

## Implementation of Financial Sustainability in Organizations through Valuation of Financial Leverage Effect in Russian Practice of Financial Management

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### ABSTRACT

The article considers the need of ensuring the sustainable development of organizations in the unstable external environment; financial sustainability which is understood as the optimal structure of funding sources of a business entity is proved to be the most significant factor of sustainable development. The article proves that the index of financial leverage influences the enterprises capital structure which also has a great impact on financial sustainability of Russian organization. The index of financial leverage was analyzed according to the European approach and taking into account such indicators as differential of financial leverage and financial leverage shoulder which are proved to be the most significant in capital structure management for Russian production companies under the circumstances when financial resources become more and more expensive. The research work was done on the basis of financial analysis of one of the biggest Russian automobile company representing the main trends for the whole industry so it may be classified as a case

### KEYWORDS

Financial sustainability, sustainable development, financial leverage, tax corrector, capital structure

### ARTICLE HISTORY

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## Introduction

The main task which determines the enterprise movement to the defined aim is its social and economic development. The direction for movement is defined by the enterprise itself which takes the chosen strategy as the main guideline for it. So the aim is one of the main driving force motivating the enterprise for progressive development. The concept of sustainable economic development was studied thoroughly and the result of the study was the idea that the aims of environment protection and economic development do not

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contradict (Barbier, 1987). Some research work has been done in order to find out how the corporation can achieve sustainability and what changes should be implemented in it for this aim (Dyllick & Hockerts, 2002; Doppelt, 2003).

The assessment of economic system functioning efficiency is necessary to be performed on the basis of significant and sufficient indicators. The indicators reflecting the key moments of functioning are used to characterize the most significant aspects of enterprise activity and the achievement degree of the main aim.

International and Russian economics practice has the innumerable number of various approaches to the determination of necessary quantity and quality of assessment indicators. (Porter, 2004; Dyllick & Hockerts, 2002).

The most progressive enterprises started to use the system of interconnected indicators in order to compose the financial and economic accounts in 20ies of the previous century. The most well-known example of such system is the DuPont model (Groppelli & Ehsan, 2000). At that time the system of accounting indicators had clear correlation between the tasks of the enterprise and the indicators characterizing these tasks. Most of the modern key indicators systems are based on the purpose-oriented approach. The difference lies only in the ways which the enterprise uses to achieve the set aims.

The activity targeted at the determination of sustainable development level of the enterprise may help the effective management of strategy development only if the corresponding indicators system is created. The elaboration and usage the sustainable development indicators allows the enterprise to implement analysis of its activity results and monitoring of sustainable enterprise functioning.

Economic situation in Russia is under significant influence of social and political factors, the great impact of resource industry and global crisis trends. That is why to make some significant changes it is especially important to elaborate and create innovative economic instruments which allow realizing structural changes in the economy and give it sustainable development direction.

A number of Western consulting firms engaged in the analysis of Russian enterprises consider as one of the significant factors influencing the lack of sustainable development of the Russian economy the lack of effective management technologies for financial and economic activities of a company (Adrain & Hyun, 2010; Doff, 2008; Sandström, 2006). It has become vitally important for Russian enterprises to analyze capital structure more thoroughly because of some limiting factors for external financing and the raise of financial resources value. The result of managerial decision about company activity financing with the help of borrowed funds may lead to financial leverage effect which creates extra risks for common stock stake –holders.

### **Materials and Methods**

There are two approaches to financial leverage concept: the American one and the European approach. The American approach defines financial leverage influence by valuation of correlation between net profit and NOPLAT. Financial leverage here shows the level of financial risk of the organization as the organization which uses borrowed funds has greater risks than the company working without it. The European approach characterizes the efficiency of

borrowed capital usage. So the financial leverage effect means some surplus to ROE which was received by using the borrowed funds.

The Russian practice of financial analysis uses European approach to financial leverage concept and includes three indicators: tax corrector; differential of financial leverage; financial leverage shoulder.

Tax corrector decreases the financial leverage effect depending on the income tax level. But this indicator can't be influenced by the enterprise as the levels of income tax are set by legislation acts.

Financial leverage differential is the main element of positive effect forming. This effect can be seen if the level of return on assets exceeds the average size of interests for using the borrowed funds.

The financial leverage shoulder characterizes the strength of influence of its positive and negative effect received by the degree of financial leverage.

## Results

1. The effect of capital structure financial management on the stability of the organization was substantiated.

Under the stability of the organization we mean the ability of the company to function effectively in the changing competitive market environment. The organizational stability can be traditionally divided into internal and external, general and financial. The stability can also be connected with technical, production, supply and marketing aspects and others. The internal stability of the organization is its overall financial condition, when high results of its functioning are consistently provided. To achieve this you need to respond actively to changing internal and external factors. External stability of the organization in the presence of the internal stability is determined by the stability of the external economic environment in which its activity is carried out. It is achieved by the appropriate management system for the whole country's economy. The overall stability of the company can be achieved by such organization of cash flows, which provides a constant excess of income funds (income) on their expenditure (costs).

