SUPPLY RISK MANAGEMENT: MITIGATION STRATEGY

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Abstract

The role of risk management is to analyse the measures aimed at protecting firms, specifically the Risk Management techniques.
Company protection is a field in which managerial innovations are urgently required. The need for the supply risk management is the result of social awareness for safety, law-makers desire to regulate dangerous activities and protect individuals exposed to risk, the evolution of technologies which are becoming increasingly complex and dangerous. Malicious and accidental events imply substantial costs that in the most severe cases can even exceed the company's financial capability. An accurate management of these events and a mitigation strategy can then be a valuable source of saving.

A low level of propensity to manage and govern mere risks is also due to a specific firm-insurance company relationship characterised by both co-operation and conflicts: nowadays firms do not want "traditional" insurance policies only; they require a range of quality innovative insurance-financial products with consulting services.

Key words: Supply risk management; mitigation strategy; Insurance.

Introduction

The paper will develop, with an inductive/deductive approach, a consistent theoretical frame of reference, based on modern analytical techniques for the assessment of the dynamics of premiums/prices insurance as a result of ongoing changes in the industry. The methodological approach provides, firstly, correlation between factors, risk measurement techniques and discretionary and evaluates prevention plans, plans to reduce and transfer insurance

The methodological approach mainly used in the definition of the working hypothesis is quali-quantitative and will be substantially based on the analysis of case studies and best practices.

In view of the synergies with the insurance companies and trade association and, more generally, with the stakeholders of the system. Will also spread the use of focus groups.

The paper intends to explore the theme of global risk assessment company, an operation which is certainly difficult for the governing body of the qualifying element of the company and, ultimately, in ensuring an evolution resonant systemic relations. The paper will study the major insurance instruments to cover the pure risks, through the comparative analysis of the existing insurance schemes in Italy and Europe in order to assess the compliance of the premium levels for the type and level of insurance cover. These results will form the basis for

designing any new tools/services that include both insurance contracts (policies) and reinsurance schemes tailored to the needs of the customers.

1. Traditional risk management and relevant evolved typologies

Innovation has always been the main development driver for individual firms and the production system as a whole. It does not exclusively involve technology and creation of new products and processes. Along with technological innovation we also have managerial innovations, namely identification of new techniques for resource management, labour organization, operation planning, decision-making. Managerial and technological innovation may be aimed at cost saving, turn- over increase, quality improvement (also in the areas that can be hardly quantified), business management.

In its evolved typologies *Risk Management* is an example of managerial innovation aimed at managing wilful and accidental adverse events, also called business protection (Golinelli, 2000). . These adverse events may include fire and computer crime, theft and brand counterfeiting, attacks and industrial injury, all of them causing damage to the organisation's tangible and intangible assets and to its human capital (Crockford 1980 e 1982, Banhan 1994, Lehar 2002).. Business protection is a field urgently requiring managerial innovation due to the following reasons:

1) management of wilful and accidental events likely is – both in the practice and in the *corpus* of business knowledge – the less advanced area amongst the different areas of the general business management. Compared to well-established functions such as marketing, finance, administration, many deficiencies can be found in decision-making methodologies, tool refinement, activity planning, evaluation of results and, in general, in the proper *management* of a business problem;

2) wilful and accidental events increasingly tend to worsen. This phenomenon does not involve all typologies of risks but is particularly evident with respect to environmental risks and those associated with liability for product malfunctioning. This worsening is due to: a higher social awareness of safety issues; the law-makers' tendency to regulate hazardous activities; protection of individuals exposed to risk; evolution of technology towards forms characterised by a higher level of complexity and dangerousness;

3) wilful and accidental events involve high costs that, in the most severe cases, cannot be afforded by the firm. A careful management of these events can then be a valuable source of saving.

There is an increasing need to rationalise and up-date business protection techniques (Antonelli, 1997). Amongst the innovations aimed at meeting this need *Risk Management* is the one that can be better applied to any typology of risk. Actually, while allowing for the management specificities of each class of wilful and accidental risks, *Risk Management* is based upon a more general approach.

