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The management of financial risks: the possible failure of an important tool

La gestion des risques financiers : l'échec potentiel d'un mécanisme important

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The management of financial risks: the possible failure of an important tool

Abstract

The growth of the Internet has forced companies to invest in the field of risk management. Several risk management tools, such as creating a risk culture, participatory management, categorization system, and monitoring unit, have been developed. However, it is essential to understand how risk management has evolved in recent years and how to carry out effective risk management. This essay aims to answer important questions related to the nature of risks faced by firms, their analysis and measurement, the possibility of anticipating and preventing them, and the transformation of companies' management due to the evolution of risks.

The advent of the Internet has had a profound impact on the business landscape, necessitating the adoption of robust risk management practices. To effectively manage risks, it is crucial to understand and analyze the various risks to which businesses are exposed. This involves developing a risk culture within the organization, implementing participatory management approaches, utilizing categorization systems, and establishing dedicated monitoring units. Anticipation and prevention play a crucial role in mitigating risks and ensuring the long-term sustainability of businesses. The transformation of business management is heavily influenced by the evolving nature of risks, calling for adaptability and proactive strategies. By integrating multidisciplinary theoretical frameworks into risk management practices, its effectiveness and comprehensiveness can be enhanced.

Paper Type: Theoretical Research
JEL Classification: G32, D81, M10
Keywords: Risk management, Internet, risk culture, participatory management, categorization system, monitoring unit, risk governance.

Résumé

La croissance de l'Internet a obligé les entreprises à investir dans le domaine de la gestion des risques. Plusieurs outils de gestion des risques, tels que la culture du risque, la gestion participative, le système de catégorisation et l'unité de surveillance ont été développés. Cependant, il est essentiel de comprendre comment la gestion des risques a évolué ces dernières années et comment mener une gestion des risques efficace. Cet article vise à répondre à des questions majeures liées à la nature des risques auxquels les entreprises sont exposées, tout en les analysant, les mesurant et en examinant la possibilité de les anticiper et de les prévenir. Il sera également question d'appréhender la transformation de la gestion des entreprises en raison de l'évolution des risques.

L'avènement d'Internet a eu un impact profond sur le paysage commercial, nécessitant l'adoption de pratiques solides de gestion des risques. Pour gérer efficacement les risques, il est essentiel de comprendre et d'analyser les différents risques auxquels les entreprises sont exposées. Cela implique de développer une culture du risque au sein de l'organisation, de mettre en œuvre des approches de gestion participative, d'utiliser des systèmes de catégorisation et de mettre en place des unités de contrôle spécialisées. L'anticipation et la prévention jouent un rôle crucial dans l'atténuation des risques et la viabilité à long terme des entreprises. La transformation de la gestion des entreprises est fortement influencée par la nature évolutive des risques, ce qui exige une capacité d'adaptation et des stratégies proactives. L'intégration de cadres théoriques pluridisciplinaires dans les pratiques de gestion des risques permet d'en améliorer l'efficacité et l'exhaustivité.

Type de papier : Article de recherche
Classification JEL : G32, D81, M10
Mots-clés: Gestion des risques, Internet, culture du risque, gestion participative, système de catégorisation, cellule de veille, gouvernance des risques.

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1. Introduction

In the 21st century, the emergence of the Internet has brought forth the recognition of risks as a crucial aspect of business operations. Companies have had to increase their investments in risk management in order to adapt to this rapidly evolving landscape. As a result, various risk management tools have been developed, such as the establishment of a risk culture, participatory management, a categorization system, and the implementation of a monitoring unit.

However, it is important to go beyond the mere existence of these tools and delve into how risk management has been transformed in recent years. This leads us to question the effectiveness of current risk management practices. What are the types of risks that companies face today? How can these risks be analyzed and measured? Can they be anticipated and prevented? Moreover, how has the evolution of risks impacted overall company management, and does it support the establishment of a "risk governance"?

This thesis aims to address these fundamental questions through the utilization of case studies and a multidisciplinary theoretical framework. By examining real-world examples and drawing from diverse academic perspectives, we seek to provide insights into effective risk management strategies in the present-day context.

The 2000s seem to mark a new era. The attacks on the World Trade Center in New York and in Madrid, the explosion of the AZF factory in Toulouse, the Tsunami in Southeast Asia, hurricane Katrina, the urban violence of November 2005 or even the financial scandals at Enron and Société Générale, are all different events that seem to highlight the urgency and the requirement to control risks. In this context, the diversification of the danger seems to challenge not only public institutions as a whole (State, local authorities, international institutions), but also, and perhaps more surprisingly, companies.

