UDC 658

RETURN OF ASSETS AS A FINAL INDICATOR OF EFFICIENCY OF BUSINESS OPERATION

РЕНТАБЕЛЬНОСТЬ АКТИВОВ КАК ИТОГОВЫЙ ПОКАЗАТЕЛЬ ЭФФЕКТИВНОСТИ ФУНКЦИОНИРОВАНИЯ БИЗНЕСА

Miasnikova A., Kasaeva T.

Vitebsk State Technological University, Republic of Belarus

Мясникова А.С., Касаева Т.В.

Витебский государственный технологический университет, Республика Беларусь

ABSTRACT

BUSINESS PERFORMANCE, ASSETS, ASSET STRUCTURE, ASSET UTILIZATION, RETURN ON ASSETS, MULTI-FACTOR MODEL

Assessing business performance poses one of the most important tasks, which is to determine the role of the volume and structure of resources, on the one hand, and the level of use of available resources, on the other hand. The study attempts to build a multifactor model of return on assets based on a systematic approach to business performance indicators combining business assets, the efficiency of their use in the production process and the final result in the form of net profit.

АННОТАЦИЯ

ЭФФЕКТИВНОСТЬ БИЗНЕСА, АКТИВЫ, СТРУКТУРА АКТИВОВ, ИСПОЛЬЗОВАНИЕ АКТИВОВ, РЕНТАБЕЛЬНОСТЬ АКТИВОВ, МНОГОФАКТОРНАЯ МОДЕЛЬ

Оценка эффективности бизнеса ставит перед собой одну из важнейших задач – определение роли объема и структуры ресурсов, с одной стороны, и уровня использования имеющихся ресурсов, с другой стороны. В исследовании предпринята попытка построения многофакторной модели рентабельность активов на основе системного подхода к показателям функционирования бизнеса, объединяющего активы бизнеса, эффективность их использования в процессе производства продукции и итоговый результат в виде чистой прибыли.

The transition to a market economy is changing the content and criteria for evaluating business performance. Of course, this also affected a key indicator of the effectiveness of the organization's functioning, i.e. its profitability. If earlier in the practical assessment of the activity of an industrial organization the indicator of profitability of products was predominant, now it is adjacent to the indicator of profitability of sales.

Modern economic science has developed many approaches and indicators to assess the level of business profitability. However, all the opinions of scientists and economists are limited to the fact that a comprehensive assessment of business profitability should be based on the profitability of assets, since the founders entrusted their assets to the organization's management in order to make a profit. Despite the fact that this point of view has supporters, there still exist opponents, according to the authors, the indicator of return on assets allows to get an idea of the profitability of different companies, different types of economic activity and makes it possible to compare them.

An assessment of business performance by the final indicator "return on assets" can be presented in the form of a "black box" model [1], in which an organization is considered as some system where there are the following components:

– "Input" is the initial assets of the organization, structural indicators that are at the stage before the production process; they are characterized by indicators of their value, condition, structure;

– "System" is the production process itself, where the process of using the organization's assets is presented, the effectiveness of which can be evaluated by various approaches: resource or cost;

– "Exit" is the final indicator of the organization's activity, which shows the result of the use of assets: sales volume, added value, profit, and so on.

This model closes the final indicator of the organization's activity, which can be determined by the ratio of "output" to "input".

For example, the general view of the final indicator can be represented by the return on assets determined by the formula:

$$R_a = \frac{NP}{LTA + STA}, \tag{1}$$

where NP – net profit of the organization (output indicator);

LTA, and STA are long-term and short-term assets of the organization (entry indicators) accordingly.

The presented model, combining the multiple and the additive, can be detailed by the sequential separation of factors. This will allow combining the indicators of "entry", "system" and "exit" in one model. In this study, the following indicators were selected at the "input": assets; long-term assets; intangible assets; short-term assets; accounts receivable.

To characterize the production system, the use of indicators of return and capacity is justified:

- an indicator of the capacity of manufactured products, calculated for short-term assets;
- the rate of return of receivables;
- capacity indicator calculated on long-term assets;

- the rate of return on intangible assets.