To some extent *Risk Management* is a new managerial approach including each individual action aimed at protecting the organisation; it combines different approaches, risk management tools, expertises that, so far, have been characterised by fragmentation and lack of interconnection. It seems that risks can be systematically found at any level of the business functions (something that cannot be ascribed to the latest theoretical developments).

The traditional elements of *Risk Management* include:

A) *Structuring of risk management activities*, according to a sequence-based model where final decisions are supported by a preliminary identification of the individual and potential risk. The model includes three fundamental phases:

1) risk identification, aimed at implementing a regular and constant monitoring of the possible threats;

2) risk evaluation, namely the translation of threats in quantitative terms, in particular by determining the likeliness of the event occurrence and the potential seriousness of the damage;

3) risk treatment, within which the most suitable actions are decided and implemented in order to reduce risks and bring them at a level viewed as convenient vis-à-vis the firm's targets (Forestieri, 1996, 1999; Barlow, 1993).

Linking risk treatment to a preliminary data gathering and processing means getting rid of empirical decision-making approaches based on approximations and intuition-based judgements that do not allow for the firm's overall cost effectiveness. Additionally, the identification and evaluation phases enable to enhance prediction abilities as to possible adverse events, above all if they are new events or events that do not occur on a regular basis (LEYENTS A.,1993).

B) *high integration amongst the different risk management tools.* Business protection is characterised by a high heterogeneity of the issues covered and by substantial differences amongst the action tools used. Insurance on the one hand, and technical solutions to prevent threats on the other hand, are two separate worlds with different counterparts, expertises and philosophies (Finken e Laux, 2009; Lakdawalla e Zanjani, 2012) .

C) *Extension of the range of tools,* trespassing into the field of flow management financial techniques. The basic principle is the attempt to reproduce a number of aspects typical of the risk portfolio of the insurance companies. The basic advantage is a higher flexibility and freedom when deciding which business protection traditional tools have to be used.

D) *Shifting decision-making methodologies toward a financial approach;* in line with what is already done when assessing any business investment. A harmful event is basically viewed as the source of a negative monetary flow and *Risk Management* actions as tools to reduce these flows (Borio C., Furfine C., Lowe P., 2001).

E) *Searching for the maximum possible integration between the management of wilful and accidental events and the overall business management.* Business protection suffers from a sort of a particularly harmful organisational isolation; the managers entrusted with this area should instead constantly interact with the managers from all functions. As each function is exposed to specific risks, managers should contribute to identifying and preventing potential threats.

Risk Management is based on the creation of links between firm protection and firm management, with a specific focus on the development of suitable communication tools and the assignment of a specific position to the person charged with risk management (a position equal to the one held by the various functional managers) (Haller M., 1976; WILLIAMS C.A.,1995).

However presenting Risk Management as a managerial innovation is in conflict with the fact that the most advanced nations have adopted this technique many years ago (in particular Great Britain and U.S.A). Risk Management is one of the most common managerial techniques used in many no-profit organisations as well.

Traditionally Risk Management is confined to the so called *pure risks,* namely those risks that only take the possibility of loss into accounts (Borghesi, 1985; LEYENTS A., 1993). The general aim of the risk management sub-system is then to guarantee protection against unfavourable events and their effects.

Given for granted that Risk Management is closely linked to the firm's size, what mostly differs real *Risk Management* from an insurance-type risk management is the assignment of competences both in the prevention and insurance fields.

In the case of risk insurance management, a distinction must be made between two different situations: 1) the relationship with the insurances is managed accurately, following modern procedures and with suitable resources; 2) the firm confines itself to a mere

operational management of policies and accidents (Born e Klimaszewski-Blettner, 2013; Klein e Wang, 2009; Kunreuther e Pauly, 2006),.

2. Resources available and relationship with the insurance company

It is worth highlighting the low level of dissemination of the *Risk Management* function in Italy. The typology and quality of the operations carried out, the tasks and objectives assigned and the resources available depend on the deficiency of human and financial resources. Additionally, objectives and *Risk Management* concept evolve more rapidly than resources, thus generating a deeper discrepancy just in the most developed firms where *risk managers* perform their function.

