritization allows choosing the best way for handling risks: risk avoidance or prevention, risk reduction, risk transfer, and risk acceptance. Overall entity risk or business unit risk should be assessed as well, recurring to aggregated risk measures or translating different risk measures into a common unit of measure (i.e. earning per share). Internal communication is an important part of the risk management process as and information must flow throughout the organization. There must also be a tool in place to evaluate the adequateness and effectiveness of the risk management processes as they are being implemented.

The effectiveness of a holistic risk management approach relies on efforts at every level of the organization. The Board of Directors has the ultimate responsibility of understanding the risks of the company. They too must ensure that risk management processes are being effectively implemented by senior executives and risk management professionals and are functioning as designed (Branson, 2010). The board should devote time to discuss and analyze information about the entity's risk management program and the most significant risks impacting the company's ability to reach strategic objectives. The primary risk oversight responsibility may be assigned to a Risk Management Committee established within the Board. Often a Chief Risk Officer (CRO) is also appointed (Mikes, 2010). Moreover, the Internal Audit function plays an oversight role by monitoring the effectiveness of risk management processes designed and implemented by senior management.

Many authors have identified the benefits of implementing Enterprise Risk Management, such as the improvement of decision-making, accountability, reputation (The Conference Board, 2005), and long-term performance (Nocco and Stulz, 2006). However, many are also the obstacles: complexity of analysis, different risk perception among actors within the company, change of mindset of managers (e.g. Hagigi and Sivakumar, 2009).

Research about risk management mainly focuses on large companies. When a company grows, the risks it is exposed to changes in scope, nature, and timing. In fact, many authors have indicated that firm size is among those contingency factors that affect the ERM implementation and showed a positive relation between the firm size and the greater deployment of ERM (e.g. Beasley *et al.*, 2005; Gordon *et al.*, 2009; Hoyt and Liebenberg, 2010).

Holistic risk management systems may be more easily found in large companies because of their need for a more effective enterprise-wide risk management technique, but also given the greater amount of resources available.

### 1.2. Risk management systems in SMEs

SMEs are the backbone of many OECD countries. They account for 60 to 70% of jobs in most OECD countries, with a particularly large share in Italy where organizations with less than 100 employees account for 98% of the entire business population and employed 63.7% of the total Italian work force in 1990s (OECD, 1998). Also today, SMEs continue to play a vital role in Italy as well as in Europe despite the current economic and financial crisis: it is estimated that in 2012 SMEs accounted for 67% of total employment and 58% of gross value added (GVA) of the European Union (European Commission, 2012).

Like their larger counterparts, SMEs might obtain several benefits from having a robust and overall risk management. Despite many constraints that can hinder its deployment, there are several reasons for implementing risk management systems.

Firstly, SMEs are particularly sensitive to business risk and competition that can be better handled by implementing a comprehensive and formalized risk management system. Also, they are quite vulnerable under many perspectives: technical-productive, third-party liability, financial, human resources, and protection of intellectual property (Verbano and Petroni, 1997).

Secondly, Basel II had sensibly increased uncertainty in SMEs. Even if Basel's pillars do not require companies to implement a formalized risk management system, they demand banks to assess how the companies deal with the opportunities and risks related to their development. This implies a tailored approach to SMEs about which information are lacking in order to assess the credit risk (Altman *et al*., 2008).

Moreover, they must face high competition without the possibility of working on the margins and little chance of engaging in technological innovation (Raghavan, 2005).

SMEs face obstacles regarding risk management implementation. It is well-known that, conversely to large listed companies, small firms lack the financial and human resources to specifically handle risks. A proper risk management system requires adequate funds and enough resources and management attention. Moreover, SMEs are often characterized as lacking professionalism, infrastructure, and having an overdependence on one or two key persons. There are findings suggesting that SMEs have a less developed, formalized, and professionally structured risk management system than large enterprises, but little research has actually focused on risk management in SMEs.

With regard to the specific risks SMEs are exposed to, Pradana and Bandula (2012) find that strategic risks, operative risks, and financial risks are dominant. While ICAEW (2005) identified people, ICT and market changes as the most important risk areas.

SMEs do not engage in a well structured nor systematic or standardized risk management (Henschel, 2006; Matthews and Scott, 1995). When in place, the risk procedures are less formalized then those adopted by large enterprises because as business grows, the need for formal processes of accountability and monitoring increases (ICAEW, 2005).

Scarce resources do not allow smaller companies to perform sufficient analysis to identify their risks and assess them. For example, Islam and Tedford (2012) suggest that SMEs should more often recur to risk indicators for identifying operational risk determinants that can later be considered in strategic decisions.

