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## Planning and performance evaluation of the manufacturing organizations

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### Abstract

This paper deals with the planning and performance evaluation of the manufacturing and transport organizations. Nowadays, the financial analysis is the most important tool of financial management and its purpose is to carry out an assessment of financial management. The result of the solution is an effective and comprehensive early warning system that measures and takes into account the performance of the enterprise and satisfies the conditions for the rapid application in small and medium-sized enterprises. At the same time, it creates conditions for fast and thorough assessment of business performance generated with respect to the value creation of the organization. Finally, the validity of the proposed system is implemented.

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### 1. Introduction

The topic of the present article is extremely wide-ranging and therefore required a deep and broad research in corporate finance theory, financial-economic analyses, analyses of value creation, business processes, macro and micro business environment analyses, the economy, business management, marketing, mathematical statistical methods and several other disciplines. A transport manager analyzing the causes and consequences of the current state of corporate finance has various options to obtain the necessary information. An important source of information is financial statements of the company (an annual accounting output).

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## 2. Problem definition

Financial analysis is one of the most important tools of financial management, and its purpose is to carry out the assessment of financial management. It is a systematic analysis of the data obtained. Such data are contained mainly in the financial statements. Financial analyses assess the corporate past, present and as well as future financial conditions.

Any financial decisions should be supported by a financial analysis; its results serve as a basis for the management of property and financial structures of the company. Its main purpose, however, is to provide information about the financial health of the company. This instrument can detect weaknesses and problems that are to be resolved and also highlights the strengths on which the company can rely. In addition to data and the indicators contained in the internal data (data on financial and managerial accounting, internal records, calculations) the analysis can rely also on data related to external analyses.

The internal analysis focuses on comparing reality with the plan and prior periods as well as with companies operating in the same industry and competitors. The internal analysis is often a part of a well-set controlling system. There are many more tools and special procedures that could be used, such a sensitivity analysis, possible development scenarios, benchmarking. These, however, are not so popular to use. The article pays attention to these above-mentioned methods.

The main instrument of the classical financial analysis is the construction and subsequent interpretation of ratio or difference indicators, which are grouped into comprehensive, logical segments of the financial analysis. Indicators and numeric values speak of the "level" of the analyzed company. In order to make this "level" comparable, it has to go through several objectivization processes.

Level of indicators, market position of the company and its development in time are factors to be viewed simultaneously. A higher form of analysis – i.e. relational analysis examines whether there is a relationship between certain parts of a whole unit. We try to quantify and record them. Relational analysis should provide an answer to the question whether the existence of a single phenomenon is dependent on the existence of another phenomenon. This type of analysis monitors the dependency of one phenomenon on another phenomenon (qualitative analysis) as well as the degree of dependence between phenomena (quantitative analysis). Knowing these dependencies we can change one phenomenon, which in turn will change the other one that is depended upon it, and use thus identified relationships in the decision-making process. These relationships can be mathematically formulated using certain functions and models. In such a case, we can speak about a functional analysis where the change of independent variables influences and thus changes dependent variables. Most general and simplest explanation of a functional relationship can be represented by the mathematical function (1):

$$y = f(x) \tag{1}$$

Using the method of relational analysis we can determine the relationships between phenomena. At the same time, we can determine whether there is a relationship of dependence (statistical, correlation, functional) or phenomena are independent. There have been attempts to quantify the relationship power. The analysis of statistical dependence (almost always purely quantitative) makes use of regression and correlation analyses. Special tools of financial analysis include modern methods for assessing company performance, such as EVA, MVA, CVA indicators and many more. If we want to intervene in the management of the company, we must perceive it as a complex unit and not as an isolated entity. There are several factors that influence the company. The analysis of the results, as the most comprehensive analysis, monitors all factors that affect the company in the current market environment. The aim of the analysis is to find out "weaknesses" that degrade and weaken the results. These weaknesses must be found and removed. But this is possible only though a complete understanding of their causes and subsequent consideration of business opportunities. Financial analysis in practice comes up against several problems:

- Different comparability
- Age
- Seasonal factors
- The effect of "window dressing"

- Different accounting policies
- Inflation
- Different interpretations of the results
- Assessment of the financial situation

There is no unequivocal answer to these problems. Financial analysis indicators, which are interconnected by a number of links, are usually part of more complex indicators, and allow us to define causal links and their impact on value creation in the company.

### 3. Literature survey

There have been several Slovak and Czech authors who paid attention to financial and economic analyses of companies, especially Zalai, Chajdiak [1,2], who developed the application of different analysis methods (index, method, pyramid schemes and the like), Synek [3], Baran [4], Alexy [5], Šnircová [6], Holečková [7] as well as Kislingerová and Hnilica [8].

This topic has attracted attention of foreign authors as well, namely R. A. Brealey a S.C. Myers, B. R. Allen, E. R. Brownlee II, M. E. Haskins a L. J. Lynch [10] University of Virginia, A. A. Atkinson [11] University of Waterloo, P. Kotler and J. A. Caslione [12], R. S. Kaplan and D. P. Norton [13] Harvard University and many others.

