

**OPTIMIZATION OF THE STRUCTURE OF ADVANCED CAPITAL
(ОПТИМІЗАЦІЯ СТРУКТУРИ АВАНСОВАНОГО КАПІТАЛУ)**

У статті подана інформація про місце авансованого капіталу у структурі підприємства. Визначено особливості оптимізації структури авансованого капіталу.

Ключові слова: авансований капітал, оптимізація, структура авансованого капіталу, норма прибутку, прибутковість.

The article provides information on the place of advanced capital in the structure of an enterprise. The peculiarities of optimization of the structure of advanced capital are determined.

Keywords: advanced capital, optimization, structure of advanced capital, rate of return, profitability.

The effectiveness of any enterprise depends on a number of factors and conditions. The study of the advanced capital of the enterprise deserves special attention. In conditions of economic volatility, processes are underway that directly affect the structure of advanced capital. These changes, in turn, affect the final result of the enterprise's activities.

The advanced capital of the enterprise is the value invested in economic activity in the form of fixed assets and intangible assets, current assets, human capital, etc., which in the process of its movement (transformation) brings income. These contributions must have a specific purpose that does not contradict the types of economic activity, and can be provided for a specific task for its subsequent implementation, including the creation of a new enterprise [1].

The formation of the optimal capital structure of a commercial organization is a significant factor in ensuring the effective management of its finances, and also determines the creation of a stable financial base for the production and economic activities of commercial enterprises.

The optimal capital structure of commercial organizations is understood as the ratio of equity and borrowed funds in which the enterprise ensures maximum business profitability and the necessary level of solvency and financial stability established by the criteria [3].

The main goals of optimizing capital and increasing the efficiency of its use are:

- increasing the level of financial stability and solvency of the company;
- reducing the risk of insolvency (bankruptcy);
- increasing the efficiency of the company's business organization.

These goals are based on certain methods, such as: self-sufficiency, self-development and self-financing.

It is well known that modeling the behavior of objective economic phenomena is much more difficult in practice than in theory. In fact, every management decision of any level is made in uncertain conditions. Sometimes it is very difficult to predict its consequences.

Most often, management has to conduct a retrospective analysis of business operations that form the level of solvency. and the trajectory of further development of the business entity.

In most cases, competent diagnostics of negative phenomena in the optimal (most acceptable) structure of assets and liabilities of the company allows you to develop a management strategy and tactics in a timely manner in order to overcome the financial crisis in the early stages of its development.

Based on the above, the purpose of this article is to present for discussion the author's methodology for modeling the optimal structure of the total capital of a commercial organization, aimed at regulating the ratio of borrowed and own liabilities of the balance sheet, varying non-current and current assets within the framework of effective anti-crisis regulation of business processes.

There are various methods of forming the financial stability of an organization. In my opinion, one of the most significant is the optimization of the liquidity of assets and the structure of the sources of formation.

The problem of choosing the optimal ratio of the elements of the total capital (fixed and circulating, own and borrowed) is central in the theory of capital structure. This issue has been repeatedly raised in the academic literature (the most complete reviews of existing models and methods are given in the works of M. Harris and A. Reviv [4] and S. Myers [7]). The initial stage of developing the theory of the financial structure of capital is associated with the works of J. Williams [2] on the valuation of financial assets and the works of D. Durand [8]. The foundations of the theory of enterprise financing were laid by F. Modigliani and M. Miller [6], who showed that the choice between debt and equity does not affect the cost of raising capital and the value of the firm. Based on the Modigliani-Miller theory, compromise theories by M. Brennan, E. Schwartz [2], H. Leland [5] and other researchers emerged. They substantiated the need to take into account such factors of the economic development of the firm as real economic conditions, the level of financial market conditions, the severity of the tax burden and the degree of tax burden on profits, as well as the magnitude of bankruptcy costs.

According to M. Baker and J. Wegler, the capital structure is formed as a result of management's attempts to monitor the capital market and is the total result of all such attempts [9].