The owner-managers mainly adopt informal approaches and unorganized procedures based on their knowledge and past experiences to identify and handle risks (Pradana and Bandula, 2012). Risks seem to be managed in an isolated fashion and specific risks are under discussion more often than the company's risk profile (ICAEW, 2005). SMEs risk management techniques are primarily limited to risk avoidance actions, and to a lesser extent, risk transfer through insurance activities. Most risk activities are constructed reactively, thereby limiting the enterprise resources available to address the risks (Smit and Watkins, 2012).

Finally, SMEs are less likely to have a high degree of formal monitoring and performance evaluation (ICAEW, 2005). Management control systems in SMEs are quite basic, thus rarely there is a link between risk management and performance management as deemed necessary by the literature and the practices (Henschel, 2006).

The link between risk management and strategy is debated. Small businesses are less likely to have a business plan with a strategy which is communicated to all staff members. On one hand, the ICAEW research (2005) showed that the 70% of SMEs actively considered risks in the business plan's strategy. On the other hand, Henschel (2010) as well as Pradana and Bandula (2012) state that the integration of the identified risks into business planning is not well developed in SMEs. Without such integration the firms are unable to determine the company's entire risk position.

Looking at the organization of risks, many researches underlined the role played by the owner-manager. Most of SMEs do not have the necessary resources to employ specialists at every position in the firm (Matthews and Scott, 1995). Thus, often there is not a risk manager, but the management of risk tends to be strongly concentrated in the hands of owner-managers that supervise and review risk management (Henschel, 2006; Pradana and Bandula, 2012) as well as dominate the decision-making process.

Their beliefs, attitudes and knowledge toward risks are crucial for how systematically risks are handled. While Pradana and Bandula (2012) indicated that owner managers did not invest much time in developing and implementing risk strategy within their firms, Smit and Watkins (2012) showed that owner-managers are often ignorant about the risks their enterprises face and respond to them by deploying risk management techniques reactively and ineffectively. However, given the size and managerial structure of SMEs, which favours close relationships between owners, managers and operators, it would be simple to establish and use a strategic risk management function (Smit and Watkins, 2012).

With reference to the Italian context, risk management systems are at a primordial stage of implementation even in large companies. Compared to other countries, further efforts need to be made in Italy to promote the adoption of integrated risk management systems (KPMG, 2010; Protiviti, 2011; Aureli and Salvatori, 2012). Consequently, Italian SMEs are not expected to be more advanced than the ones operating in other countries. This is suggested also by a dated work of Petroni and Verbano (1997) whose results indicate that administrative directors following an insurance approach mainly handled risk management in Italian SMEs. Moreover, conversely to large listed companies, regulations (e.g. Legislative Decree n. 81/2008 "Safety and heath on the workplace") may not be the driving force for Italian SMEs to establish or improve risk management practices, though they still need to comply with the Civil Code requirements that disclose the main risks and uncertainties in financial reports.

## 2. METHODOLOGY

The paper aims to investigate the risk areas of SMEs, their current risk management practice as well as perceived obstacles, benefits, and drivers of a holistic risk management approach. Considering these explorative goals, the qualitative methodology appears to be the most adequate one, especially when aiming to obtain personnel's perceptions about obstacles and drivers to risk management implementation.

As suggested by many authors, qualitative studies are of value as quantitative ones. They may contribute to improve academic research in the filed of accounting, control and finance (Otley and Berry, 1998; Berry and Otley, 2004). Although this is not the aim of the authors, qualitative research can even contribute to develop new theories (Eisenhardt, 1989). Surveys showed not to be appropriate as feedback from a previous attempt made by the two authors to investigate SMEs with an online self-administered questionnaire generated very poor response rates. Moreover, codified questions about 'standard' elements which constitute a risk management system resulted improper to bring out SMEs' risk management activities which are characterized by a great variety and are difficult to standardise.

Standardized surveys need to include questions that have the same meaning to all participants to provide reliable results, but this is not the case regarding SMEs' interpretations of concepts related to risk management. Thus, case studies have been preferred as they also contribute to a more holistic and richer contextual understanding of the field results (Scapens, 1990, 2004; Siggelkow, 2007).

The case studies are based on interviews conducted with the use of semi-structured questionnaires and refer to ten Italian joint-stock manufacturing companies whose size is either small or medium according to the categorization provided by the European Recommendation 2003/361/CE.

The companies have been identified through the collaboration of two local employers' associations - one located in North Italy (Verona) and one in the South (Taranto) - belonging to the Confederation of Italian industries (the main organisation representing Italian manufacturing and services companies). The choice of different locations was made in order to avoid possible results related to the territory (i.e. the emergence of a specific organizational behaviour due to companies' belonging to the same industrial district).

