

INFORMATIONAL SYSTEM FOR EARLY NOTICE

– INSTRUMENT FOR MANAGING THE ECONOMIC RISKS

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Abstract

In the current period, most notably known for the frequent and diversified events which generate a higher exposure of economic activities to the risk factors, any organization should identify three systems that will represent guidance for an effective management in decision making:

- *An early notice system, which will detect and signal early on the possible turbulence sources;*
- *A system of analysis, evaluation and ranking of the identified risks, regarding the vulnerability (the possibility of materialization) and magnitude (impact);*
- *A rapid reaction system, by devising and applying risks related strategies.*

The present study focuses on analyzing the methods and techniques used for the first system, for valorizing the quantitative and qualitative information in a general, coherent and correlated context, that will allow the identification of the major risks sources: internal or external shocks, conjunctural or mid-term, favorable or unfavorable trends for the long term.

Keywords: risks identification, risks typology, early notice systems, micro-risks, macro-risks.

I. Preliminary considerations

Over many decades, the risk and uncertainty field has represented one of the most fascinating research areas for the specialists from banking, insurance, and capital markets sectors. Gradually, the theoreticians and the practitioners of management, statistics, forecasting and economic modelling have developed concepts and basic instruments regarding the risk management, as a major part of complex process of corporate governance. [C. Secăreanu; 2012, p.5]

In the business world, there have always been different degrees of turbulence, at macroeconomic level (the overall economy local, regional, global) as well as at the microeconomic level. Two fundamental states of the market characterize the economic cycles with relatively linear and a largely predictable evolution: one of them representing significant growth and prosperity, the other one anticipating a falling demand and even a recession. In such context, analyzing

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the past and present information offers the possibility of anticipating future trends of different phenomena and events with the help of traditional instruments, especially the classical “company dashboard”.

In the present and the near future, the normal economic fluctuations, ascending and descending type, considered to be very predictable are replaced with the syntagma “the economy of new normality” [Ph.Kotler, J. Carlione; 2009, p.96-116]. Today, risks are mainly generated by human activities, with high frequency, more numerous and diversified and are manifesting through sudden, disordered, and unpredictable movements, being usually of dramatic magnitude. As a result, the forecasting does no longer fit into a historical trend, result of the dynamic impulse and of continuity. Major influence factors such as hyper competition and globalization, technological innovations and computer revolution, the political, economic, and social environment determine difficult to anticipate disturbances, in the context of risk probabilistically quantified, or even impossible to prefigure in unquantifiable uncertainty situations.

These conditions have led to the development of a new informational and management reporting system which will provide companies with real time and high-quality information.

II. The main characteristics of the system of early notice

The early notice system represents a business administration system in the context of risk and uncertainty, that encompasses an overall conceptual framework, a set of analytical instruments (statistic and forecast) and moreover a set of strategic behaviors. This is how the early notice system transforms risk management into a cyclic, systematic, and continuous process used by companies to take the proper decisions, efficient and opportune to achieve the established objectives.

A. The early notice system enables the creation and understanding of an overall conceptual framework and a unitary vision of the companies’ environment by using and harmonizing all the edifying information. As a result, there can be obtained a general image, taking into consideration the macroeconomic factors, political factors, legislation, the competitive environment, new technologies etc. As each indicator is a partial reflection of reality, a hierarchical/graded system of information and indicators, coherent and correlated to different levels (national, international, firm, activity etc.) should be used.

B. It ensures the permanent monitoring of the companies’ activity and connections with the extern environment, using different instruments for analyses, evaluation, and diagnostic in areas, such as: the dimension and structure of the company, the performance and efficiency of the activities, human, material, and financial resources, business environment etc. and the relations and connections between them.

C. It stimulates a proactive approach with focus on the predictive aspects, by developing forecasting based on past trends, especially looking for the possibility of an unexpected event, an inflexion and discontinuity points to occur [C. Secareanu, C. Dridea; 2016, p. 125-133]. By elaboration flexible and adaptable scenarios, companies will be able to have fast, viable, and efficient strategies as feedback to a changing environment.

