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Towards a better risk management in companies

Vers un meilleur risk management dans les entreprises

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Abstract

Nowadays, risk exerts a significant effect on companies. Its frequency as well as its gravity have drastically increased. Consequently, risk management becomes an absolute necessity for every company. Nevertheless, in many companies risk management is limited to a silo approach where risks are managed individually by traditional tools. However, this approach showed important weaknesses, which resulted in the emergence of a more structured approach of risk management, commonly referred to as "enterprise risk management (ERM)". This process and its principal contributions are still poorly understood in many companies. This article aims to analyze the weaknesses of a silo-based risk management approach and to clarify ERM and its main contributions. We hope that this article will contribute to the promotion of a true culture of risks within the companies.

Keywords: Risk, Silo-based risk management, Enterprise Risk Management, Value Creation, Strategy.

Résumé

De nos jours, le risque exerce un effet significatif sur l'entreprise. Ce dernier augmente aussi bien en fréquence qu'en gravité. Par conséquent, le risk management devient une nécessité pour toute entreprise. Néanmoins, dans bon nombre d'entreprises le risk management se limite à une approche en silos, où les risques sont gérés individuellement par des outils classiques. Cependant, cette approche a montré d'importantes faiblesses, ce qui a donné naissance à une approche de risk management plus structurée, communément appelée : enterprise risk management (ERM). Ce processus et ses principaux apports sont encore méconnus chez certaines entreprises. Le présent article a pour objectif d'analyser les faiblesses d'un risk management en silos et de mettre en lumière le processus ERM et ses principaux apports. Nous espérons que cet article contribuera à la promotion d'une véritable culture des risques au sein des entreprises.

Mots-clés : Risque, Risk management en silos, Enterprise Risk Management, Création de valeur, Stratégie.

Introduction

The ISO 31000 (2009) standard considers the risk as: "the effect of uncertainty on objectives." This effect can be positive or negative. In fact, the risk cannot be completely eliminated (Golshan et al., 2012). The risk is by nature unforeseeable, but if it is managed in an optimal way, it can create several opportunities for the company. Entrepreneurship is often synonymous with taking risk, an entrepreneur accepts certain risks when he creates his company that others refuse categorically (Lemettre, 2008). Avoiding risks certainly enable avoiding the negative consequences of risks, but it also makes the company lose certain opportunities to maximize its profit (Waweru and Kisaka, 2013). Therefore, it is essential to thoroughly set the company's risk appetite in order to know which risks to retain and which risks to reduce or to avoid. The COSO (2004) framework defines the risk appetite as: "the amount of risk, on a broad level, an entity is willing to accept in pursuit of value."

It is more and more difficult to identify risks thoroughly. Indeed, the nature of risks is constantly changing because of the current complexity of companies (Liebenberg and Hoyt, 2003; Hrifa and Bamousse, 2018). Thanks to globalization, companies can profit from new opportunities by reaching new markets. However, the specificities of these new markets are often difficult to apprehend by the companies, which creates new risks (Le Ray, 2006).

The frequency and the gravity of risks also keep increasing from one day to the next. The multiplication of the relations between companies and the level of growth of their interdependencies make the current environment more complex (Cleary and Malleret, 2006). Consequently, when risk occurs, it is not only the company that will quickly and severely feel its consequences, but also its various stakeholders. Employees will lose their salaries and a part of their pension funds. Shareholders will lose their wealth and their reputation. Creditors will suffer from severe losses due to the sums not reimbursed by the company. Customers will undergo difficulties in the supply chain and will not be able to satisfy the needs of their own customers. Suppliers will suffer from losses due to the non-payment of the goods, products or services. Public services will have provided services and engaged certain costs without anything received in return. Finally, the government will undergo a reduction of cash inflows (St-Pierre, 2004). Consequently, risk management becomes a necessity and not a luxury (Shenkir et al., 2010).

