

# FINANCIAL RISK - INTEGRATING DETERMINANT OF THE ACCOUNTING MODEL

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## Abstract

*Culture differences, business practices, political and regulatory structures, the legal system, currency values, local inflation rate, risk management, but also the method of taxation, all these influence both the way the business is managed and also the financial reporting in the world. Financial statements and other information are impossible to understand without an awareness of basic accounting principles and business culture. Accounting plays an important role in the risk management process. Based on the information provided by it, potential risks can be identified and the company's exposure to specific risks can be measured. The information provided by accounting is influenced by the adopted accounting model, the way of presenting them varying.*

**Keywords:** *financial risk, nonbusiness risk, business risk, operational risk*

**JEL Classification:** G3; G32; G34

## 1. Introduction

The decision-making process is perhaps the most important step in the functional architecture of an entity, due to the profound implications of their adoption. In the decision-making process, the manager is forced to apply a certain reasoning, whose purpose is identified in the implementation and monitoring of a certain chosen solution. Understanding the uncertainty and risks that affect processes helps improve the decisions made. Risk, defined as a variable event that can occur and have a negative impact on the organization's objectives, is one of the topics that have gained momentum, and its evaluation has become one of the objectives of management. The financial risk assessment, that risk that characterizes the variability of the result indicators under the incidence of the financial structure of the enterprise, has an important role in the management of organizations, with an impact on the functions of planning, control and especially on the decision-making process. The current economic context has led to the increase of the importance of this activity, the success of a business being a problem of adaptation to the environment, and the connection of the company to the economic-social environment being a premise of its functionality.

The financial crisis emphasizes the need and timeliness of such an approach, the accounting model being often included among the determining factors of the current economic context. The financial risk assessment process is an ongoing one, and strategies need to be implemented and improved depending on the market and the changes that have taken place. The adjustments made may reflect changes in market share expectations, changes in the business environment, or changes in international policy conditions, for example.

The connection between risk and the accounting model can only be one of interconnection and mutual determination, the accounting information being the main common point. The different objectives of financial reporting, influenced by the economic, cultural and social environment of the country in which the company operates, lead to different ways of approaching risks, a different prioritization and implicitly different valuation methods.

We ask ourselves "can financial risk be considered a determining factor in the accounting model?". We consider that the importance of financial risk assessment and management has implications for accounting information needs, determining different reporting methods. At the same time, the evolution of the notion of risk is based on changes in the business environment, and the progress of valuation methods has been possible due to changes in accounting models.

## 2. Financial risk - conceptual approaches

Talking about risk in general and financial risk in particular, is and will remain a challenge. Over time, different specialists have generated different views, constructions, ideas and reasoning that have led to collaborations in different areas of science. The transition from abstract to concrete was thus made, with the help of the theories, concepts, methods and models that appeared.

Modern companies operate in a financial space that offers them specific tools and possibilities for action, but which also subjects them to special constraints. The content and conditions of the financial problems that the

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company has to face, as well as the solutions that can be found, are obviously related to the characteristics of its financial environment, as well as to its own characteristics.

Practical applications - including risk limits, business-based compensation, portfolio optimization and capital calculation - all depend on risk measurement. In the absence of a definition of risk, it is unclear what the measurement accurately reflects. An analysis of the financial literature reveals many discussions about risk. To understand risk, two concepts are important: probability and impact.

The notion of risk has existed since ancient times, taking shape since the emergence of commodity-money relations and the emergence of competition in the economic circuit. There are also a number of theories about risk with the development of capitalist relations.

The best known definition of risk is given by Frank Knight in 1921, who suggested in his paper "Risk, Uncertainty and Profit" that the terms risk and uncertainty are relevant to economic analysis. He states that "the term 'risk' can be used to preserve the distinction between measurable and immeasurable uncertainty." However, this definition is not complete, the risk being determined by both uncertainty and exposure - possible consequences. In F. Knight's opinion, uncertainty is realized when we find ourselves in front of unrepeatable events, with possible known results, but without knowing the probability of distributions, and in case of repeatable events under the same conditions, the frequency of the distribution of possible results can be defined, we can talk about the risk situation.