It is worth mentioning another crucial element of analysis: the variability of resources in the event of a crisis. Actually when a firm experiences a period of sales reduction, some of the measures required to maintain management cost effectiveness are: rationalisation of the activities and reduction of unproductive expenses. Expense reductions usually involve those related to R*isk Management,* although this function is allocated a lower level of resources than other areas equally subject to expense cuts. The objection might be raised that *Risk Management* is a function that might generate revenues or non-losses (e.g. the economic damages avoided by the firm thanks to accident prevention). However the business practice is resolutely in favour of the Expense Centre approach Campbell J., Y. Lettau, M. Malkiel, B.G. Xu , 2001),.

It is usually maintained that the development of *Risk Management* is closely linked to the evolution of the firm-insurance company relationship. In the United States the acceleration in *Risk Management* growth coincided –as from the 80's – with a particularly unfavourable economic trend of the insurance market, also characterised by difficulties in obtaining risk coverage for a number of risk categories (Crockford G.N., 1982).

According to many authors, the practice of the Italian insurance market unfortunately reflects this model that does not favour the dissemination of *Risk Management* and justifying the firms' management deficiencies with the behaviour of the insurance companies is not sufficient (Coviello A, 2005).

In general it can be maintained that *Risk Management* tends to develop above all because insurance companies are quite demanding as to safety measures, are unwilling to cover any typology of risk and extremely accurate in searching a cost-effective technical management. The characteristics of the relationship with the insurance company have to be analysed regardless of the coverage problem. The insurance policy can be supplemented with a number of ancillary services that the firm might require from the insurance company (considering its competence in this field) (Coviello, 2005; Forestieri G. 1996 e 1999) .

The risk analysis is the whole set of operations and methodologies used to identify and assess mere risks. The threats the company assets are exposed to cannot be easily identified as they are usually "hidden" behind apparently normal and safe situations. The risk analysis includes collection and processing of data to improve risk knowledge, increase the level of accuracy of the measures and refine the quality of the decision-making processes; identification is instead aimed at analysing which are the potential threats the firm is exposed to, describing their source and potential effects; assessment defines, whenever possible, the extent of the risk through a quantitative measure (maximum possible loss, mean possible loss, etc.)

Both stages of the risk analysis are necessary, although the former is more widespread and the latter is sometimes viewed as a scarcely useful additional analysis. Risk assessment is usually referred to the insurance company that, on its turn, often does not carry out detailed analyses but just applies a number of standard parameters to quantify the threat.

There are different effects resulting from an insufficient risk analysis (Corvino G.P.,1996):

- Lack of preparation of the firm in front of concrete threats that were not identified or underestimated;
- Misallocation of the resources to various insurance policies and other items, related to different typologies of threat, with excess expenditures for not severe risks and lack of expenditures for really dangerous risks;
- impossibility, due to the lack of reliable data, to use cost-effective decision-making methodologies.

In general, the dissemination of rigorous approaches to risk analysis has to be viewed as a crucial component to assess the practice of mere risk management. Modern firms consider the quantity and quality of data as a key for efficiency and competitive success. *Risk Management* cannot be included in the crucial management areas without having a reliable information system basically including news and data on risks (Davenport T.H., 1991; Coviello, 2005; Corvino 1996).

It is difficult to make empirical and theoretical generalisations with respect to risk prevention. The physical protection of the firm's resources against malicious or accidental threats is an idea that - under unitary concepts – actually hides a large fragmentation of the problems. For example, protection of information systems and repression of brand counterfeiting have very little in common (different expertise required, different operational tools, management principles, reference actors). Such a heterogeneity requires independent organisational solutions that prevent from identifying within the firm an area responsible for managing risk prevention as a whole.

3. Integration between insurance and prevention

One of the *Risk Management* key principles provides for a unitary management of physical safety and insurance.

These two tools can be either complementary or replaceable. While the complementarity relationship between prevention and insurance is quite obvious (provided the company has accurately analysed the quality of the risk covered and adjusted the premiums consistently), the replaceability relashionship is not always fully understood (Carniol F., 1996).