For many years, companies managed their risks using traditional activities such as the insurance or hedging the risks by derivatives. However, many researchers consider that the occurrence of several international scandals are due to a bad risk management (Stulz, 2009;

Quon et al., 2012). Consequently, companies start now using a more global and structured approach to manage risks, ERM. However, we note that companies still confuse these two approaches. In their survey of 45 Moroccan companies, El Maguiri and Ibenrissoul (2014) find that only 20% of the surveyed companies manage their risks in a global and structured approach.

The objective of this paper is to differentiate ERM from a silo-based risk management approach. We hope that this article will reduce the confusion between these two approaches and will motivate certain companies to integrate an ERM. Therefore, in this article we try to answer the following research questions:

- What are the main limits of a silo-based risk management approach?
- What is ERM?
- What are the major ERM's contributions to companies?

This article is structured as follows. First, we present the silo-based risk management approach. Second, we provide a literature review of the main definitions of ERM. Third, we demonstrate the advantages of an ERM. Finally, we present our conclusions.

1. A literature review on the Silo-Based Risk Management Approach

The silo-based risk management approach is particularly interested in the negative impacts of risks. The objective of the companies through the integration of this approach is to reduce as much as possible the negative impacts of risks (Rochette, 2009). In this approach, the risk manager has an important risk aversion. He does not consider events that can have positive impacts on income in his analysis, but only those that can have possible negative impacts (March and Shapira, 1987).

Several researchers consider that the origin of the silo-based risk management approach is the emergence of the instruments of insurance and risk hedging (Liebenberg and Hoyt, 2003; Nocco and Stulz, 2006; Pagach and Warr, 2011; Quon et al., 2012). The insurance consists in paying a premium to an insurer who will support the risk instead of the company. In the beginning, companies could only transfer some risks to the insurers, like the risks of natural disasters or the risks related to incidents. With the sophistication of insurers' activities, companies could transfer other risks, like credit risk, for example. Then, starting from the seventies, companies still looking for more ways to reduce their risks start using derivative like forwards, futures, options and swaps (Dickinson, 2001).

The use of insurance to manage risks consists mainly in establishing a full list of the insurance policies listed by the insurers. Then, the company performs a thorough analysis of its activities in order to identify its risks according to the insurance policies that can insure them. Finally, the company chooses a solvent and perennial insurer in order to insure the identified risks (Véret and Mekouar, 2005). Nevertheless, certain conditions must be met before the insurer agrees to support risks instead of the company. First, the risk must be calculable. Indeed, to be considered as a risk and in order for the insurer to be able to calculate the premium, its frequency should be calculated in a precise manner. Secondly, the risk must be common. It must be shared between several actors so that the part supported by each one of them becomes marginal. Thirdly, it must represent a capital. Indeed, it is not the damage which is insured, but the capital (Jokung Nguéna, 2008).

Therefore, the insurance covers only the pure risks, which are the risks undergone by the company and on which she does not exert any control, like the risks of natural disasters. It does not consider the speculative risks, related to the choices operated by the company to make a future profit, for example, launching a new product or operating on new markets (Barthélemy, 2000).

By limiting itself to the insurance to cover its risks, the company may face several problems. The specific risks of the company are not always those listed by the insurers. The risks that can be insured are those that already occurred in the past. Therefore, by limiting itself to those risks, the company will neglect other ones that are not listed by the insurers. If the latter occur, they can question its sustainability (Jokung Nguéna, 2008). Moreover, if the assured risks exceed the real level of the company's risks that can cause important losses of the company's resources through excessive insurances premiums that she will pay anyway. The company must retain certain risks that have little impacts or little frequency, instead of insuring all of them (Meier, 2000).

Another limit of the insurance approach to cover risks of the company is the fact that it acts only on the consequences of the risks and not on their causes (Le Ray, 2006). Moreover, it only compensates the guaranteed losses that the company suffers from. Indeed, the risk occurrence can have other more serious economic consequences that cannot be offset by a simple financial compensation. The deterioration of the image of the company and the human losses are some good examples of these consequences (Bénard and Fontan, 1994; Barthélemy, 2000).