Excluding financial institutions, micro companies as well as large companies, a list of 40 companies has been provided by the Employers' Association of Verona, while the database provided by the Employers' Association of Taranto was made of 24 companies.

An invitation to participate to the research, enclosing a presentation of the questionnaire, was sent to the 64 companies composing the sample in order for them to have a general idea about the topic under investigation.

Just 10 companies accepted to participate in the research (8 located in the Taranto Province and 2 in the Verona Province). Self selection bias could be relevant in case of a quantitative research. However, this different response rate suggests that companies in Taranto are more responsive to this topic.

These 10 companies belong to different industries: wood, wine, graphics, fixtures, petrochemical, and textile and they differ in size. In terms of number of employees, there are only two small companies (companies C and G) and among medium-sized companies there is on organization which can easily upscale to the category of large company (see the following Table 1).

**Table 1.** *Companies by number of employees, turnover, total assets*

| | EMPLOYEES | TURNOVER | TOTAL ASSET | SECTOR |
|---|---|---|---|---|
| Company A | 87 | 5.312.540 | 5.779.510 | Textile |
| Company B | 249 | 35.302.120 | 42.386.829 | Fixture |
| Company C | 10* | 8.436.981 | 10.322.456 | Textile |
| Company D | 182 * | 16.448.536 | 19.060.945 | Textile |
| Company E | 51 | 13.216.566 | 6.068.280 | Chemical |
| Company F | 68 | 14.114.137 | 27.837.717 | Wood |
| Company G | 22 * | 8.770.133 | 13.217.737 | Wine |
| Company H | 77 | 7.927.068 | 8.985.414 | Graphic |
| Company I | 121 | 5.728.428 | 13.470.165 | Textile |
| Company J | 90 | 19.547.025 | 20.341.140 | Fixture |

Company data refer to year 2010 with the exception of (*) referring to 2011

Face to face interviews have been conducted with the help of a semi-structured questionnaire administered by one researcher (occasionally two). They lasted about one hour and a half. On one hand, the interviewer-administrated questionnaire has been chosen over the mere interview, because of the complexity of the topic and the large number of aspects to examine, the time constraints and the potential for more comparability among responses. On the other hand, this mode of administration has been preferred to self-administrated questionnaire because the presence of a friendly investigator can increase response rates, maintain motivation with long questionnaires, probe for responses, explain and simplify questions, favor responses using techniques for aiding recall of events and behavior, and control the order of the questions.

Of course, this method is not free of weaknesses such as the bias introduced by the interviewer' perceptions and interpretations of the answers (Bowling, 2005).

Four parts of the questionnaire follows the study conducted by Henschel (2010). As Henschel (2010) did, risk areas, risk management process, and risk management organization are investigated. The investigation of risk areas supported the understanding of what risks are considered important and correlate them with the management processes. The fifth part enlarges the scope of the research compared to Henschel's by investigating drivers, benefits, and obstacles to risk management implementation.

Each area and sub-areas of the questionnaire had a blank space in order for the interviewer to insert comments and additional information (i.e. a specific type of risk not included in questionnaire's list or additional actors involved in the evaluation and management of risks).

None of the ten companies analyzed has appointed a risk manager. Thus, the questionnaire has been usually administered to the Head of the Finance and Control Department since this person acknowledges the corporate objectives and policies, collaborates with the CEO or the general manager, contributes to ensure the company's compliance to law, provides guidelines for HR, coordinates management, financial, and budgeting processes and policies and, finally, takes care of the relationship with external parties. Where the Finance and Control Department was not established, questions have been addressed to the Accounting or Administrative Department (SMEs usually do not have a specific function for finance since investments and financial decisions are strictly handled by the owner-manager and control activities are delegated to accountants that prepare annual reports). In case there was no Administrative Department, the person in charge of supervising accounting and control activities was taken as reference.

## 3. RESULTS

The results of the research are disclosed without separation among the single case studies because of length constraint, but rather dividing them by research areas: a) main risk areas; b) risk management organization, c) risk management process, d) risk approach, e) benefits, obstacles, and drivers.

Moreover, company names cannot be disclosed because the disclosure was not authorized by the respondents.

Four of the companies are family-owned and managed meaning that there is no separation between ownership and control. The others companies have a managerial approach to business, which means the appointment of one or more professional top managers.

Regardless of the management approach, seven out of ten have implemented a management accounting system and eight have a planning system in place. The budget is mainly used for programming and controlling costs and contribution margins rather than financial aspects.