Following his lead, other economists turned to the notions of risk and uncertainty to explain the profit, financing, size and structure of companies, all categories of decisions. In modern decision theory, as a consequence of the fact that in real situations not all the conditions and effects of an event can be known, one no longer operates with absolute certainties, but decision makers resort to probable uncertain estimates, notions of risk and uncertainty. Incomplete knowledge of one or more "variables" is a constant of economic activity.

Risk can be defined in different ways, but the central notions are the uncertainty of achieving objectives and potential losses, and incomplete control over the consequences of decisions. Risk management is the effort to understand these uncertainties in order to make better decisions on goals set and achieve them more effectively.

According to the definition given by Kaplan and Garrick, the risk is equal to the triplet, where it is the second scenario, it is the probability of that scenario and it is the consequence of that scenario. This definition of risk becomes clearer when the probability is defined:

a. subjective measure of uncertainty related to future events and consequences, seen through the eyes of the evaluator and based on basic information and knowledge (Bayesian perspective) - subjective probability;

b. the relative frequency of the number for the event to occur if the analyzed situation were hypothetically repeated an infinite number of times.

The above statement is the definition of risk using probability. In the specialized literature we also find definitions formulated based on uncertainty, an explicit component of the concept of risk. Thus, Professor T. Aven defines risk as equal to the two-dimensional combination of events / consequences and associated uncertainties. Risk has also been defined as the uncertainty of income, actions and events.

Another approach to risk, often encountered in economic risk and decision analysis, refers to the expected utility, which can be represented as follows: - consequences and - utility function. This definition considers the preferences of decision makers as part of the concept of risk. The result is a mixture of assessments of uncertainties about the consequences and preferences of decision makers, the value of the consequences and the associated probabilities. However, researchers believe that preferences and values should not be part of the concept of risk and its assessment.

In the following table we present some definitions given by organizations that deal with its management:

*Table no.1. Definitions of risk in the vision of different organizations*

| <b>Organization</b>   | <b>Definition</b>  |
|---|--|
| Institute of Risk Management                                    | The combination of the probability of an event and its consequences. The consequences can range from positive to negative.   |
| International Organization for Standardization (ISO) - Guide 73 | The effect of uncertainty on objectives. It is also stated that the effect can be positive, negative or a deviation from expectations (it can be called opportunity, hazard or uncertainty). |
| Institute of Internal Auditors                                  | The uncertainty of an event that could have an impact on the achievement of objectives. Risk is measured in terms of consequences and probability.   |

| <b>Organization</b>                   | <b>Definition</b>  |
|---------------------------------------|--|
| International Risk Governance Council | The uncertain consequence of an event or activity in terms of something valuable.  |
| Ernst&Young                           | An event or action that may adversely affect the organization's ability to maximize shareholder value and achieve its goals. Business risk arises both from the possibility that opportunities are realized and from the possibility that threats materialize. |
| KPMG                                  | Anything preventing the organization from achieving its goals. Dynamic entities will not avoid risk, but they will identify, measure and manage it continuously, helping to increase shareholder value.  |
| OCDE                                  | The possibility that an event of unintended consequences to occur.   |

Source: self-processing

The literature reveals numerous definitions of risk. We further present some of them, and in the qualitative study we will present what definition of risk is perceived by companies to be closest to economic reality. Thus, the risk was defined as:

- Uncertainty about achieving goals and potential losses;
1. Incomplete control over the consequences of decisions;
  2. A probable deviation from the proposed purpose;
  3. Variability of the result under environmental pressure;

Risk can be classified in various ways. One method is to classify the nature of the risk attributes, such as the range of the impact, as well as its nature and / or the likely magnitude of the risk. It can also be classified according to the impact after it occurs. The source of the risk can also be a basis for classifications. In this case the risk can be classified according to its origins, such as credit risk.