At the "exit", the net profit indicator is used as the final indicator.

The final indicator "return on assets", covering all the components of the black box model as a result of fragmentation of factors is converted into a model:

$$R_a = \frac{NP}{\frac{STA}{VP} \times \frac{VP}{AR} \times \frac{AR}{STA} \times A \times \frac{STA}{A} + \frac{LTA}{VP} \times \frac{VP}{IA} \times \frac{IA}{LTA} \times A \times \frac{LTA}{A}}, \qquad (2)$$

where VP is the volume of products, works and services;

AR is accounts receivable;

A is the total amount of assets of the organization;

IA is intangible assets.

Each denominator ratio has an independent economic meaning, which allows to present the model in the form:

$$R_a = \frac{NP}{STA_e \times AR_o \times d_{AR} \times A \times d_{STA} + LTA_e \times IA_o \times d_{IA} \times A \times d_{LTA}}, \qquad (3)$$

where STA_e is the indicator of the capacity of manufactured products calculated on short-term assets;

AR_o is return of receivables;

d_{AR} is the share of receivables in the total amount of short-term assets;

d_{STA} is the share of short-term assets in the total assets;

LTA_e is the indicator of the capacity of manufactured products calculated on long-term assets;

IA_o is return on intangible assets;

d_{IA} is the share of intangible assets in the total amount of long-term assets;

d_{LTA} is the proportion of long-term assets in the total amount of long-term assets.

This model was tested at the private enterprise "Machine-Building Company Vitebsk Aerial Platforms". The main results are presented in Table 1.

According to the results of the study, the following results were revealed:

1. of the "entry" indicators, the negative impact on the change in the return on assets was affected by such factors as the share of short-term assets in the total assets, the assets of the organization and the share of intangible assets in the total amount of long-term assets; this is due to the fact that in multiple models an increase in the denominator leads to a decrease in the indicator.

2. From the indicators of the "system", negative factors influencing the change in the return on assets were affected by such factors as the indicator of the capacity of manufactured

Table 1 – The Impact of changes in factors on the return on assets in the analyzed period

Factor Name	The result of the influence of the factor
Organization net income	42,559
The indicator of the capacity of manufactured products calculated on short-term assets;	-19,903
Return of receivables;	18,980
The share of receivables in the total amount of short-term assets	0,923
The total amount of the organization's assets	-32,589
The share of short-term assets in the total assets	-4,401
The indicator of the capacity of manufactured products calculated on long-term assets	1,349
Return on intangible assets	8,908
The share of intangible assets in the total amount of long	-10,256
The proportion of long	4,401

Compiled by the author

products calculated on short-term assets.

The final result of the work done will be considered to determine the influence of extensive and intensive factors on the final indicator of the effectiveness of the functioning of an industrial organization through living labor, means of labor and objects of labor.

REFERENCE

1. Мясникова А.С Модель оценки эффективности бизнеса / А.С. Мясникова, Т.В. Касаева // Материалы докладов 52 международной научно – технической конференции преподавателей и студентов: в 1 т./ УО «ВГТУ». – Витебск, 2019. – Т.1. – С. 192 – 195.

2. Макаренко М.В., Малова И.И. Системы показателей, модели и подходы к оценке эффективности деятельности предприятия. / Макаренко М.В., Малова И.И. // Российское предпринимательство, 2016. – №2. – С 32-49

3. Николаенко А.А. Управление эффективностью бизнеса на основе врм / А.А. Николаенко, Т.А Худякова – Челябинск: Юургу, Эу-277, 2017. – 114 С.

4. Назарова В.В., Бирюкова Д.С. Стоимостные методы оценки эффективности менеджмента компании / В.В. Назарова, Д.С. Бирюкова // Научный журнал Ниу Итмо. Серия

«Экономика и экологический менеджмент» −2014. – № 3. – С .405-407

5. Крайнова В.В. Обоснование выбора модели ключевых показателей деятельности для судоходных компаний / В. В. Крайнова // Вестник Нижегородского Университета им. Н.И. Лобачевского. Серия: Социальные науки, − 2015. − № 1 (37). − 23–32 С.