*a) Main risk areas*
The respondents were asked to rank the importance of the risks their company is exposed to. Risks were divided into eight categories: risks from external events, financial risks, environmental risks, IT risks, human resources risks, business risks, strategic risks, and product-related risks. Since categorization can open some subjectivity, risks belonging to each category were explicated (e.g. financial risks were divided into commodity risk, credit risk, liquidity risk and so on). At the same time what are usually defined as operative risks has been divided into three classes: IT risks, human resources risks, and product-related risks. The respondents were free to add other risks they considered as important but not included in the questionnaire.

It emerged that the most important risks belong to the area of financial risks, followed by external risks, and IT risks.

Credit risk and commodity risk are definitively the most important financial ones. Among the external risks, concerns are mainly related to theft, fire, and damage while natural disasters and vandalism are less important.

Risks related to human resources, business risks, strategic risks, and environmental risks are considered as the less important ones. Two companies state to not be exposed to them. In general, the respondents do not believe that the company's productive processes have a significant environmental impact and, in turn, little attention is paid to the related risks.

The questions about risk importance were ranked into four levels (none, low, medium, high). However, for the sake of simplicity, the answers have been reported in Table 2 and Table 3 by giving "0" to respondents that considered a specific risk of little importance or not important at all, and "1" to those that considered that risk as highly important or of medium importance.

In some cases, the magnitude of risks relies upon the sector in which the company operates. For example, company E considers legislative risks as important because it builds plants in the petrochemical sector where a high compliance with many laws and regulations is required. Company H declares to be highly exposed to reputational and technological risks because it operates in the graphic sector where there are high competitive pressures and many technological innovations for improving the sophistication of graphic products.

**Table 2.** *Ranking of the most important risks*

| | RISKS FROM EXTERNAL EVENTS | | | | | FINANCIAL RISKS | | | | | IT RISKS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fire | Theft | Damage | Vandalism | Break-down | Interest rate | Exchange rate | Commodity | Credit | Liquidity | Data loss | Hacker | IT break |
| Company A | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Company B | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Company C | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| Company D | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Company E | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Company F | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Company G | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| Company H | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Company I | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| Company J | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |

**Table 3.** *Ranking of less important risks*

| | HUMAN RESOURCES RISKS | | ENVIRONMENTAL RISKS | | PRODUCT-RELATED RISKS | | | BUSINESS RISKS | | | | | STRATEGIC RISKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Safety | Talents | Pollution | Damage | Production stop | Non compliance | Replacement | Regulation | Legal | Socio-political | Macro-economic | Tech change | Reputation | Strategy-related |
| Company A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Company B | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Company C | 1 | 0 | 0 | 0 | 1 | 1 | 1 | n.g. | 0 | 0 | 0 | 0 | 0 | 0 |
| Company D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Company E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| Company F | 0 | 0 | 0 | n.g. | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| Company G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | n.g. | 0 | 0 | 0 | 1 | 0 |
| Company H | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Company I | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Company J | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*b) Risk management organization*

None of the companies investigated have either appointed a risk manager or established a specific function or department for risk management. However, companies D and J identified a person that is informally in charge of managing all company risks. Interestingly, the Chief Accountant and Tax Officer of company J disagrees on the benefits of both appointing a chief risk manager and implementing risk management in a holistic fashion. Company E relies on an external professional who receives an annual budget for managing risk. It represents the only case where there is willingness to establish a specific risk management function within the company in the future.

We found that many of the same personnel are involved in risk management activities, especially the Board of Directors, first level managers (i.e. Head of Departments or Functions), and the Planning and Control Department. However, in some cases the Administrative Department, the Control Body, the Finance Department and the Internal Auditing are also involved (see Table 4).

It also emerges that in two companies just one faction is involved in risk management. At Company A, risk management is in the hands of the Planning and Control Department, while only first level management is involved in risk management at company D.

The interviews indicated that owner-managers are involved in risk management but do not always have full control over the company risk exposure. Also, the employees that eventually are appointed as risk owners, if any, have a quite limited autonomy and budget for the risk management purpose.

When respondents were able to quantify risks, it emerged that most of companies dedicate internal resources to risk management activities for about 2% of the total turnover. Just one company affirms that up to 4% of resources are allocated to risk management activities.

**Table 4.** *Actors involved in risk management activities*

| | BOARD | CONTROL BODY | MANA GEMENT | PLAN &CONTROL DEPT. | ADMINISTR. DEPT. | FINANCE DEPT. | INT. AUDITING |
|---|---|---|---|---|---|---|---|
| Company A | | | | x | | | |
| Company B | x | | x | x | | | x |
| Company C | x | x | | | | | |
| Company D | | | x | | | | |
| Company E | x | | x | | | | |
| Company F | x | x | x | | x | x | |
| Company G | x | | | x | x | | |
| Company H | | | x | | x | x | |
| Company I | x | | | x | | | |
| Company J | x | x | x | x | x | | x |

*c) Risk management process*

The questionnaire investigated the risk management process by asking questions about activities commonly established and acknowledged by the literature: risk identification, risk assessment, risk responses, risk communication and monitoring.