Indeed, to an uninitiated eye, companies seem to be waking up from a deep sleep over the issue of risk management. In the press and conferences, we discover, for example, that firms engage their social responsibility by developing strategies aimed at protecting their environment and human rights, which industries seem more sensitive to the safety of their employees and that they are starting to use risk management specialists, called risk managers.

However, if we look more closely, we realize that, in reality, risk management within companies is far from being a new concern. It should be remembered, without going back to too distant periods, that as early as the 1970s and 1980s, risk management was a crucial issue. As such, in 1985, management professors Patrick Joffre and Gérard Koenig believed that companies were already under an obligation to develop a strategy in relation to their financial and operational risks.

Their analysis was then based on two rising phenomena:

– On the one hand, the rise of insurance: companies are resorting more and more to insurance contracts to protect their assets, saw themselves imposing, by their insurer, the implementation of prevention and security measures.

– On the other hand, the financialization of capitalist economies: indeed, the gradual transition from a debt economy to a financial market economy made financing methods complex and consequently required greater investment on the part of companies in terms of measuring and assessing risks.

In addition, the news at the time was already pushing companies to be responsive to threats that could affect them.

For the record, we can recall that the accidents at Seveso in Italy in 1976 and Chernobyl in Ukraine in April 1986 strongly challenged public opinion and forced a number of decision-makers concerned with industrial risks to take drastic safety measures in order to avoid a resurgence and disasters.

However, we also recognize that if risk management is not a new concern for companies, the latter had somewhat lost interest in this theme during the 1990s.

Indeed, by questioning experts or business leaders, we quickly realized that risk management was not treated as such but diluted between different departments: legal, financial, purchasing, human resources, and security. During the 1990s, this theme therefore seemed to have been forgotten or, at least, no longer had as strong a place as during the 1980s.

However, at the beginning of the third millennium, a new reversal of the trend seems to be taking shape. The question of risk management is once again greeted with keen interest by companies and their managers. Thus, a study by Marsh, on a sample of 950 managers interviewed in eleven European countries, between 2001 and 2004, revealed that their degree of involvement and investment increased substantially, as 60% of responders gave more importance to the need to assess the risks of their firm.

As mentioned, this revitalization owes its explanation, in part, to the appearance of new disasters that could have been better managed.

The number of deaths resulting from the events of September 11, 2001, the Tsunami of December 26, 2004 or Hurricane Katrina of August 25, 2005 could certainly have been reduced considerably if satisfactory precautionary measures had been put in place.

But, more generally, we would argue that it is the emergence of new risks that attract the attention of companies. For example, cybercrime - the result of the explosion of the Internet - or violence are unprecedented risks for companies that they must now manage, unless they jeopardize their economic activity. In relation to the risk represented by violence, one need only be convinced of the importance of companies of thinking of the events of September 11, 2001. In addition to the thousands of deaths that these attacks caused, the events had a brutal impact on the business community and led to the collapse of economic activity in all Western countries.

Based on this observation, as risks seem to have mutated and proliferated for companies, this leads us to wonder if risk management has also evolved over the past thirty years. By definition, risk management is a method that helps the company identify its risks well and measure their importance with a view to then dealing with them effectively. This means that if the contours of the risks have changed, the methods of measurement and treatment should have also evolved. Did this actually happen? Have companies entered a new era of risk management?

After a literature review, we will present a recent history of risks within the company in a differentiated way in the first chapter and aim to address the following:What is the precise nature of these new risks and how are they new? Are they more "unpredictable" than the previous ones? Do they represent a greater threat to societies?

subsequently, we will focus on risk actors, not only those who prevent them but also risk producers: Who are the actors? Who is protecting the company and how is it organized to deal with risk? Perhaps surprising, but we will see, , that with the appearance of these "new risks", the network of risk prevention players today relies on resources that were little used previously by companies but which represent ancestral resources, namely the police, justice system and citizens.

We will also present the tools which make it possible to identify and evaluate these various risks. We will see how the appearance of a new wave of risks calls into question new measures to tackle them. Traditional risk assessment requires a more dynamic perspective. More than measurement and evaluation, anticipation is becoming the leitmotif of new risk management policies.