Another way to classify risk is to consider the nature of the impact. There are risks that can affect the company's finances, and others can have an impact on activities or infrastructure. Moreover, risks can impact the organization's reputation or status and how it is perceived in the market. Each company decides which risk classification best suits it, depending on the nature of the organization and its activity.

There is no classification system that suits all companies or one that is fully relevant. However, many classifications offer a common or similar structure, following a certain logic, common features of different risks can be encountered at different levels of manifestation.

According to the nature of the risks, random (accidental) or entrepreneurial (speculative) risks were identified, the latter referring to the risks to which the company is subject as a result of its existence on the market. Having as a determining factor the origin of the risk, we encounter risks associated with the internal environment of the company and those generated by the external environment. Also, an interesting classification is made according to the consequences of the risk, identifying risks that affect the company's employees, assets or financial security.

P. Jorion proposes the following risk classification:

- business risk - the risks that companies voluntarily assume in order to create a competitive advantage or value for shareholders. Business or operational risk refers to the risk associated with the product market in which the company operates, including technological innovation, product design and marketing. Business activities also include exposure to macroeconomic risks, resulting from business cycles, income fluctuations and monetary policies.

- nonbusiness risk - risks over which companies have no control. These include strategic risks arising from fundamental changes in the economy or the political environment.

- financial risk - risks related to possible losses on the financial markets, such as losses caused by changes in the interest rate or non-payment of financial obligations.

Already from this classification we notice the appearance in question of the financial risk and a first definition. Analyzing the specialized literature, we noticed that we identify various definitions of it, some of which are significantly different.

Thus, M. Niculescu defines risk in terms of the variability of result indicators under the incidence of the financial structure of the enterprise. Another definition, given by S. Gabriel and C. Baker is “the variability of the net cash flow of the equity holder resulting from the financial obligations associated with debt financing and cash leasing”.

Financial risk is a term that unites several types of risk associated with financing, respectively with financial transactions: market risk, operational risk, credit risk, currency risk, liquidity risk, legal risk, reputational risk, systemic risk. We further define these risk categories.

The market risk consists in the production of unfavorable situations as a result of the modification of the main parameters of the market in which the organization operates, respectively the interest rate, the exchange rate and the value of the assets in the portfolio. This type of risk is monitored and evaluated on the basis of quantitative models by prestigious institutions in developed countries.

Operational risk is one of the oldest risks found everywhere in the business environment. Any institution will face this risk before deciding on the first market transaction or the first lending. Of all the types of risk with possible serious effects that companies may face, operational risk is considered the most devastating and the most difficult to anticipate.

The rapid pace of changes in technology, the large volume of transactions and their value, the value of company assets, the number of employees and their experience increase the probability that operational risk will occur. There is an increase, especially within banks and financial institutions, in assigning responsibilities to the management of this type of risk, following the regulations formulated by the regulatory bodies.

There is no unanimously accepted definition of operational risk in the financial community. An important starting point is to understand that operational risk encompasses the risk inherent in a company's business, and raises a variety of issues that lie outside of market or credit risk. The British Bankers' Association defined operational risk in 1997 as "risk associated with human error, inadequate procedures and controls, fraudulent or criminal activities, risk caused by lack of technology, system crashes, all non-banking risks arising from business decisions for competitiveness, legal risk and business relations risk, lack of compliance with applicable regulations or negative impact on the bank's reputation. External factors include: natural disasters, terrorist attacks and fraudulent activities, etc. ”.

The Basel Committee on Banking Supervision, an institution that formulates supervisory standards, instructions and recommendations on best practices in banking, has addressed the issue of operational risk in the financial field, and the definition given to this risk is "the risk of direct or indirect losses due to inadequate or defective internal processes due to external persons, systems or events". The difference between fraud and error is important in the analysis of operational risk.

Credit risk exists wherever the payment or performance of a contractual agreement with another organization is expected, with the likelihood of losses being implicitly resulting from the failure of another organization. Credit risk and the methods used to manage it depend on the size of the organization and the complexity of the exposure. Financial institutions, such as banks, investment dealers, credit companies, insurance companies, have a significant exposure due to the increased activity related to lending and trade. Although credit risk is traditionally associated with lending, it is also a major issue to study for other businesses, such as corporations.