Nowadays, the risk occurrence has more consequences on the company due to the markets' independencies, the impact of the media which amplify information on the risks and the high requirements of shareholders (Lemettre, 2008). It becomes difficult to use insurance policies since the premiums became very expensive for companies (St-Pierre, 2004).

In the silo-based risk management approach, the risk manager does not analyze the existing correlations between the various risks of the company. The risks are analyzed separately (Liebenberg and Hoyt, 2003; Golshan et al., 2012; Quon et al., 2012; Waweru and Kisaka, 2013; Grace et al., 2015). In this approach, various people within the company handle the risk management function. Certain people could be responsible for the equipment's safety, others of the purchase of the insurance policies, etc. There is no real information exchange between the various departments in the silo-based risk management approach. Moreover, the lack of coordination and synergy can cause losses or waste time and company's resources pointlessly. Indeed, the company could be in a situation where one or more people deal with the same risk and neglect another more critical risk. It would be wiser to allocate the tasks in a more optimal way (Alviniuissen and Jankensgard, 2009)

Finally, in the silo-based risk management approach the risk manager is regarded only as a simple treasurer who purchase insurance policies and hedges the various exposures of the company (Nocco and Stulz, 2006). Moreover, he could have other functions within the company, which does not let him be exclusively devoted to risk management (Bénard and Fontan, 1994).

The various limits of the silo-based risk management approach helped the emergence of a more global and structured approach to manage risks, ERM.

2. A literature review on ERM

2.1. Definition

ERM is a relatively new function. Its definition has changed gradually with the progression of research on the subject. Moreover, its scope, tasks and missions vary considerably from one company to another (Beasley et al., 2005). Therefore, there are many ERM's definitions in the literature. In the following, we review the principal ERM's definitions in the literature and we perform a critical analysis of them.

Dickinson (2001) defines ERM as: "a systematic and integrated approach to the management of the total risks that a company faces."

For Meulbroek (2002), ERM is: "the identification and assessment of the collective risks that affect firm value, and the implementation of a firm-wide strategy to manage those risks."

Chapman (2003) considers ERM as: "the process of identifying and analyzing risk from an integrated, company-wide perspective."

For Liebenberg and Hoyt (2003), ERM is: "an integrated approach of managing risks. This approach is more offensive and strategic, unlike the silo-based approach which is primarily defensive."

According to Nocco and Stulz (2006), "ERM enables to limit the probability of distress1 to a level that management and the board agrees is likely to maximize firm value."

Beasley et al. (2008) define ERM as: "the process of analyzing the portfolio of risks facing the enterprise to ensure that the combined effect of such risks is within an acceptable tolerance2."

The ISO 31000 (2009) standard defines ERM as: "coordinated activities to direct and control organization with regard to risk."

For Rochette (2009), ERM is: "the strategic enterprise process of identifying, assessing and responding to the collective risks and opportunities that may affect the enterprise's ability to attain its strategic goals, optimize its stakeholders' value and improve its overall stewardship and management."

Pagach and Warr (2010) defines ERM as: "a strategy that attempts to holistically evaluate and manage all of the risks faced by the firm. In doing so, ERM uses the firm's risk appetite to determine which risks should be accepted and which should be mitigated or avoided."

Altuntas et al. (2011) considers ERM as: "a way of measuring, understanding and controlling risks facing the firm, it is also viewed as a management tool that can identify profitable opportunities to enhance shareholder wealth."

Razali et al. (2011) define ERM as: "a systematically integrated and discipline approaches in managing risks within organizations to ensure firms achieve their objectives that are to maximize and create value to their stakeholders."

Finally, for Woon et al. (2011): "ERM entails a paradigm shift which dictates that the focus of risk management has to be shifted from the conventional operational hazards and pure financial risks to a much more strategic view of threats to business success. A robust and dynamic risk management framework should also promote an appetite for upside risk."