Finally, we will examine the best methods for risk management. The assessment that will be made may be surprising: if obviously risk management has gained in technicality, it has evolved little in terms of representation. The proliferation of experts has not made it possible

to renew thinking in terms of risk treatment. Virtual barriers have replaced physical barriers. Surveillance screens are gradually replacing human surveillance.
But these devices, as sophisticated as they are, have not generated any cognitive upheavals in relation to these fields of investigation.But this is not without its difficulties. Companies in particular and society in general find themselves powerless in relation to the societal and technical transformations of the past two decades.
What can we propose to break out of the circle of violence that impoverishes certain territories around the world and makes business investment unlikely? Doe is not the inability of companies to fight effectively against "new generation" risks have an impact on their image and their legitimacy?
Finally, we will end with a dozen sheets for good risk management within the company. The integration of risk management within an organization requires that each employee considers himself or herself as a risk manager whois responsible for his or her actions.
To answer the questions laid out in the first chapter, we would argue that it is from this exploration of risks in business at the end of the 20th century and at the beginning of the 21st century that several features emerge. If the existence of the risk is far from unprecedented, the number of risks, their polymorphic nature, and their ability to reinforce each other are a new deal.
It is perhaps delinquency, even violence, which penetrates companies, and, more broadly, organizations, and whose nature is amplified and enhanced by new technologies, which most destabilizes the world of the economy. Indeed, this world that some present as sanitized turns out, like the rest of society, to be facing a breakdown in civility. From harassment in a company to the attack by planes on one's workplace, the diversity of the field of malevolence in the company leads to multiple anxieties on the part of those who work there.
The most worrying fact is the impossibility of foreseeing certain serious events. Frank Knight, an economist from the beginning of the 20th century, distinguished risk from uncertainty, the first being probable unlike the second. Indeed, we can estimate the chances of an earthquake on the Californian coast, but we could not estimate the chances that a terrorist organization is planning an attack of the type of September 11, 2001. However, this type of unpredictable event has strong chances of happening without being able to foresee them.
From a society of risk, we would move to a society of uncertainty which conveys a heightened feeling of fear.
Faced with this societal transformation, companies have no choice but to organize themselves and adapt to these new difficulties. This article will be an opportunity to present the network of actors who convey these risks or, on the contrary, who try to prevent and combat them.

2. Literature Review

The management of financial risks is a complex and critical task for businesses in today's dynamic and uncertain environment. To gain a comprehensive understanding of this subject, an extensive review of existing literature was conducted, encompassing a wide range of sources including books and journals. This literature review provides an overview of key works that contribute to the understanding of risk management and its implications.
Books have played a significant role in shaping the discourse on risk management. Arrow's "Théorie de l'information et des organisations" (2000) presents a theoretical framework that explores the relationship between information and organizational dynamics, offering insights into how risk is perceived, processed, and managed within organizations. Barthélemy and Courrèges (2004) provide a comprehensive methodology for optimizing risk management strategies, highlighting the importance of a global perspective in decision-making. Beaver and Parker's "Risk Management: Problems and Solutions" (2002) delves into the challenges faced

by organizations in managing risks effectively, offering practical insights and solutions. Beck's "La société du risque" (2001) discusses the concept of the risk society, exploring the evolving nature of risks and their impact on various aspects of society. Callon, Lascoumes, and Barthes' "Agir dans un monde incertain" (2001) examine the dynamics of action and decision-making in an uncertain world, emphasizing the need for adaptive risk management approaches.

Other notable books include Cleary and Malleret's "Risques, perception, évaluation, gestion" (2006), which provides a comprehensive analysis of risk perception, evaluation, and management strategies. Crouhy, Galai, and Mark's "Risk Management" (2001) offer an in-depth exploration of risk management practices and techniques in financial institutions. Eeckhoudt, Gollier, and Schlesinger's "Economic and Financial Decisions under Risk" (2005) provide a theoretical framework for understanding risk preferences and decision-making under uncertainty. Friedman's "The World Is Flat: A Brief History of the Twenty-First Century" (2005) examines the global forces that shape economic and business landscapes, emphasizing the need for effective risk management strategies in an interconnected world. These books, among others, contribute valuable insights into the theoretical foundations, methodologies, and practical considerations of risk management.