The capital of an enterprise is a necessary condition for its functioning. The level and structure of the enterprise's capital determine its financial capabilities, and also contribute to determining the level of financial stability and solvency. The assessment of the capital structure of an enterprise should be carried out in conjunction with the assessment of its composition, movement and efficiency of use, which will contribute to a more rational and detailed analysis, and as a rule, to the development of appropriate management decisions. In the practice of assessing the capital structure, there is no single model for its optimization, therefore, each company, taking into account certain factors, must independently decide what conditions for optimizing its capital are acceptable and optimal.

Increasing the efficiency of capital management of an enterprise should be limited only to its optimization. In order to rationally manage capital, it is necessary to take measures to increase the efficiency of its use, according to the principles: increasing the level of profitability of the enterprise's own and borrowed capital; creating conditions for strengthening the financial stability of the enterprise through the effective use of own and borrowed capital; increasing the level of profitability of capital in order to ensure an increase in financial returns and the formation of additional profits; ensuring the structure and size of own and borrowed capital; increasing the level of profitability of capital in order to ensure an increase in financial returns and the formation of additional profits; ensuring the structure and size of own and borrowed capital necessary to protect the interests of owners and for an objective assessment by creditors and other interested parties; confident behavior of the enterprise in the market; effective investment in the assets of the enterprise.

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Чоботарь Д.В.
Саламатіна О.О.

**BIOTECHNOLOGICAL METHODS OF REGULATING REPRODUCTIVE
FUNCTIONS OF COWS
(БІОТЕХНОЛОГІЧНІ МЕТОДИ РЕГУЛЯЦІЇ ВІДТВОРЮВАЛЬНОЇ ФУНКЦІЇ У
КОРІВ)**

У публікації проведено огляд методів регуляції відтворювальної функції корів. Було проаналізовано дослідження вчених про стимуляцію відтворювальної функції у сільськогосподарських тварин шляхом використання гормональних препаратів.

Ключові слова: біотехнології, відтворювальна функція, корови, стимуляція, гормональні препарати, синхронізація, простагландини, статевая охота, статевий цикл, гонадотропін.

The publication provides a review of methods for regulating the reproductive function of cows. It analyzes research by scientists on stimulating the reproductive function of farm animals through the use of hormonal drugs.

Keywords: biotechnology, reproductive function, cows, stimulation, hormonal drugs, synchronization, prostaglandins, estrus, sexual cycle, gonadotropin.

Scientific research related to methods of regulating reproductive functions of farm animals dates back to the 1950s, when it was first proven that hormones could be used to increase the fertility of animals. However, at that time, the understanding of the mechanisms of neurohumoral interactions was quite incomplete, and the practical possibilities for using hormonal drugs of various actions were extremely limited [1].

In modern times, numerous studies on stimulating reproductive functions of farm animals through the use of biologically active substances are being conducted in many countries around the world. As real practice shows, hormonal drugs are the most effective, as they allow for proper normalization of sexual processes and increase fertility. Such drugs include gestagens (megestrol acetate, progesterone, etc.) used in combination with gonadotropic drugs [2].

However, according to scientists [3], after synchronization with progestagens, fertility may decrease, and synchronization may be incomplete for inseminating groups of animals at a specifically defined time. Therefore, nowadays, more researchers are focusing on the use of prostaglandins to study the stimulation of sexual function of cows and heifers [4].

One of the most widespread classes of prostaglandins includes: A, B, E, D, C, and F. Prostaglandins in living organisms are synthesized from polyunsaturated fatty acids through a special enzyme system (prostaglandin synthase), which is located in the myxomal membranes [5].

Prostaglandins can be found in a very large number of systems in the bodies of various animal species and humans, namely: in the mucous membranes of the stomach and intestines, in the kidneys, liver, spleen, brain tissue, iris, and other tissues and organs. However, the highest concentration is found in seminal fluid [6].

Prostaglandins exert a powerful physiological effect on a number of body systems: cardiovascular, endocrine, reproductive, nervous, respiratory, digestive, and excretory. Of particular interest to scientists is the luteolytic action of prostaglandin F₂-α in the ovarian artery, where it causes the regression of the corpus luteum, accompanied by a decrease in the content and production of progesterone [6].