We note several similarities in these ERM definitions. We recapitulate their main ideas as follows:

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[1] Purnanandam (2008) considers the financial distress as: "a low cash-flow state in which the firm incurs losses without being insolvent."

[2] The COSO (2004) framework define risk tolerance as: "the acceptable level of variation relative to achievement of a specific objective.''

- ERM is an integrated and structured approach of risk management (Dickinson, 2001; Meulbroek, 2002; Chapman, 2003; Liebenberg and Hoyt, 2003; Pagach and Warr, 2010; Razali et al., 2011);
- ERM considers all company's risks (Dickinson, 2001; Rochette, 2009; Pagach and Warr, 2010; Woon et al., 2011);
- the most common ERM's steps are: the identification, the assessment and the treatment of risks (Meulbroek, 2002; Chapman, 2003; Nocco and Stulz, 2006; Rochette, 2009; Altuntas et al., 2011);
- the company analyzes its risks as a portfolio and takes into consideration their possible correlations (Beasley et al., 2008);
- even if the company considers all the risks that can affect her, those that must be treated are those which are likely to reduce its value (Meulbroek, 2002; Nocco and Stulz, 2006; Rochette, 2009). The treatments to apply will have to reduce these risks so that they correspond to the company's risk appetite (Nocco and Stulz, 2006; Beasley et al., 2008; Pagach and Warr, 2010);
- ERM is not defensive, but offensive and strategic (Liebenberg and Hoyt, 2003; Rochette, 2009; Woon et al., 2011). It allows to seize various opportunities (Rochette, 2009; Altuntas et al., 2011; Woon et al., 2011), to improve management (Rochette, 2009), to achieve the strategic objectives (Rochette, 2009; Razali et al., 2011), and to maximize the shareholder value (Nocco and Stulz, 2006; Altuntas et al., 2011; Razali et al., 2011).

There is also an ERM's definition very quoted in the literature, it is the definition of the Committee of Sponsoring Organizations of the Treadways Commission (COSO). Due to its importance and the fact that it gathers the principal concepts of an ERM we analyze it here separately. ERM is: "A process, effected by an 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 its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives" (COSO, 2004).

In this definition, ERM:

- is a process: it is an iterative and continuous sequence of actions integrated within each activity;

- effected by people: it is implemented by the management and all of the company's employees, but its absolute responsibility is assumed by the board of directors;
- applied in the strategy setting: thanks to ERM, the company can choose strategies according to their risks;
- applied across the enterprise: ERM considers all activities, all the levels and all the functions within the company. This helps to involve all the employees in the process and creates a genuine synergy;
- considers the risk appetite: the risk appetite constitutes an important component when choosing capital allocation strategy. The higher the risk appetite, the more the company can allocate capital in risky activities;
- provides reasonable assurance: the risk is by nature unforeseeable, consequently, ERM cannot guarantee the absolute assurance that the company will achieve its goals. On the other hand, thanks to the treatments of risks operated in this process, it offers a reasonable assurance regarding the achievement of objectives;
- geared to achievement of objectives: ERM enables to reach the objectives of the reliability of the reporting and the compliance with applicable laws and regulations. On the other hand, strategic and operational objectives depend on random events. Therefore, ERM can only provide a reasonable assurance that the management and the board are regularly informed on the company's progress towards these objectives (COSO, 2004).

2.2. Contributions

Contrary to the silo-based risk management approach, ERM enables managing the company's risks as a portfolio. This will help her to identify possible interdependencies between the risks and the various activities. The aggregation of risks in a unique portfolio facilitates their treatments (Kleffner et al., 2003; Liebenberg and Hoyt, 2003; Alviniuissen and Jankensgard, 2009; McShane et al., 2011). Indeed, to cover or insure the total exposure of the company instead of the individual exposure of each risk makes it possible to reduce the costs of transaction (Kleffner et al., 2003; Quon et al., 2012). Moreover, the aggregation of risks allows their diversification, certain risks will be compensated by others, which makes the total risk lower than the sum of the individual risks (Nocco and Stulz, 2006). Finally, it facilitates the supervision of the risks by the management and the board of directors (Beasley et al., 2005).