Companies mainly recur to a combination of brainstorming, meetings, and process analysis in order to identify risks, but in two cases just one of these techniques is used. Surprisingly, three companies (E, D and L) also use scenario analysis beyond the above-mentioned techniques. None interview or survey personnel to detect risk sources or the causes of certain events (such as injuries).

Once identified, risks are assessed using many criteria: likelihood, economic impact, financial impact, and the consequence on the achievement of strategic objectives. What seems to be less important is the effect of the event on company reputation (half of the companies consider it as not important or little important). The assessment activity is mainly carried out by using excel sheets. In just one case (company E) self-made, ad-hoc software is in place.

Once risks are prioritized based on their assessment, the best risk response is chosen.

Risk retention is undertaken either by establishing risk reserves in the balance sheet or recurring to insurances or both. Risk transfer occurs when recurring to insurances. Companies often refer to the financial or economic impact as criterion in deciding whether to transfer or accept risk. When this is not the case, other criteria may be utilized such as the source of risk (e.g. there is risk acceptance for internal risks and transfer for external ones) or the availability of previous established reserves in the balance sheet.

Obviously the responses undertaken by the companies for managing risks rely upon the type of risk. Risks generated by external events are almost always managed by establishing an insurance coverage. Except company D that carries out just maintenance activities, all the other companies use insurances together with at least another risk measure. Eight of them undertake maintenance activities and five implement internal prevention programs.

With regard to financial risks, eight out of ten companies just establish a client database that reports their trustworthiness, thus confirming that credit risks are the most important. The majority of the companies use just one tool for managing financial risks, while company B uses both credit insurance and client database and company F recurs to financial tools both negotiated by financial institutions (e.g. forward) and in the free financial market (e.g. futures).

Financial risks are usually managed by the Administrative Department that uses excel sheets to report the trend of commodity prices, interest rate, and exchange rates. The interviews show that the management of financial risks is not a formalized and structured process. Respondents state that financial management can be improved and enhancements can be made regarding raw material purchase policies that should allow the mitigation of commodity risks.

Human resources risks are managed by combining from two to five measures. All but company B are compliant with the Italian legislative decree n. 81/2008 “Safety and health in the workplace” which requires continuous preventive management of safety and security by the identification of risks (e.g. hazardous emissions, electromagnetic field) and their sources, the minimization of risks, the continuous control of the preventative measures undertaken, and the appointment of key persons in charge of preventative and protection management.

9 out of 10 companies also comply with the Italian legislation that requires them to pay an insurance premium to the National Institute for Injuries in the Workplace (INAIL) in case their work conditions are considered dangerous.

Moreover, 7 out of 10 companies train the workforce about both the use and the upgrade of machineries as well as about the principles of a good management and maintenance of assets.

Three companies have an insurance that covers the employee liabilities. Company E, which is the only one recurring to a mix of five different response tools for managing human resources risks, is also the only that received the OHSAS 18001-18002 certification “Occupational Health and Safety Assessment Service”. This certification is seen as a tool for both being compliant with the regulations and improving the reputation of the company in compliance.

The corporate function in charge of managing human resources risks varies depending on the company and it may either be the HR Department, Production or the Administrative Department. Rarely the CEO (that is usually the company owner) is the risk owner.

Beyond the compliance with the monitoring and reporting activities required by the Italian legislative decree n. 81/2008, risks related to human resources are not managed in a formal and structured way and their communication flow is not continuous.

With regard to environmental risks, the respondent of company D does not know how they are handled while company J believes to not be exposed to it. Six companies have an insurance coverage for third-party liability. Company B got the ISO 14001 certification (which attests a company's compliance with international standards for environmental management) and is the only one that prepares a social report that discloses the environmental risks and how they are being managed. Company A, which carries out the recycling of textile waste and shreds, does not have either of the above-mentioned tools.

Seven companies manage IT risks in compliance with the Italian Legislative Decree 196/2003 (Privacy Unified Code) that, for example, requires the companies to prepare a planning document on data safety annually. Also IT recovery or backup systems have been implemented (by seven companies in total), however the backup copies are not kept far from the plants in safe places.

Four companies implement both the measures required by the Legislative Decree 196/2003 and IT recovery plans, while the others recurs to one of them in combination with ISO 9000 certification and/or public-liability insurance.

The interviews show that the companies do not monitor and report the data loss or any other events connected to an adequate data and information management. Just company J has established a specific privacy function within the company that is in charge of managing all the aspects related to IT and communication processes (e.g. enlarging the use of Intranet from clients).