Financial stability is a financial condition of the company, which can provide under current condition the fulfillment of all obligations to employees, other organizations and the government by implementing its business activity. It can also characterize the risk level of insolvency for the organization in the context of the balance or excess of income over expenses. The financial stability is a reflection of a stable excess of revenues over expenditures. It provides free maneuvering in cash and leads to the constant process of production and sales. The financial stability is formed in the process of the entire production and business activities, and can be considered as a major component of the overall sustainability of the enterprise. Assessment and analysis of the financial stability of the organization should be started with a study of its capital structure and competitiveness at the market of financial resources.

The financial stability of the company is characterized as more solvent in relation to businesses which do not have financial stability. For such a company it is easier to get a bank loan, to attract investment. The financially sustainable enterprise has the advantage in attracting more qualified personnel, as well as in selection of suppliers. The category of financial stability is influenced by many

factors and appears in a variety of assessed indicators of the financial situation in the company.

Summarizing the theoretical thesis about the nature of the financial stability, it should be emphasized that the financial stability depends not only on the optimal structure of funding sources of a business entity, but also on the lawfulness of their use, thereby providing the solvency of the company as well as the profitability of its operations.

In our opinion, the financial stability is broadly defined as a state of an economic system characterizing its ability to function effectively in unstable conditions which affect its activity. A more specific definition of the financial stability is that when it is considered as the solvency of the company at a certain time, which establishes the circumstances of the effective application of financial resources to ensure high financial results.

In modern Western and Russian practice there are many methods and techniques for determining the level of the financial stability. By analyzing figures in the methods of different authors it is important to determine directions (objects) for the study of financial stability of an economic entity. Each object of the analysis corresponds to an indicator reflecting its most significance. The main condition for the formation of the financial stability of the company is its solvency, which means the possibility of the organization to meet its needs for material and financial resources.

Another condition for the financial stability is such asset structure of the organization, which allows realizing current and strategic business interests. In order to analyze the financial stability, it is necessary to study indicators characterizing the solvency of the company, the liquidity of its balance sheet, the level of turnover of the enterprise's funds and its creditworthiness. The objects of analysis are the efficient use of the company's capital, the optimal structure of its assets, liabilities and expenses. More generally we should analyze the level of financial independence and liquidity as well as the solvency and investment appeal of the economic entity. All these aspects can be complexly analyzed by financial leverage indicators which show the efficiency equity capital usage.

2. The effect of financial leverage was analyzed taking Russian joint-stock company "GAZ" as an example. The effect of financial leverage was tested at the enterprise of the automobile industry. Recently Russian automobile enterprises have survived in automobile industry crisis which was expressed through decrease of credit resources volumes, decrease of sales.

GAZ Group produces light and medium duty commercial vehicles, buses, heavy-duty trucks, passenger cars, power trains and auto components. It incorporates 13 plants in 8 regions of Russia. It is the leader of the commercial vehicles market of Russia and occupies 50% of the light commercial vehicles segment and nearly 75% of the buses segment. The flagship product of the company is the light commercial vehicle of the new generation GAZelle NEXT. GAZ Group is the leader among Russian automakers in creating eco-friendly types of vehicles, including vehicles on alternative fuels. GAZ Group is constantly working on improving the production capacity and implementing new technologies. In the framework of the production preparation for the new generation vehicle GAZelle NEXT in GAZ Plant, new stamping and welding lines were installed, the painting complex was modernized and the new quality control points were introduced.

The calculation of the differential of financial leverage for the period of 2011-2013 for “GAZ” is represented in Table 1.

The results of the calculation show that the enterprise was in crisis in 2011 and 2012 as the negative value of DFL demonstrates and as a result ROE decreased making the use of equity ineffective. The year of 2013 has changed the situation to something better and that speaks about the possibility of its rise if the company increases the part of borrowed funds in capital structure.

**Table 1.** The numbers of DFL for 2011-2013 in joint-stock company “GAZ”.

Year	DFL calculation
2011	-0,0554
2012	-0,0936
2013	0,019

Source: The results of authors' financial analysis.

The second constituent of financial leverage effect is financial leverage shoulder (FLS) which characterizes the strength of financial leverage influence and defined as the ratio of borrowed capital to equity capital.

So the differential of financial leverage and financial leverage shoulder are closely interconnected. As soon as the return of investments into assets is higher than the price of borrowed capital and the degree is positive ROE will rise as fast as high is the ratio of borrowed and equity resources. However, along with the growth of borrowed resources level there is the growth of their price. Profit starts decreasing and as a result the return on assets starts falling too. There is the threat of having the negative index of differential of financial leverage.

The results of financial leverage shoulder calculation for joint-stock company “GAZ” are represented in Table 2.

**Table 2.** The numbers of financial leverage shoulder (FLS) for 2011-2013 in joint-stock company “GAZ”.

Year	FLS calculation
2011	0,91
2012	0,77
2013	0,84

Source: The results of authors' financial analysis.

The highest number of financial leverage shoulder was calculated in 2013 which means that the share of borrowed capital was increased in comparison with equity capital.