ERM allows a more exhaustive identification of the company's risks. Whereas in a silo-based risk management approach the company relies only on the list of risks provided by the insurers to identify its own risks, ERM uses more advanced techniques of risk's identification.

ERM helps the company to better quantify its risks. Thanks to the technological advancements and the sophistication of the statistical and economic models, companies quantify their risks more precisely, and understand better their interdependencies (Jablonowski, 2001; Kleffner et al., 2003). A better quantification of the risks allows to prioritize some of them in their treatments compared to other less important risks (COSO, 2004). Important risks are those that prevent the company from achieving its goals (Barthélemy, 2000). Moreover, a good risk's assessment enables the company to better charge her customers for that risk, which will avoid certain future costs (Bessis, 1995).

ERM contributes to a better centralization of information on the company's risks and allow to better communicate them on all the company's levels (Kleffner et al., 2003; Alviniuissen and Jankensgard, 2009). Better information and a better communication of risks improve its perception by all and optimize the effectiveness of an ERM (Lemettre, 2008).

Whereas the silo based risk management considers only the pure risks, ERM considers many types of risks, whether it is the pure risks or the speculative risks (Liebenberg and Hoyt, 2003; Véret and Mekouar, 2005). It considers for example the risks of natural disasters, financial risks, operational risks, strategic risks, reputation risks, social risk, etc. (Percie du Sert, Anne-Marie, 1999; Daud et al., 2011; Pagach and Warr, 2011). Whereas the risk manager is regarded only as a treasurer in the silo-based risk management approach, in the ERM he holds a strategic position in the company and focus exclusively on this process. Indeed, the complexity of this process requires the presence of a specialist highly qualified to manage this process. In ERM, this person is often called: "chief risk officer."

In the ERM, the strategy of the company is not defensive, but rather offensive and strategic. ERM is a part of the company's overall strategy and does not only seek to protect the company from the negative effects of risks as it is the case for the silo-based risk management approach (Meulbroek, 2002; Razali et al., 2011).

ERM enables the company to improve its competitive advantage (Stroh, 2005). This is possible via increasing the reliability of the installations and the processes due to the reduction of default, via improving the transparency, via strengthening the accountability of managers and via improving the delegation of responsibilities (Lemettre, 2008). The improvement of the competitive advantage through ERM can also be reached through the optimization of the tradeoff between risk and return. This tradeoff allows the company to make more objective decisions (Alviniuissen and Jankensgard, 2009). Indeed, the company can increase its exposures in strategic activities in which she has a competitive advantage and thus to seize more opportunities. That is the case, for instance, for the company's specific risks, since she has enough information on them (Nocco and Stulz, 2006; McShane et al., 2011). On the other hand, the non-strategic risks can be reduced or transferred. This includes, for example, legal risks and the risks of natural disasters (Gates, 2006).

For Le Ray (2006), ERM allows the satisfaction of the company's stakeholder. Firstly, the satisfaction of the shareholders and the investors. ERM reduces the vulnerability of the company, which improves its performances and improves the remuneration of the shareholders. Secondly, the satisfaction of the customers. ERM improves safety within the company, which will motivate the employees and will have a positive influence on the quality of the products and services. This will allow the company to preserve its current customers and to attract newer ones. Thirdly, the satisfaction of managers and employees. ERM ensures the sustainability of the company, which secures the jobs of managers and employees and motivates them more. Fourthly, the satisfaction of the suppliers. The suppliers prefer transacting with perennial companies. Finally, the satisfaction of the social environment. The company that has an effective ERM is generally more socially responsible. Moreover, the presence of an ERM reduces the risk of bankruptcy, which protects the community.