Risks related to products are managed in seven cases with control procedures and tests whose outcomes are compared with the technical features of the products, client requirements, and eventual regulations. Five companies are also compliant with ISO 9001:2008 standards. Three companies got industrial certifications that are related to the specific products they manufacture.

In two cases, public-liability insurances for covering costs related to product returns are adopted, but always in combination with control procedures on products or quality certifications.

The most used measures undertaken for managing strategic risks and business risks are marketing strategies for preventing bad market positioning or delays in entering new markets. In three cases market analysis are conducted. Half of the companies have adopted the organization and management model required by the Legislative Decree 231/2001 while four have third-party liability insurances in place.

Interestingly, half of the companies recur to external consultants for risk management. Three companies hired an external consultant for legal risks. Others use consultancy for environmental risk, financial risks or certifications.

Once the risk has been responded to, reports should be prepared outlining what actions were undertaken. However, just company E and company I prepare risk reports. Company E is one of the three companies that communicate risks throughout the organization for each risk category that has been previously identified.

*d) Risk management approach*

When respondents were asked about the risk management approach that their company follows, contradictory answers emerged. In particular, seven of them state that the approach is either partially integrated or highly integrated throughout the company. However, at another point of the questionnaire all these companies (with the exception of company G) state that different people and departments manage risks in silos.

Looking at the control questions, it emerged that companies A, B, C, J, and H can be classified as companies following a traditional risk management approach. These companies share all the same following features: : i) risk management does not affect the setting of strategic plans; ii) risk management is aimed at managing threats; iii) risk management is rarely executed and risks are managed in silos and just when they materialize and there is an immediate exposure; iii) risk management responsibilities are given to those people that are closest to the risk consequences; iv) there is no risk reporting; v) risk communication is low or absent; vi) risk owners are not appointed for all risk categories.

Those having a traditional risk management approach are also the ones that see risk management as a costly activity and a mere duty required by legislation. At the same time, in some cases (see company C), advanced risk management practices are not held as necessary because of both the low company risk exposure and the ability of being flexible to changes.

Companies F, G and I seem to follow a mix of traditional and integrated approaches. They are characterized by some advanced practices but they also share the absence of a transversal approach to risk management, risk reporting and appointment of risk owners for all the identified risk categories to which the company is exposed (see company F and I). Moreover respondent I states that the company does not need risk management policies because the company is flexible to external changes.

Finally, companies D and E state to have a holistic risk management. In these two cases: i) risk management supports the preparation of strategic plans and risk owners are appointed accordingly; ii) risk management is aimed at recognizing the risks to avoid and those to manage in order to get a competitive advantage; iii) risk management is continuous, proactive, and focuses on both short term and long term risk exposures; iv) risks are managed throughout transversal processes; v) a full and integrated risk reporting is prepared; vi) risk communication flows throughout the company.

Respondents D and E believe that risk management is not a waste of money but rather an investment in the long run that will better help the company identify and react to the future scenarios and challenges.

Looking at the specific risk exposure of companies (expressed by the number of relevant risks that respondents believe to be exposed to), there seems to be no correlation between how big is the perception of exposure and the approach followed. For example, companies A and D rank risks quite in the same way, but they follow opposite risk approaches.

However, it is worthy to underline that among those having holistic risk management systems in place or a coexistence of approaches, just companies E, G, and I state to have risk management objectives that are linked with the company strategic objectives.

In none of the cases, formalized frameworks such as ERM or ISO standards have been adopted.

*e) Benefits, obstacles and drivers*

Companies were asked to identify the drivers, obstacles and benefits to implementing holistic risk management systems. Two major drivers were described: 1) the evolution of the legislation and regulations regarding risk management and 2) the increasing attention that stakeholders pay to the management of risks. Moreover, the companies admit to be exposed to an increasing variety of risks, which get more and more severe over time. Finally, banks are playing an important role in fostering risk management. However, Basel II has not directly affected the implementation of advanced risk management systems. Even if a better management of risks would improve the assessment of the firm by the bank, the link between debt and quality of risk management is stated to be indirect and not easily quantifiable. For almost all companies of the sample, the amount of funds received from banks has been kept the same, if not increased, over time.

Respondents have identified three major obstacles to the implementation of holistic risk management. First of all, they indicate the lack of human resources that have the necessary skills and competences. Also, there is a wide lack of risk culture and awareness about the importance of risk management. The last major issue is the lack of financial resources to invest in risk management activities.

In addition, seven respondents believe that the lack of homogeneous methodologies used for risk assessment hinder the advancement of risk management, while such an aspect is considered as totally irrelevant by the remaining companies.

The inadequacy of information systems dedicated to collect and analyze data seems to have little relevance for the integration of risk management practices.