In addition to books, scholarly journals play are advancing the understanding of risk management. The selected journal articles provide empirical evidence and theoretical advancements in various areas of risk management. Adam and Fernando's article on "Hedging, Speculation, and Shareholder Value" (2006) explores the relationship between hedging strategies, speculation, and the creation of shareholder value. Amadieu's research on "Eléments essentiels pour une bonne gestion du risque opérationnel" (2006) focuses on identifying critical elements for effective operational risk management. Anand and Kaushik's study on "Currency Derivatives: A Survey of Indian Firms" (2008) examines the usage and effectiveness of currency derivatives in managing foreign exchange risk. These studies, along with others such as Campbell and Kracaw's (1990) analysis of corporate risk management and Froot et al.'s (1993, 1994) framework for risk management, contribute to the understanding of specific aspects of risk management practices, policies, and their implications for organizations.

The reviewed literature covers a wide range of topics within the field of risk management, including but not limited to information theory, organizational dynamics, global optimization, risk perception, evaluation methodologies, financial risk management, operational risk, scenario analysis, and hedging policies. By examining these diverse perspectives, this literature review provides a solid foundation for understanding the complexities and challenges associated with financial topics and business models.

3. External risks

The malicious operations are obviously not the only fact of the members of the company. From the consumer who shoplifts to the intelligence agent who steals a secret for the benefit of another company, the producers of external risks are many and varied. Let us point out nine categories of actors who do not belong to the company and who can cause it harm: – consumers; – the media; – government; – the citizens; – rating agencies; – competition; – providers; – The subcontractors; – distributor customers (Arrow, 2000; Barthélemy & Courrèges, 2004; Callon et al., 2001; Cleary & Malleret, 2006).

All of these entities have become sources of extraordinary risk over the past decade. For example, the consumer, who in the act of purchase seemed harmless, seems to have become totally uncivil, ready to come to blows as soon as he/she is not satisfied with the service offered to him/her (Friedman, 2005).

In addition, the power of each of these entities has grown with the importance of information in our societies. As such, as soon as the media or rating agencies disclose negative information about a company, this information spreads like wildfire. The consequences are often harmful even though the veracity of the information has not been established.
The Rodriguez affair represents a symptomatic case of this type of danger. Let us briefly recall the case. At the end of 2002, the newspaper Le Point referred to a possible link between the group, manufacturer of luxury yachts, and Peter Morrish, in “complex mechanisms which… promote money laundering”. Following this article, the stock share fell from 55 euros to 15 euros in a very short time, while the turnover of the multinational increased by 50% between 2002 and 2003. It was not until June 25, 2003 that the High Court of Paris agrees with the company, which was harmed by this announcement (Godard et al., 2000).
In addition, since the fall of the Berlin Wall and the end of the Cold War, the number of external risk producers has increased. On the one hand, a number of intelligence officers who worked for the country became business intelligence agents; on the other hand, the opening of Eastern countries to capitalism has allowed organized crime to prosper. These phenomena are coming reinforce the idea that risk continues to globalize and complicate (Beck, 2001).
In short, the risks have multiplied with the development of capitalist society in the world. It is therefore far from certain that the individuals have become, as Robert Castel argues more sensitive to risk (Social insecurity, What is that what to be protected?, Paris, Editions from Threshold, 2003). In our view, developed societies entered a new era where it is important to have "a culture of risk" for TO DO face at of the risks polymorphs.
For the risk not materialize or translate into a crisis, it is necessary that this network of actors get organized.
But even before the question of the effectiveness of the organization of this network arises, it is necessary to know the different categories of actors able to participate in the fight against risk. It is from a good knowledge of these that the network of actors can function in the best conditions. In other words, this "stakeholder mapping", as G.Johnson, H. Scholes and F.Frery call it (Strategic, Pearson Education, 2nd edition, p.483), is used to consider the possibilities of managing the reactions of each and to identify the potential for reactivity in relation to the risks that may arise.
It is in this perspective that we are going to present five forms of protagonists able to participate in risk prevention: the companies themselves, the risk experts, the private security and insurance sector, the institutions of control and citizens.
1.1 Businesses risks
In a European survey carried out by Marsh & McLennan Companies among 600 business leaders, the importance of risk is a popular issue, and a growing number of them consider it a topic of priority concern. However, behind the discourse of business leaders, a very disparate realities within companies in terms of risk prevention hide.
Some companies consider the notion of risk as important enough to create a full-time risk manager position, with extended responsibilities and a team of a few agents. They are above all large companies and with an internation dimension. They have to manage massive, frequent and serious risks. They can benefit from a culture of risk because of the products they sell: companies like EDF (Marsh & McLennan Companies, 2022), with responsibility for civil nuclear power; and Saint-Gobain, a seller of reinforcement and insulation materials, etc.
Other companies have a risk management division that could be attached to the division responsible for insurance issues without it being particularly highlighted. In other cases, the risk may be managed by the division that has the most to manage the risk on a day-to-day basis. As such, some health establishments leave this management to their biomedical department, the main function of which is the management of the hospital's medical equipment and technical monitoring.