Currency risk originates in banking operations in foreign currency, and expresses the probability that changes in the exchange rate on the market will negatively influence the interest margin.

Liquidity risk occurs when an organization is unable to conduct a transaction at a certain point in time, or when it is unable to obtain funds to meet its obligations under the expected cash flow. Most institutions face two types of liquidity risk. The first refers to the depth of the market and refers to specific traded products, and the second one to the financing of trading activities. Lack of liquidity can cause the institution to go bankrupt, even when it is technically solvent (i.e. the value of assets exceeds that of debt).

The legal risk arises from the potential of certain contracts, lawsuits or negative judgments that may disrupt or adversely affect the operations or conditions of the organization.

Reputational risk is the potential for loss of revenue, market share, key employees or costly litigation, resulting from negative publicity of the organization's business practices, whether or not this is true.

Systemic risk is the term used to describe the fragility of the financial system as a whole, as opposed to the risks that any company or market participant might face. A single company or a single transaction could trigger financial instability, if features of the financial system can multiply losses or cut vital services for other sectors of the economy.

We can see that the company's financing method and the external environment are the factors generating financial risks, with a significant impact on the activity. Thus, the issue of financial risk assessment and management acquires a major importance in the company's internal planning and control processes. Choosing the optimal correlation between the level of risk and the results of the activities becomes an essential component in the decision-making process.

It should be emphasized that the purpose of risk analysis and quantification is to provide the information needed to make decisions on issues that involve not only risks but also other forms of costs or benefits. Risk must always be considered in the context of a decision theory. In this context, the risk is acceptable if it corresponds to the optimal decision, and other risks are unacceptable, even if they are lower.

## **2. Financial risks - priority of the entity's management**

### **2.1. Accounting and risk management**

A basic law of capitalism is that money migrates to the environment considered the safest, and / or the one that brings the most income. There is pressure on managers for a more efficient management of the assets entrusted to them. In parallel, there is pressure on successful companies to continue their rapid performance growth. Along with expanding business opportunities, two types of controls contribute to better results: cost control and risk control.

Discipline is always a success factor, especially when volatility and uncertainty increase the requirements for risk control procedures. Therefore, management must encourage a disciplined accounting culture, by promoting standards of integrity and ethics, separation of tasks, clear lines of responsibility, proper supervision and a clear set of standards. Because in all matters related to risk control, accounting acts as a recording and monitoring system, another important ingredient of sound management is complete internal controls, with activities such as approvals, authorizations and compliance controls, and non-compliance monitoring activities, clearly defined for each activity level.

In order to effectively contribute to exposure control, accountants must understand the universe of risk in the company in which they work, the course of business, and the associated

risk flow. This means that systems and procedures must clearly delineate the elements of risk, allow for efficient management of system boundaries, closely monitor market, counterparty and other financial risks, and manage assets and liabilities in a clear manner, consistent and secure.

The prerequisites for the successful completion of these activities depend on the availability of an accounting system and data capture, processing and reporting technology. P. Drucker defined a procedure to allow a critical examination of the accountant's responsibility for risk management, which contains the following questions: Has each major individual risk been taken into account? Has the margin of error been set? Have correlations between major risks been tested? The answers to these questions must be given in a disciplined and well-documented manner.

Certain practices, such as creative accounting and those who practice it are the enemies of the accountant. Lessons on how to control such deviations are provided by industrial engineering. Because nothing works in a straight line, productivity varies from person to person or from point of work to point of work, but there are certain limits. This is a basic principle in cost accounting. Also, the risks follow a certain distribution. Business risks can be tested using the "stress testing" method, this method being very important in accounting, being considered a defensive weapon.

Accountants need to constantly calibrate their tools to keep risk managers aware of exposure assessment. Accountants must also appreciate the correct definition of the risks to which the company is subject.