Respondents seem to totally agree about the benefits of a holistic risk management system which are: i) cost optimization and efficiency of risk management programs by removing redundant controls and consolidating the decisions of risk transfer or risk retention; ii) better ability of identifying transversal risks and attitude to risk management that might in turn provide a competitive advantage; iii) ability of preparing integrated risk reporting to be provided to the Board of directors.

## 4. DISCUSSION

Results emerged from case study analysis show that financial risks, risks deriving from external events, and IT risks are considered as the most important ones. However, since the categorization of risks was really detailed, it was possible to identify the specific risks that are on average more important compared to the others. In particular, among financial risks, credit and liquidity issues result essential. Fire, theft, damage, and activity breakdown are central among the risks deriving from external events, while IT breakdown is on average the biggest concern for the respondents among the category of IT risks. Conversely to the results of Pradana and Bandula (2012) and ICAEW (2005), strategic, operative, and people risks are not that important for Italian SMEs.

The empirical analysis also indicates that risk managers are never appointed, thus confirming the results of previous researches (e.g. Matthews and Scott, 1995). However, there is one company that currently refers to an external consultant and is planning to establish a specific risk management function.

External risk consultants are hired for managing some of the risks (e.g. legal or financial risks) or with the aim to provide support for certifications, showing that the internal risk management process is usually not formalized, or at least not enough structured, for a proper management of the company risk exposure. As stated by the respondents, the lack of human resources with adequate risk management skills and competencies is a big issue.

Actors usually involved in risk management activities are the Board of Directors, the first level management, and the Planning and Control Department. When risk owners are identified and appointed, they have a quite limited autonomy and budget for the risk management purpose, thus indicating a low priority given to risk management as well as a centralization of power in the hands of owner-managers. The latter are involved in risk management, but they do not always have full control and supervision over the company risk exposure, confirming the results of Smit and Watkins (2012). A cultural problem is thus evident.

Risk identification is carried out mainly recurring to brainstorming, meetings, and process analysis. Thus, there is a wide recourse to informal approaches and unorganized procedures for risk identification. Surprisingly three companies use also scenario analysis together with the above-mentioned techniques. The focus on some risks rather than on others is explained by the specific sector each company operates in, but also by managers' personal experience and availability of historical data. Attention is not paid to risks related to events that did not frequently occur in the past.

Risks are assessed by looking at the likelihood of event occurrence, economic impact, financial impact, and possible consequences on the achievement of strategic objectives. Risk assessment is mainly carried out by using excel sheets, while just one company uses a self-made ad-hoc software. The risk management sophistication is still rudimentary, but this is probably due to the lack of financial resources.

The risk responses undertaken are company-specific, but many common behaviours emerge.

Risks generated by external events are almost always handled by insurances with at least another risk measure such as maintenance activities and internal prevention programs.

Companies that state to be exposed to environmental risks transfer them and comply with legislative requirements without going far beyond.

Financial risk management is neither formalized nor structured. Credit risks are mainly managed by improving the company information system. The recourse to financial instruments (e.g. derivatives) for managing financial risks is rare.

Human resources risks are also not managed in a formal and structured fashion and their communication is often narrowed down to the legislative requirements. Companies mainly comply with regulations (legislative decree n. 81/2008) and undertake other measures such as personnel training and payment of an insurance premium.

The majority of companies manage IT risks by being compliant with Legislative Decree 196/2003 or establishing IT recovery or backup systems that are either both in place or adopted together with ISO 9000 certification and/or public-liability insurance. None exceeded the legislative requirements adopting, for example, the ISO 27001:2005 (Information Security Management System).

Product-related risks are mainly managed with control procedures and certifications. Sometimes insurances are adopted but always combined with certifications.

Companies do not seem to be exposed to business risks. However, respondents state to manage them through marketing, market analysis, and compliance with the Legislative Decree 231/2001.

Risk reporting is rare and so it the risk communication throughout the company. Even if results cannot be generalized, the risk approach of Italian companies seems to be reactive rather than being a proactive one. In half of the companies examined risks are managed in isolation: specific risk owners manage and are accountable for the risks that are under their jurisdictions. Financial risks are managed by the Administrative Department that uses excel sheets to report the trend of commodity prices, interest rate, and exchange rates. The corporate function in charge of managing human resource risks might be either the HR Department, Production or the Administrative Department. Rarely the CEO (that is usually the owner) is the risk owner.

There is little formalization and risk identification is limited to those the companies are familiar with. Moreover, there is a short-term risk time horizon as already noted by Henschel (2010). No formal risk reporting procedures are in place.