D. It stimulates the constant communication at all levels, the implication of all activities, structures, and human resources to identify, evaluate and react to the potential risk phenomena. Many of the risks that affect companies remain unidentified, not for the early signals, but for the lack of an adequate organizational culture, an ineffective communication within.

In conclusion, the early notice system should perform three essential functions:

- to detect positive and negative events as fast as possible, including the weaker signals that can provide companies with hints of future trends;
- to issue warnings in the case of possible threats, identifying the vulnerable points;
- to notice and capitalize the opportunities in the case of positive events.

III. Conceptual analysis methods

The first steps in creating an early notice system require the research of the external and internal environment, for the general framework that sets the parameters for implementing, developing, and perfecting the integrated management of risks for the entire organization.

In this stage, there are two very efficient methods used for identifying risk factors.

The first one is PEST [A. Gregory; 2009, p.68-72] analysis, or the extended form EPISTLE (Environment, Political, Information, Social, Technological, Legislation, Economical). These represent the major risks factors from outside the company, which are beyond the firm's ability to fully control them, but for which measures can be undertaken for their attenuation by valorizing the company's capabilities. These are *systemic risks* because most of the companies are exposed to them at global, national, regional, or local level, according to the magnitude of risks. For instance, every company is interested in detecting important risks, such as:

- *political risks* generated by politic instability manifested as intern and extern conflicts, political crises, riots, terrorism etc.;
- *economic risks* determined by the general state of the economy (economic unbalances such as recession, inflation, and diminishing of the real income of population, unemployment, budget deficit and public debt, external balance of payment deficit and changes in the exchange rate);

- *social risks* as consequences of major disruptive events like: large demographic transformations that reflects in the reduction of birth rates and aging of population; reflects in reconsidering the needs pyramid and the change of mentality and traditions, that lead to reorienting the population's expenditure structure, and therefore, essential changes of demand (demand risks);

- *technological and informational competitive risks* determined by new technologies and computer revolution, the pace of changing and diversifying new offers, in general by globalization as effect of the expansions of direct foreign investments and portfolio investments, as well as the free movement of capital, labor force, goods and services with powerful effects on increasing competitiveness;

- *legal risks* that consists of unexpected modifications of legislation that influences the business environment, including the tax regime;

- *environmental risks* refer to natural calamities and manmade ones (pollution).

After the PEST analysis it is necessary to approach the specific and relevant problems of the company. The internal risks are depended on the company's activities (the nature of activity, the actors involved, the financing methods, the logistic system, the available resources, the commercial relations etc.) without affecting the entire economy, branch, or sector. These are *specific risks* of the companies, that are rather easy to distinguish, evaluate and manage for avoiding or diminishing the negative effects.

Every analysis at company's level should take into consideration:

- *strategic risks* come from the wrong direction of activity towards a sector, product or service, or a geographical area;

- *marketing risks* resulted from the incertitude of consumers' behavior in the context of hard to control information, or from the practice of unsuccessful marketing activities (promotion risks, innovation risks, price risks etc.);

- *contractual risks* that can occur as legal risk, when the provisions of the various legislations are not respected, or the risks of compliance with the contractual clauses;

- *operational risks* generated by the management and execution activities, like: noncompliance with various current, operational, and administrative procedures; human resources risks, management risks etc.;

- *financial risks* manifested as indebtedness risk and debt default risks and liquidity, solvency, bankruptcy risks.

This research can be undertaken by using SWOT analysis, which has two objectives:

✓ identifying the specific characteristics of the company that reflects the its internal situation: strengths (capabilities, achievements, sufficient resources) and weaknesses (insufficient resources, failures);

✓ detecting risk factors with important impact of company's activities: opportunities (chanced provided by the business environment that can be

profitable) and threats (events or situations that can affect the ability of the company to reach its targets, reducing its performance).

Using SWOT method is more efficient on major areas: the dimension, structure and dynamic of the company (its history and tradition) in relation to the trends of its field of activity; the mission, business type, product portfolio; the company's reputation on the market, regarding its consumers, providers, mass media etc.; the financial and development resources (profit and self-financing, investments and debts etc.); human resources, organization and company's management; the customers and distribution channels for products and services; the competition; technologies and future progress etc.