**Table 3.** The calculation of financial leverage effect for 2011-2013 in joint-stock company “GAZ”.

	2011	2012	2013
The index of financial leverage effect	-0,037	-0,058	0,014

Source: The results of authors' financial analysis.

Speaking about such index as tax corrector we can say that Russian enterprise can't influence it greatly as the rate of taxes is set by legislation. But it can be used in some cases of financial leverage management such as:

- The enterprise has different kinds of activities and there are different tax rates for them;
- The enterprises uses some tax preferences for income tax for some kinds of its activity;
- The subsidiaries of the enterprise implement their activity in special economy zones of the country with preferential conditions of income taxation;
- The subsidiaries of the enterprise implement their activity in the states which have lower rates of income taxation.

Influencing the regional and branch production structure (and the income structure, consequently to its tax rate) the enterprise is able to decrease the average income tax rate in such conditions and increase the influence of financial leverage tax corrector on its effect. As for studied enterprise the income tax rate during 2011-2013 was 20% so the number of tax corrector for each year will be:  $1-0,20=0,80$ .

Analyzing the financial leverage effect we should bear in mind that it shows the ratio of borrowed funds to equity resources of the enterprise.

The analysis shows that ROE decreased by 3,7% in 2011 and by 5,8% in 2012. The enterprise had to implement some financial decisions and managed to increase ROE by 1,4% by attracting the borrowed funds.

Taking into account the current trends in Russian automobile market and exchange rates fluctuations and general economy recession the enterprise has two alternatives for its development.

The first variant is based on import replacement policy in Russian economy and the rise of demand for "GAZ" products will increase the sales level of produced transport means leading to the increase of its general economic efficiency and to the increase of financial leverage effect. The second variant is less optimistic because it focuses on the changes that happened at Russian financial market which is influenced by the decrease of financing sources. So the supply of financial resources decreased but the demand is still rising. This led to the increase of interest payments for attracting loan capital and this makes practically impossible to implement the task of keeping positive dynamics of financial leverage differential. But this indicator is the main condition of ROE growth. And negative differential will lead to negative financial leverage effect and to new crisis situations at the enterprise. So the choice of development way depends both on external factors such as competitiveness level at the market, political decisions, customers demand and internal factors concerning right and financially motivated decisions made by the enterprise management.

## Discussions

Thus, in our opinion a more detailed elaboration of financial leverage influence assessment as a unified methodical instrument for all industrial enterprises should be done as well as setting a relation between this indicator and the indicators of inventory and assets turnover in the whole, taking into account the characteristics specific to the various sectors of enterprises' activities for the purpose of more complex and meaningful assessment of the enterprise efficiency. As a result of the performed research work it turned out that there is some necessity to elaborate the practical activity and events

targeted at increasing the level of financial sustainable development which is based on some certain mechanism.

### Conclusion

In the context of our study we carried out the calculation of financial leverage indicators of Russian automobile company and found out the effect of financial leverage indicators on financial sustainability of the company. Each year the rise of complexity and uncertainty of the exterior and interior environment of economic entities is becoming one of the key problems for continuous and sustainable growth of enterprises. Contemporary managers have to make decisions under the conditions when the product life-cycle grows short, the production profitability falls, the technology systems change systematically. In this situation the problem of development of strategic planning instruments is becoming more and more actual. The most usual decision which is made by management now is to raise efficiency in financial sphere and it has some effect but only for a short-term period. Long-term planning forces managers to work out more flexible aims and to formulate the tasks taking into account changeable external conditions of financial market. At the same time strong competition at the market of financial resources for available financing conditions forces the enterprises to optimize their strategy financial management.

The analysis revealed that financial leverage effect assessment is becoming one of the most essential instruments of financial sustainability support system in Russian enterprises which have to compete under the sharp worsening of financial market conditions and the great rise in price of available financial resources at this market.

### Recommendations

The research results may be useful as the foundation for the professionals in financial sphere and financial management for the purpose of more complex and meaningful assessment of the enterprise efficiency.

Study is also recommended to scientists and higher vocational teachers, who work on solving the problem of the future financial profile specialists' professional competence creation for Russian labor market.

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### Disclosure statement

No potential conflict of interest was reported by the authors.

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## References

- Adrain, T. & Hyun S. S. (2010). "Liquidity and Leverage". *Journal of Financial Intermediation*, 19, 418 – 37.
- Barbier, E. (1987). "The Concept of Sustainable Economic Development". *Environmental Conservation* 14(2), 101–110.
- Doff, R. (2008). "A Critical Analysis of the Solvency II Proposals". *The Geneva Papers on Risk and Insurance – Issues and Practice* 33, 193 – 206.
- Doppelt, B. (2003). *Leading change toward sustainability*. Sheffield: Greenleaf Publishing, 325 p.
- Dyllick, T. & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11(2), 130–141.
- Groppelli, A. A., Ehsan N. (2000). *Finance*. Barron's Educational Series, 445.
- Porter M.E. (2004). *Competitive advantage: creating and sustaining superior performance*. New York: Free Press, 252 p.
- Sandström, A. (2006). "Solvency: Models, Assessment and Regulation." Florida: Chapman & Hall, 433 p.