Finally, some companies feel little concerned about this issue. These are generally not large enough to employ a full-time risk manager.
This is particularly the case for many SMEs. In this context, they favor subcontracting. For example, to identify its risks and set up a continuity plan, an SME uses the services of a consulting company capable of carrying out this audit. In this context, it is the administrative and financial director who remains the main contact with whom risk management is approached.
Nevertheless, this suggested relative heterogeneity between companies tends to fade over time. On the one hand, because the appearance of new risks (informational risks, phenomena of insecurity towards goods and people) affects all organizations without distinction – computer viruses, attacks against personnel or staff health concerns – on the other hand, because companies are increasingly forced to comply with a real risk management policy due to stricter requirements in this area on the part of of some customers. As such, the investigation carried out by Marsh & McLennan Companies concludes that "many medium-sized companies today are suppliers and subcontractors of large groups or large distributors, who impose demanding quality charters on them, and intend to control ever more upstream (just-in-time requirements) the reliability of their service providers. Some of the constraints imposed on this subject, particularly in terms of food safety, sometimes go beyond the legislation itself. The implementation of these charters will require real risk management.

- **Risks related to experts**

Behind the security experts hide different profiles and different worlds. We find the police commissioner, seconded to the Ministry of the Interior, to do public engineering, the biology researcher who does internal auditing for a large group, and finally the risk management consultant (Arrow, 2000).
Behind this difference in profiles and universes, we nevertheless retain four ways of carrying out security expertise: the first way to carry out an expertise is obviously to carry it out internally. We then speak of internal audit. This type of audit is carried out in particular in large groups. But it can also be done in other organizations. For example, some town halls have in-house evaluation services that verify the application of health and safety standards (Bartthélémy et Courrèges, 2004).
Then there are the research laboratories which are also able to provide specific expertise in the area of risk management. For the record, let us cite a few well-known research centers in this field: the National Institute for the Industrial Environment and Risks (INERIS) and the National Institute for Research on Transport and their Safety (INRETS).
A third way to carry out an expertise is to use administrative audit services. For example, the National Institute for Advanced Security Studies (INHES), a merger of IHESI (which studied crime phenomena) and INESC (which studied natural and human risks), has a public engineering sector (Greffe, 1999). Finally, there is the outsourcing of expertise to consulting firms: Accenture, Ernst & Young, Marsh or Geos, to name but a few large firms, have recently invested in the fields of security and management of risks (Marsh, 2004).
However, it is interesting to underline that with regard to the recent reports on this field of activity, it is this last category, that is to say, the outsourcing of expertise, which is gaining momentum compared to other categories of expertise. Indeed, for several years, audit companies have seen their presence increased compared to other forms of expertise, both for reasons of cost and for reasons of convenience (Crouhy et al., 2000).
From this perspective, organizations are less inclined than in the past to have an internal audit department. This type of service does not create value. Similarly, the State and its administrations are seeking to withdraw from numerous missions in order to reduce public expenditure; they leave, when possible, the task of carrying out the expertise to private actors

(Cabras 1994).
Finally, the nature of security expertise needs on the part of all organizations appears multiple and complex: IT security, urban security audit, industrial security, etc.
In this context, it is more advantageous to use consulting firms that can offer them a global service offering combining all forms of security expertise rather than having to manage security expertise of various kinds internally (Bourdieu 1982).