IV. Risk research techniques

The general framework, based on PEST and SWOT analyses provide the proper opportunity for identification the most important risk factors: intern or extern, conjunctural or on long term etc. This is the case for representing rather the symptoms than the risks generation event, that should be carefully analyzed.

For this there can be used a set of research techniques that combine the documentary research with the qualitative investigation and quantitative analyses.

Documentary research is represented by selecting, grouping, systematization and analysis of existing information: from the company's archives (activity reports, financial documents and statistics, investment projects technical documentation, commercial contracts etc.); other published sources (scientific papers and studies, national and international data bases, papers and magazine articles, conference presentations etc.).

Qualitative research investigates the unquantifiable variables, for instance: opinions, reactions, preferences, aptitudes of experts, clients, providers, specialists, and consultants. This type of research uses individual techniques (standard questionnaires and structured interviews) and collective techniques (Brainstorming and Delphi). These methods can translate qualitative input into indicators which can be the subject of ordering, hailing, and processing.

Quantitative research consists in a series of methods and techniques for identifying and evaluating risks in business administration. Many of these methods has a theoretical approach which makes it difficult to put in practice, or are specific to some activity areas where the risk management is very developed (banking, capital markets, insurance etc.) and where there are relevant historical data.

At present, the most suitable quantitative techniques are: the method of risk exposure, the comparison method, the methods based on specific indicators and the scoring method.

A. The method of risk exposure

Measures the consequences generated in relation to the established objectives, the interaction of the two dimensions of risks (probability of risk materialization and risk impact).

The risk exposure (E) [C. Secareanu; 2012, p.21-24] is the result of the interaction of the two-risk dimension ($E=P*I$):

- probability of risk materialization (P) measures the possibility of occurrence of an event on a scale of 0 to 100%;

- the risk impact (I) represents the physical or value effect on the company's results if the risk were to materialize.

The widespread use of this method can be explained by its ability to combine the quantitative techniques (based on theory of probabilities), with the qualitative, intuitive techniques.

B. The comparison method

It is used for risk evaluation and generating warnings and alerts, for 2 situations: comparing the level of an indicator with a standard level and comparing the dynamics of different interdependent indicators.

The first situation requires setting a standard level for each indicator and therefore, and acceptable or avoidable area (range) regarding the associated risks. The standard level becomes an important reference system that offers a comparative measurement of the company's performance; it could be represented by: a pre-established standard validated by practice; a level registered by the competition, leaders in the field; a medium level of performance of that domain.

This method is successfully applied in the case of financial rates (liquidity, solvency, debt, and debt repayment etc.) as well as for operating risks, determined by the threshold of profitability and the volatility coefficient. Based on the difference between the level of the indicators registered by the company and the standard one, it falls into one of the preset risk classes.

The second situation assumes checking for compliance with basic correlations between different economic variables, for a company. By comparing the performances obtained or desired, for the next period it can be identified the deviations from basic correlations. According to the deviations dynamics, the firms can be classified differently in rapport to the risks, from insignificant risks to major one.

All the techniques used for a long time offers a suggestive image of the company's trends. It allows the detection of high risk areas, and also, it represent an early notice system of unfavorable event.

C. Methods based on specific indicators

These methods present the advantage of quantifying different risk associated aspects, using two indicators: the variation coefficient and the informational energy.

Utilizing *the variation coefficient* in risks analysis is consistent with the general approach, that the risk has a speculative character, in the sense that managing a business and the risks involved can either lead to a loss situation (this representing risk as a threat and shouldn't be tolerated) or to a win situation (this representing an opportunity and therefore capitalized).

This approach is focusing on the volatility of performance variables (profit, total revenue, market share etc.) and their positive or negative deviations in regard with the established objectives.

Taking into consideration the undeniable advantages of the variation coefficient, it can be said that this is the most complete measure of risk (the normalized standard deviation). It provides the comparison opportunity of decisions/projects regardless of the economic context of the variables, the measurement unit, and its order of magnitude. The value of the variation coefficient is situated between [0%-100%], the higher the value, the higher the risk degree.