Those having a traditional risk management approach are also the one that see risk management as a costly activity and a mere duty required by legislation. When this is the perspective, informality of the process is the rule and risk management activities are quite rudimentary as described by Henschel (2006).

However, the other half of the sample seems to experience a different level of advancement in risk management approaches. These five companies diverge from the previous ones because they tend to adopt more advanced risk identification techniques (such as scenario analysis) and risk assessment methods. Also in this group there is a higher concentration of certifications.

Aiming to be more precise, a further distinction within the group of “advanced” companies can be made.

In particular, on one hand, a mix of traditional and holistic approaches coexists in three companies (F, G, I), confirming the idea that risk management practices can not be classified into a clear cut scheme (Mikes, 2005). For example, companies F and G use scenario analysis and they carry out risk management activities that in part are aligned with the traditional view of risk management (e.g. weaknesses of risk reporting and risk communication activities) and in part expression of a holistic attempt of managing risks.

On the other hand, the two remaining companies (D and E) seem to have a more holistic risk management than the previous ones. In fact, their risk management is continuous, proactive, and focuses on both short term and long term risk exposures, it supports the preparation of strategic plans, is aimed at improving company’s competitive advantage and is complemented by a full and integrated risk reporting and communications that flow throughout the company. Moreover, these two companies have the same risk infrastructure. Risks are centralized at the Board level and there is also the involvement of the first level management in both of them. Finally, they are the only companies (together with company I which follows a mix of approaches) having risk management objectives that are linked with the company strategic objectives. In all the other cases such a link is absent.

Regardless these differences, all respondents but one recognize the need of holistic risk management because the increasing amount of risks and uncertainty they face. Stakeholders and banks also play an important role as they expect companies to manager their risks and assess them based on risk management systems. Contrary to what the literature indicated (e.g. Altman *et al*., 2008), Basel II seems not important.

The lack of human resources, risk culture, and financial resources are the main obstacles to advancement of risk management toward a holistic system. Even if one respondent did not agree about the benefits of having a holistic risk management system, others recognize that it may produce many advantages such as consolidating the decisions of risk transfer or risk retention as well as reporting practices and identifying transversal risks.

## CONCLUSIONS

Based on case study analysis, this research investigated the current state of the art of risk management practices in Italian SMEs.

Results indicate that Italian SMEs perceive the importance of different kinds of risk (not just financial risks but also the ones related to IT breakdown and exogenous events) to which they seem to be exposed. Despite that, no specific risk figure is appointed and risk management processes are usually not formalized and structured as suggested by the previous literature. The risk identification and assessment activities are quite rudimentary and informal. Also, the risk responses are often limited to compliance with regulations and international standards as well as to risk transfer.

Half of the companies behave and think fatalistically and coherently will identify only very specific risks (that are highly likely and are expected to have a significant impact on the company), which will be transferred to third parties.

Compared to risk management in large companies, SMEs are evidently less advanced. The ones in the sample that seem to have more sophisticated risk management practices (in relative terms) do not adopt formalized risk management systems or risk management international standards. Neither they have developed ad hoc formalized risk management systems, tailored to their specific needs and resources. Just one company developed an in-house software for risk assessment.
However, this does not imply inertia. Some companies have introduced holistic aspects in their risk management activities, although their approach cannot be defined as proactive. In few cases, they link risk management with the corporate strategic objectives, use more sophisticated risk assessment and risk identification tools and have a more integrated risk reporting and risk communication throughout the company.

Actually all the companies interviewed seem to fully understand the potential of having or moving toward a holistic risk management approach, but there are many well-known constraints that stop SMEs at their current stage such as the lack of resources and risk-aware culture.

Thanks to this study the authors aimed to contribute to both the Italian and international literature on SMEs and risk management, following previous attempts made to enlarge the studies about risk management in small companies.

Such stream of literature is underdeveloped, since the studies on risk management are mainly focused on large companies and a lot of work is needed to fill the gap existent especially in Italian studies about risk management considering that the last research was dated back to fifteen years ago.

At the same time, this study also tried to provide useful information to practitioners. A better comprehension of the state of the art of risk management in Italian SMEs can be useful in identifying the internal weaknesses and the related space for improvement. This is particularly important in the current economic scenario where Italian SMEs are experiencing great difficulty in borrowing money from banks.

Of course, the research is not free of limitations such as the small number of companies analysed. An extensive analysis of a larger number companies could support a more generalized understanding of current risk management practices. Moreover, it would be adequate to interview more than one person within the same company such as the CEO, the Board members, and owner-managers when present.

Further research may investigate the explanatory variables of the risk management approach. The research shows that the risk exposure and perception do not explain the approach, but other contextual features may (e.g. the professional background of the CEO or owner-managers or the past occurrence of an unexpected event which has seriously impacted the company performances).

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