4. The private security and insurance sector

There are currently two categories of companies that provide risk management activities: on the one hand, companies that guarantee the security of physical assets (premises, computers, etc.), human and immaterial (software, patents, database); on the other, companies that offer insurance coverage (Bartthélémy et Courrèges, 2004).
For the first type of company, it is essentially a matter of carrying out maintenance, surveillance and protection missions for private or public customers. In this context, the company is guided by a philosophy of preventing the risk of loss or damage. For the second type of company, it is a question of covering business risks: commercial risks, civil liability, property insurance, etc.
In this context, insurance companies have for ten years been forcing their customers to integrate the need to protect themselves, which benefits private security companies (Marsh 2004). For the same historical reasons, insurers have been involved since the early 1980s in efforts to certify safety equipment. Even today, insurers are trying to harmonize these standards at European level through the European Insurance Committee.
In other words, a risk management sector is forming and gaining momentum thanks to the linking of security activities that are still young, and insurance activities that have become traditional activities of modern economic activity (Marsh, 2004).
As observed previously, the risk may come directly from the members of the company, be it the fruit of the actions of individuals outside it or even be the result of a natural hazard (earthquake by example). It is important to note that the origin of the risk and the nature of the risk producer imply specific organizational methods in terms of risk management (Coqueteau et Pottier 1995).
In this regard, a study carried out on shopping centers by two sociologists, Frédéric Ocqueteau and Marie-Lyse Pottier, shows that the managers of these structures subcontract the production of security to specialized companies when the probability of theft emanates from all of the personnel (Coqueteau et Pottier 1995).
On the other hand, the management of a shopping center prefers to produce “in-house security” when it is the staff who are endangered by the behavior of outsiders.
This choice has a simple explanation. Monitoring is outsourced to avoid possible collusion between security guards and other staff. Management can better control its staff. Surveillance is internalized to federate the energies and promoting a “safety culture” internally (Coqueteau et Pottier 1995).
In other words, The internalization of risk prevention functions has the advantage of protecting the organization and consolidating group ties, as investments made internally in terms of prevention contribute to this cohesion (Coqueteau et Pottier 1995).
This observation is reproducible in other situations. When it comes to IT security, it is best for a business to hire an IT services company when it comes to monitoring employees when using the internet and email. Conversely, a firm may prefer to ensure its own IT security when it wants to maintain control of critical assets and when it wants a greater culture of security at all levels of the organization (Coqueteau et Pottier 1995).
In summary, the origin of the risk and the producer of the risk are essential factors that

determine the methods of risk management. Outsourcing of risk management often results from internal malfunctions that need to be controlled, such as theft committed by employees or imprudence by managers. Conversely, the internalization of risk management is linked to the dangerousness of the external environment and the need to strengthen internal defenses (Coqueteau et Pottier 1995). The company strengthens its internal defenses ("immunity") when it feels threatened by entities external to the company: competing company, State... Within its organization, a corporate culture is then formed which crystallizes around of the concept of "risk". Indeed, in order to reduce uncertainty, individuals will convey new values, will develop new safety standards, and will participate together in new training.

This cohesion will produce learning, knowledge, sensitivity and common experiences that will have a reassurance function.

It is difficult to measure the risks within a company, and this measure proves to be insufficient. We are in an economy where everything is changing rapidly. Today's risks will not necessarily be tomorrow's risks. Therefore, how can the company anticipate future risks? How can it “act as if” it knows future risks, or in other words, how can a company control long-term risks?

To answer these questions, the company first needs to be able to assess the number of economic activities it is able to produce. As we will see, having too many activities within a company, or conversely too few, inevitably leads to taking high risks. But that is not all. For the company, it is also a question of memorizing the necessary and sufficient information which enables it to anticipate future risks.

Here again, memorizing too much information, like memorizing insufficiently, leads to excessive risk.

5. Optimizing activities number

In the context of financial markets, economists have shown that the diversification of securities in a portfolio reduces the risk. Assuming that the price variations of different stocks that make up a portfolio are partly independent, they tend to offset each other, thus reducing the total risk (Markowitz, 1959).

This idea has been taken up by economists in the context of industrial strategies. It is preferable for a company to diversify its activities rather than concentrate on a single area of activity. Indeed, in the event of a problem in one area of activity, the profitability of the other areas of activity can compensate for the losses. Cross-subsidies are then possible (Barthélémy et Courrèges 2004).

However, in recent years, after a strong diversification movement, companies have tended to refocus on their core skills, the idea being that we know how to do better what we have already done than what we never did. For example, Suez, which operates in particular in water management, got rid of many assets in the communication sector such as M6, Paris première or OndeoVideo. This rationalization constitutes a long-term risk (Barthélémy et Courrèges 2004).