It is universally recognized and mathematically demonstrated, that diversifying the business portfolio is a considerably diminution factor of associated risks, rather than concentrating the entire activity on a single product/service, or reliant on a limited number of providers.

Diversifying, spreading the company's activity can be realized in different ways:

- ✓ From diversifying to vertical integration (upstream and downstream) which refers to adding new business to the existing portfolio as complementary to the original one;

- ✓ The conglomerate diversification that involves adding a new business field for the company, unrelated with the original one, which offer a high potential for development;

The process of diminishing business risk by diversifying product portfolio, can be studied with the help of many indicators, the *informational energy* [A. Isaic-Maniu, C. Mitrut, V. Voineagu; 2004, p.195], being one of them. This indicator, especially in the form of the normative information energy, represents an estimation of risk exposure of the company in the context of concentration or diversification of activities [C. Secăreanu²⁰¹², p.123-130].

D. The scoring method

This method is frequently used for evaluation of aggregate risks, for instance bankruptcy risk, which assembles all the performance/failures results from point analysis (on different segments of the activity), based on financial rates, the comparison method (or other methods).

As a result, the bankruptcy risk [Anghel Ion; 2002, p.35-54] of a company, for a future period is synthetically evaluated based on the scoring function -z- as a linear function of many variables, this being the actual selected financial rates,

with permanent and intense action. The weighting coefficients are determined based on the registered information regarding the level of financial rates of companies from a sample, over a period of several years. Using the discriminatory analysis technique, the sample encompasses firms in financial difficulty and even bankruptcies, as well as, firms with no financial problems. At the end, for the determined scoring function there can be identified several intervals that are consistent with the delimitations of the financial states of the companies: the area with a stable financial situation, favorable and with low risk of bankruptcy; the area with uncertain financial situation; the area with hazardous financial situation and high risk of bankruptcy. So, the scoring method provides an important image of risks on different segments of activity and identify the areas of major risks.

Each company can find the area in which is situated or will be situated in the near future, by replacing – in z function – the actual values of their own financial rates, already obtained or predicted.

Nevertheless, the informative value of the scoring method, as an early notice model, shouldn't be overestimated, requiring additional information with quantitative and qualitative analyses. More than that, for diminishing the unfavorable effects of the successive aggregations of statistical information, is recommended the determination of scoring functions for different branches of national economy.

V. Risk management tools

The most efficient risk management instrument is the *risk register*. Elaborated for each compartment of the company, the register represents a database and by centralizing all previous registers, it generates the *general risks register*.

It contains information regarding: the risk area (area, activity, compartment); risk affected objectives; the description of identified risks; the responsible with risk management; estimating inherent risk (probability, impact, exposure), representing the risk before undertaken any measure to respond to it; the risk strategy (monitoring, avoidance, transfer etc.), the residual risk estimation (probability, impact, exposure) representing the risk after undertaken measures to counteract it.

Based on the registers there can be obtained the *Risks matrix* [Ghita Marcel; 2008, p.252]– an instrument for synthesis, ordering and ranking risks, ensuring the integration of information regarding their magnitude and severity. This “a map of risks „offers a proper image of the company's risk profile: from the assumed risks, whose exposure is below the acceptable risk tolerance limit, until the unacceptable risks that are jeopardizing the company's strategy and its financial situation.

VI. Conclusions

For a long period of time, managing risks was the responsibility of the general management of the company, as a component of strategic development.

Nowadays, the early notice system determines the transition from a fragmented, punctual, and reactive risk management, based on the traditional techniques of risk management towards an integrated management system, as a continuous process, proactive, predictive, located in the center of the actual model for corporate governance.

Each company can use different techniques for risk management, according to the specific of its activity, available resources, and management approach. In this context, an efficient system for early notice offers a conceptual framework and a management system able to face uncertainty, with new behaviors and strategic instruments integrated in the organizational culture. In conclusion, the early notice system can: detect positive and negative events and provide forecasts of future development; issue warnings and alerts and identify the vulnerable areas; seize and capitalize opportunities in the case of positive events.

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