## **2.2. The main theories of risk from an accounting perspective**

The development of interest in the risk management process has led to the formulation of useful theories in this process, applicable in the process of their assessment. As pointed out above, the history of financial theory actually begins in the middle of the twentieth century, with the pioneering work of some researchers (who often won the Nobel Prize for Economics), notable being H. Markowitz (the principle of portfolio diversification in 1952), J. Tobin (separation theory in 1958), Lawrence Sharpe (CAPM financial asset balance model in 1964), Modigliani and Miller (dividend neutrality and capital structure neutrality in respect to company value), R. Merton and M. Scholes (option theory), and many others.

Fifty years later, a financial theory has been divided into two major families of theories: financial market theory and enterprise financial theory. The latter seeks to give a financial definition of the enterprise and business decision, while financial market theories seek to answer investors' questions about portfolio management or the valuation of financial assets.

Two theories contributed to the substantiation of the company's financial theory:

- Modigliani and Miller model (late 1950s), they were the first to use the capital neutrality hypothesis together with an arbitrage reasoning. The model is based on the idea that there is no optimal financial structure or dividend policy;
  - the theory of information asymmetry that emerges from an article by G. Akerlof (1970), together with other financial theories such as information signal theory, agency theory and enterprise governance theory.

The most important financial theories that have implications on financial risks are presented in the next table.

Table no.2. Important risk theories and the accounting perspective

| The name of the theory and its representatives                                       | The essence of the theory  | The accounting perspective  |
|--|--|---|
| Capital allocation efficiency ( <i>Kenneth Arrow, Gerard Debreu</i> )                | It demonstrates that an efficient allocation of resources requires a complete set of securities that allow agents to insure all risks, thus laying the foundations of the theory of general equilibrium. | It supports the financial instruments market, explains decision making in conditions of uncertainty and shows that the ultimate role of financial instruments markets is the efficient allocation of risks. |
| Average variation ( <i>Harry Markowitz</i> )   | Investors who choose portfolios must consider risks in the same way they make investment choices.  | Efficiency concept limits the benefits of the choices made.   |
| Capital Asset Valuation Model - CAPM ( <i>Bill Sharpe</i> )                          | With some limitations, the market compensates companies for market risk, but does not do so for particular risks that investors may diversify.   | Relevant for the discussion related to the insurance of idiosyncratic risks, the reduction of which is not rewarded by the market.  |
| Capital structure ( <i>Franco Modigliani, Merton Miller</i> )                        | Subject to strong constraints, a company's capital structure does not make a difference in its valuation by the market, because the company's risk exposure is the same.                                 | When constraints are removed, the model is divided, introducing the idea of an efficient capital structure and the role of risk reduction through insurance.  |
| Option prices ( <i>Fischer Black, Myron Scholes, Robert Merton</i> )                 | Volatility is the key to the consistency of option pricing.  | The concept of the real option allows companies to put value on hold.   |
| Binomial setting of option prices ( <i>John Cox, Stephen Ross, Mark Rubinstein</i> ) | Model the instrument's base over time, increasing accuracy, particularly for longer-term options.  | It allows a more accurate evaluation of options that have a higher flexibility.   |
| Arbitrage Price Theory ( <i>Stephen Ross</i> )                                       | A less restrictive alternative than CAPM, defines the expected return on a financial asset as a linear function of various macroeconomic factors or theoretical market indices.                          | Allows investors to segment risk systematically into factors or components that influence correlations.   |

Source: Buehler, K., Freeman, A., Hulme, R. (2008), *The risk revolution*, McKinsey working papers on risk, pp. 5-6

### 2.3. The importance and stages of financial risk management

One of the factors behind the rapid development of financial risk management is the high level of instability of the economic environment in which companies operate - environmental volatility. It exposes companies to higher financial risks, causing companies to identify more efficient ways to manage risks. To this volatility it is added the intensification of trade activity since the 1960s and the development of information technology. Improving the latter has made possible the computational power (new techniques can be used) and the speed with which calculations are made. In the contemporary period, other important factors have led to the emergence of new methods of financial risk management. Out of all of these, the most important are globalization and relocation to countries with cheaper labor.