It is effective not to diversify too much otherwise, the company will lose control of its areas of activity. The director of Siemens, on February 3, 2004, in an interview with the newspaper La Tribune, admitted that he did not know all the activities produced by his group. Herbert Simon, Nobel laureate in economics, developed the idea that individuals have limited cognitive abilities. Unable to know everything, they do not look for the optimal solution, but stop at the first satisfactory solution they discover (Barthélémy et Courrèges 2004). While rationality is known to be “limited”, insufficient diversification is also a risk for a company. A company that is poorly diversified is ill-equipped to deal with market volatility(Barthélémy et Courrèges 2004).

As such, the Alstom group, faced with a critical financial situation, is facing the following vicious circle: forced to launch a restructuring program, Alstom had to sell its energy transmission and distribution division to Areva and Siemens, its competitors in the industrial turbines sector. However, from July 30, 2004, the date of the group's recapitalization, it will only have three divisions: Power (energy generation: power plants, turbines, etc.), Transport (mainly rail) and Marine (liners, ferries). The number of activities therefore seems limited in a context where two of the three poles had an uncertain future. Indeed, the Power pole would be supposed to be technologically behind its competitors and the “Marine” pole would encounter sluggish demand.

Therefore, in general, companies must seek a balance in terms of areas of activity ensuring a minimization of risk in the long term, too many areas of activity or not enough necessarily producing a significant risk.

With the development of risk during the 1980s, research in risk management focused on risk measurement. It was at this time that the sciences of danger were built around cyndinics. This science has relied to a large extent on the work of systems science and more particularly the work of Jean-Louis Le Moigne in France, and internationally on that of the Nobel Prize winner in economics Herbert A. Simon.

Combining psychology, sociology, financial mathematics, actuarial calculation, reliability calculation, calculation of probability on tree structures and computerization of information processing, cyndinics is a science that has been enriched to try to assess risk as precisely as possible. We will first try to make a brief inventory of the risk measurement and we will demonstrate that the latter currently seems insufficient to apprehend the risk.

Two other facets of risk are worth considering. On the one hand, it is necessary to have a more qualitative estimation of the risk. The perception of the risk by the persons concerned must not be neglected. On the other hand, in our contemporary societies where risks are constantly evolving and changing, it is advisable to have a dynamic approach to risk.

Companies have mostly adapted to risks by buying insurance policies, relying on insurance-based risk management. However, insurance coverage is not able to fully repair the damage caused by a crime or misdemeanour. Insurance protects the activity of the company but can discourage investment in risk management. Thus, introducing clauses and limits to insurance contracts becomes necessary (Marsh, 2004).

This observation may seem surprising because insurance coverage is not able to repair the commission of a crime or misdemeanour. Abruptly, if an employee dies in his/her workplace in a context where the safety instructions are not sufficient, the insurer can only pay a tiny part of the damage caused. It will not bring the employee back to life nor prevent the company director from being imprisoned. He/she will have to pay compensation to the victim's family and a good lawyer to the company director for his/her defense.

On the one hand, hedging is then a double-edged sword. The insurer protects the activity of the company, which is essential if it wishes to develop.On the other hand, it can discourage the company from investing in a risk management approach; hence the need to introduce clauses and limits to insurance contracts.

6. Conclusion

In conclusion, the research paper explores the evolving landscape of risk management in the 21st century and the challenges faced by companies. The paper delves into the nature of new risks, their unpredictability, and their potential threat to societies. It highlights the need for effective risk management strategies in the face of emerging risks such as cybercrime and violence. The study also examines the different actors involved in risk management, including those who prevent and produce risks. It emphasizes the importance of adopting a dynamic and anticipatory approach to risk assessment and management.

While risk management has become more technical, the paper argues that there has been limited progress in terms of conceptual frameworks and cognitive shifts. It raises concerns about the societal and technical transformations that have rendered companies and society at large somewhat powerless in effectively addressing new generation risks. The research suggests that the inability of companies to effectively combat these risks may impact their image and legitimacy.

Ultimately, the paper emphasizes the need for a comprehensive approach to risk management within organizations. It proposes that every employee should consider themselves as a risk manager responsible for their actions. The research concludes by highlighting the increasing number and polymorphic nature of risks, as well as their ability to reinforce each other, creating a new deal for businesses. In this era of uncertainty, where certain serious events are difficult to foresee, companies must adapt and organize themselves to navigate these challenges and ensure their resilience in an evolving risk landscape.

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