ERM contributes to the maximization of the shareholder value (Meulbroek, 2002; COSO, 2004; Beasley et al., 2005; Nocco and Stulz, 2006; Hoyt and Liebenberg, 2011; Pagach and Warr, 2011). ERM creates value through reaching the strategic objectives and improving performances (ISO 31000, 2009). ERM also creates value through the reduction of the costs of the financial distress. Firstly, by reducing the total risk of the company, financial distress becomes unlikely. Secondly, ERM helps to assess the probability of the potential financial distress. Finally, ERM helps to determinate the costs to be supported by the company in case of a potential financial distress (Smith and Stulz, 1985; Stulz, 1996). ERM also creates value by reducing the tax burden of the company. ERM helps to reduce earnings' volatility, which improves the capacity of the company to seek further debt finance. Indeed, thanks to ERM, the company will be more solvent, which will encourage the creditors to provide her with more credits. Consequently, the company can profit from tax savings related to the deductibility of the interest charges (Smith and Stulz, 1985; Stulz, 1996). Finally, ERM creates value through the reduction of the financing costs. When the company is undervalued by the market, because she does not reveal all the information concerning its projects, investors will finance her with a value that is lower than her actual value. By reducing risks, ERM helps to reduce the cash flows' volatility. This will increase the internal funds that the company will use to finance profitable projects. Consequently, it will avoid using expensive external financing (Froot et al., 1993). The reduction of the financing costs by an ERM process is also possible through the improvement of the information on the company's risk profile (Berry-Stölzle and Xu, 2016). It will facilitate the assessment of risks by the shareholders. Moreover, the presence of an ERM will improve the rating of the company and will be well perceived by the investors, which will encourage them to invest in the company. This will reduce the external financing costs of the company since the risk premium will be low for a company that has an efficient ERM (Meulbroek, 2002; Liebenberg and Hoyt, 2003; Quon et al., 2012; Berry-Stölzle and Xu, 2016).

ERM makes it possible to keep detailed history of the last events. This will help the company to better react to these same events. ERM allows a good preparation and a good management of a possible crisis (Véret and Mekouar, 2005). Table 1 summarize the main differences between the silo-based risk management approach and the ERM.

Table 1: Comparison between the silo-based risk management approach and ERM

Silo-based risk management	ERM
Taking into consideration the negative effects of risk's exposures.	Taking into consideration the positive and negative effects of risk's exposures.
Each risk is analyzed separately.	Risks are analyzed as a portfolio.
Risk management's activities are decentralized in the company.	Integrated and organized risk management activities.
The company seeks to be protected from the risks.	The company seeks to improve its performances and to create value.
The principal risks considered are legal and financial risks.	All the types of risks are considered.
There is a lack of synergy between the	There is a good communication and a good synergy between the various departments of

Silo-based risk management	ERM
various departments of the company.	the company.
There is a lack of risk awareness among employees.	Each employee considers himself as a risk owner.
The risk manager is considered as a treasurer.	The presence of a chief risk officer with a strategic position in the company.

Source: Prepared by the author

Conclusion

We present in this article two approaches of risk management. The first approach, the silo-based risk management is defensive since it only seeks to protect the company through traditional instruments of insurance or derivatives. The company does not benefit from possible opportunities that can emerge. This approach does not allow an exhaustive identification of the company's risks. Moreover, each risk is managed in a separated way, which can cause a duplication of the expenditures or a waste of valuable company's resources. The second approach, the ERM, is more offensive and strategic. In this approach, risks are managed like a portfolio, which enables to study their possible correlations. It helps the company to establish an exhaustive list of risks, as well as a better assessment and communication on them. The integration of an ERM within the company contributes to the improvement of the competitive advantage, the satisfaction of the stakeholders and the maximization of the shareholders' value. We hope that this article will help the reader to understand ERM and its contributions better. This will raise certain confusions on the subject and help to understand that the ERM's integration within the company is not a fad, but an absolute necessity in an increasingly risky environment.

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