Risk retention is a solution that can be adopted when the risk can be taken on using the firm's regular financial resources. It is well-known that, if we consider the resulting positive and negative financial flows, in the long term insurance is never convenient from the economic point of view. Actually if the premium paid by the clients is higher (wrong assessment made by the insurer excepted) than the expected average loss linked to the risk taken on without adversely affecting the firm's financial balance, retention might be an interesting and favourable solution (Forestieri G., 1996; Coviello 2005).

Without dwelling on a "financial-term" of *Risk Management (*Porzio et al, 2011), there is no doubt that retention – vis-à-vis prevention and insurance – constitutes a third element the management of mere risks has to pay the due attention to. An advanced and modern *Risk Management* implies that *risk managers* have to devote part of their time to the financial planning of the interventions to be implemented in close co-operation with the Financial Managers.

4. Decision-making methodologies.

Decision-making methodologies are the whole set of approaches, techniques and rules used to choose the most suitable option allowing for the objectives to be pursued.

All problems admit at least two options as we have to decide whether we want to do something or not.

Within a firm decision-making methodologies must have an economic feature, as the objectives to be achieved are economic objectives. This means that, in principle, any decision problem must be addressed by comparing the costs and revenues associated with the options available. Of course this approach does not include the cases in which a behaviour is compulsory or justified by strategic considerations that do not allow for an economic quantification.

In the R*isk Management* field decision-making methodologies are affected by the high level of uncertainty of mere risks. To make proper decisions from the economic point of view, we should know in detail which is the loss that a given risk would generate in a given period; however, clearly enough, this information might be acquired only if the risk would be certain, i.e. if the risk would not be a risk any longer.

Consequently in *Risk Management* less rigorous decision-making methods must be adopted, resorting to personal experience and empirical rules. This does not mean that we have to exclude the economic calculation that can be made based on uncertain although quite reliable data, provided that an accurate identification and assessment work is carried out so as to get reliable data on many risks, above all on those the occurrence of which is not very infrequent (Space, 1996).

Brokers and *insurers* are a crucial reference parameter in the decisions to be made; sometimes law provisions, broker's or insurer's opinions are accepted in a passive way (Coviello A.-Pellicano M, 2010). In highly decentralised firms with long hierarchical scales, top management directly intervenes only on crucial matters; therefore its involvement in *Risk Management* has to be interpreted as a sign of interest in the mere risk problems (Coviello, 2005). Vice-versa, in centralised firms with short hierarchical scales, top management, that often coincides with ownership, tends to participate in any decisions and the not infrequent direct management of mere risks, meant as a mere purchase of insurance polices, has to be viewed as an indicator of a lack of *Risk Management*.

5. Conclusions

The entrepreneurial culture will then be the result of a constant interaction between the assumptions and theories initially conveyed by the firm's founders into the group and the experience pathway of the group itself may vary as a function of the cultural level of the entrepreneur and his group.

The in-firm learning level depends on the strategic approach planned for turning individual knowledge into a collective asset.

It is then important for Italian entepreneurs to get in line with European standards (England) and world standards (USA). In these countries the Risk Management function has become increasingly important; it is applied allowing for the firms' (even small firms') needs, and the risk manager professional figure is viewed as an opportunity to find the correct answer to anomalous phenomena occurring during the firms' life. There is a pressing need to analyse the Risk Management phenomenon so as to stimulate a debate aimed at its actual application in the Italian firms, outlining an approach that allows for the different strategic behaviours and industrial policy objectives. This will lead to a cultural growth of the Italian top management viewed as crucial by many people; such a cultural growth will also enable to give a different configuration to the tools that the market provides and will provide in the future for risk management.

A higher attention to the firm's risk management is also necessary as result of this current phase of changes that are usually sudden, urgent changes requiring timely decisions demanded by difficult contexts where the firm's survival is challenged.

These are crucial or even drastic and traumatic changes involving not only the strategies but also the organisation culture, the structure of ownership and the stakeholders whose commitment is required to pursue the following objective: bringing the firm back to balance, profitability, development, namely to a normal life with long-term prospects.

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