### 4. Case study

The era of “turbulence” is on the rise, so businesses and organizations worldwide will have to adapt to these changes. There goes the endless rotation between the periods of what is “known“ - the initial period of normality and the subsequent period of turmoil that will lead to the establishment of the so-called new normality after adapting to new and changing market conditions. This endless cycle is shown in the following Fig. 1.

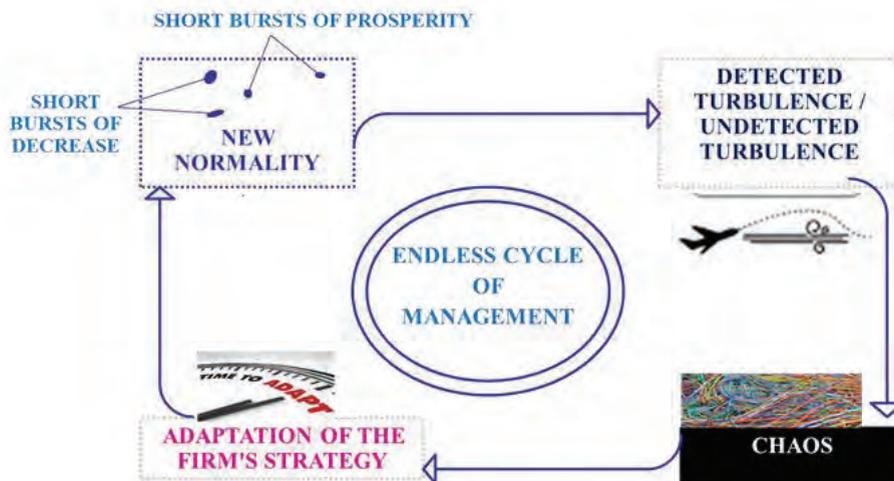


Fig. 1. The chaotic management system.

The success of future activities of the company will therefore depend on the early detection of potential threats and opportunities alike. The main question is how to diagnose problems even before they enter company's finances.

To underpin the problems that reached the stage of the initial crisis, it is necessary that the company creates an effective and comprehensive early warning system. The system for planning and assessment of a business entity

outlines the scope of the particular solutions which are then arranged in a logical sequence. The solution procedure is shown in the following Fig. 2.

This approach combines the approaches of the two types of analyzes that are to be carried out in any business, regardless of size and sector, although the process is primarily designed for manufacturing companies.

Internal conditions of a business entity that transforms resources form the internal business environment. The internal environment (also microenvironment) includes all the departments, e.g. senior management, financial department, purchasing department, production and development, marketing department, human resources and many others. The concept is very broad but for purposes of this study it needs to be viewed and assessed in particular in terms of value creation as the main objective of a business entity.

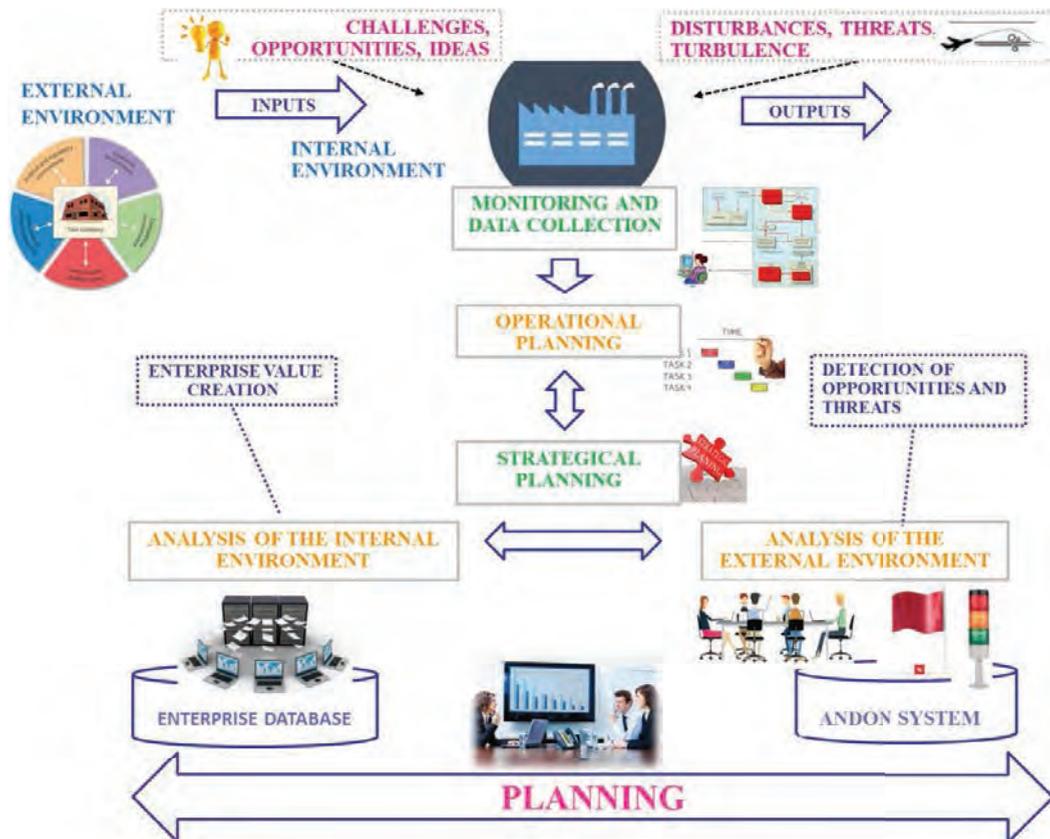


Fig. 2. Process solutions for planning and evaluation of business performance.