Financial risk management is the process by which the company copes with the uncertainties arising from the financial markets. This includes assessing the financial risks facing the organization and the developing of management strategies in line with internal priorities and policies. Proactively addressing financial risks can give the company a competitive advantage. It also ensures that management, operational staff, stakeholders and the board agree on key risk issues. Financial risk management requires organizational decisions based on which risks are accepted, versus which are not. The passive strategy of not taking any action is equal to accepting all risks. A variety of strategies and products are used to manage financial risks, and it is important to understand how they work to reduce risk in the context of the company's tolerance and goals.

Financial risk management is a component of the company's financial management, seeking to control instability related to certain operations or operating costs (Operational risk related to the cost structure, leverage risk related to the effect of the company's financial structure, risk of bankruptcy), but also to control the influences exerted on the enterprise by the inherent instability of some environmental variables (risk exchange rate, interest rate risk), or special transformations that take place in the institutional environment (administrative risk and political risk). Risk management has 7 stages, in some of them the accounting information provided by the accounting model has a significant importance.

*Table no.3. Stages of risk management and their correlation with the use of accounting information*

| <b>Stages of risk management</b>   | <b>Use of accounting information</b>                   |
|--|--|
| Risk recognition and identification  | Yes - accounting is the primary source of information. |
| Classification and assessment of risks in terms of magnitude and probability   | Yes - accounting is the primary source of information. |
| Responses to significant risks, including decisions on the most appropriate ones - tolerance, reduction, transfer or elimination of risk.                  | Yes - calculating the impact of risks on results.      |
| Resource control in order to ensure that the necessary control activities can be introduced and supported  | Yes - budget analysis.                                 |
| Planning response and / or event management  | No.  |
| Reporting and monitoring performance, actions and events related to risk   | Yes - monitoring information using results' analysis.  |
| Review of the risk management system, including internal control procedures, revisions and improvements to the risk architecture, strategies and protocols | No.  |

Source: self-processing

We consider that in 5 out of 7 stages the information provided by the accounting model is essential for an efficient risk management. Accounting is an important source of information underlying the identification and assessment of risks. But this is not the only function it has in the risk management process, the calculation of the impact that risks can have on the results, being of particular importance in making the right decisions related to the best way to be approached. However, these decisions require financial resources, and information about the possibility of their implementation cannot be taken without a financial analysis of the company's results. We therefore infer that the activity of financial risk management is closely related to the information provided by the accounting model.

The main purpose of this process is to provide decision support. As we can see from the steps presented above, we start with risk identification, risk analysis and description. All analyzes performed are frequently referred to as risk assessments. From our point of view, this stage of risk assessment is very important, as the other steps depend directly on it. Quantitative risk assessment (also called probabilistic risk assessment) is a new tool used in risk management. It includes:

- statistical methods - data are available to predict the performance of the activity or the analyzed system. These methods can be based on data extrapolation or probabilistic modeling;
- systems analysis methods - these methods (including the FTA fault tree method and the event tree method) are used when the data is insufficient to accurately predict future performance.

Related to the accounting theory, progress has been made in understanding how risk perception and behavior are affected; recognizing that personal decisions reflect different processes of assessing and combining anticipated and current losses, gains, delays and surprises, as well as the development of an ethical environment and framework. Assessment

methods have been developed through the use of a formal analysis of uncertainties, strengthening the capacity to apply the multi-objective decision-making process related to risk-affected decisions and modifying existing regional and economic assessment tools. During this period, the estimation of probabilities was developed and the application of intelligent analysis models was perfected. Risk communication has expanded and decisions are made based on more accurate information.

### 3. Conclusions

Proper awareness and assessment of financial risks is a key point in the management of the entity. An important role in this process is played by the professional accountant, by understanding the risk universe in the company and by using tools to keep management aware of it. Also, the risk analyst is the one who conducts the numerical analyzes and informs about it. The methods of financial risk assessment have evolved with the development of economic activity, and their importance has become increasingly acknowledged. The need for information on risks has led to a change in the way of reporting in accounting models, thus demonstrating the implication of financial risk - accounting model.

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