Every business is part of a larger unit which can be described as an external environment or macro-environment of the company. It is clear that both types of environment are interconnected and affect one another. External business environment consists of suppliers, customers, clients, competitors, cooperating companies, banks and financial institutions, local and other public

#### 4.1. Solution proposal for the external environment

The external environment consists of all the outside influences that affect decision-making process of a business entity and its performance. An essential step in the analysis of the external environment is the continuous monitoring and data collection, thus learning about potential risks and opportunities.

Business leaders and their companies who will embrace the new normality will have implemented new systems to detect turbulence that can be detected, while also instilling new strategic behaviors within their organizations and their business models to minimize or preempt any ill effects on their businesses when turbulence strikes unexpectedly. Such companies can then take away competitors' business, or even acquire competitors at bargain prices that have been weakened and made vulnerable by their inability to withstand the turbulence and its consequent chaos. [14] The solution procedure from turbulence to sustainability is shown in the following Fig. 3.

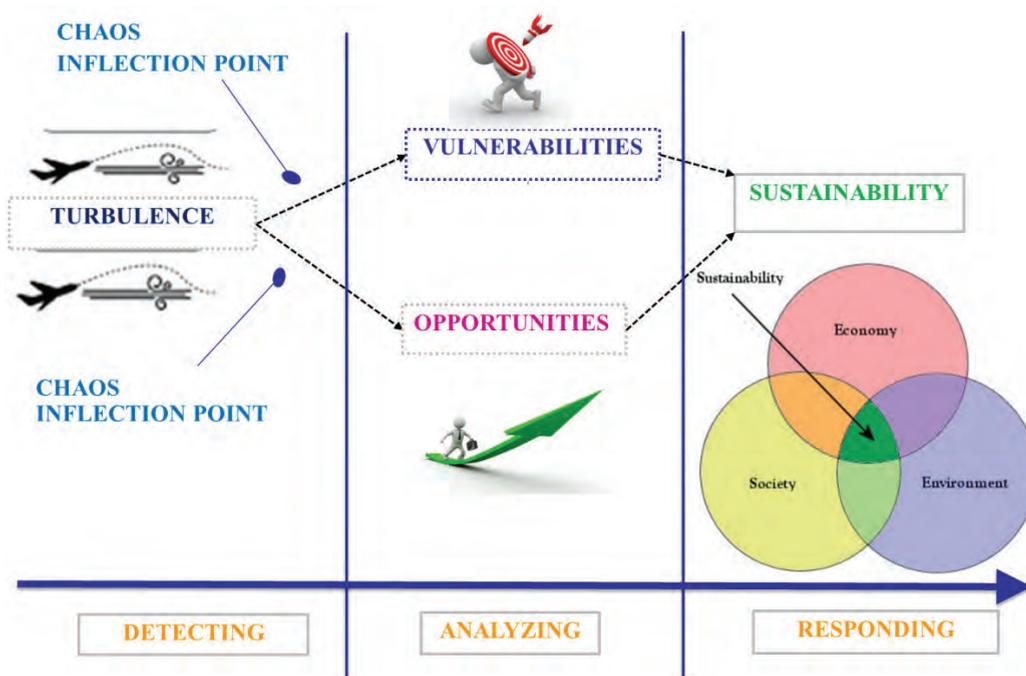


Fig. 3. From turbulence to sustainability. [14]

Chaosics serves ultimately as a disciplined approach to detecting sources of turbulence, predicting consequent vulnerabilities and opportunities, and developing critical and appropriate responses to ensure that the business lives on successfully and thrives for many years into the future. The eventual goal is to achieve what is now called, Business Enterprise Sustainability (BES). [14]

Business Enterprise Sustainability is a comprehensive strategy to maximize the underlying value of companies in the extended long-term, while optimizing company performance and value in the short and medium term – but never to compromise long-term value. It involves the implementation of the Chaosics Management System, a system that enables companies to be responsive, robust and resilient in its business and operational strategy, especially in a time of turbulence. [15,16,17]

Production systems are ready for a change. Their design will not do without the use of advanced technologies. Future production systems must have completely new features, such as self-organization, reconfigurability, autonomy, self-optimization, self-replication or the ability to learning and work independently using the acquired knowledge. The changes will be very fast. [18,19,20]

## 5. Conclusion

Nowadays, market features several different market situations which are well beyond the scope of the aforementioned two. If the production or transport company is not sufficiently prepared for them, conditions can

change unexpectedly. How can production or transport managers deal with such situations? Given that they have to do business in turbulent times, they need better decision-making system with management and planning support reflecting the new global trends. One of the helpers in these times of "chaos control" and a new "normality" could be a solution proposed in this paper.

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