Analysis of Theoretical Approaches to The Formation and Optimization of Share Capital

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Abstract. The theory of capital formation plays an important role in the category of finance. The theory of capital value and the theory of market value of the enterprise form the basis of research. Comparing the cost of raising funds and borrowing capital and analyzing the impact of various complex processes of financing the market value of the enterprise is a current problem in the global financial market. The study of the interrelationships of theories of capital formation or the study of a single conceptual set is a solution to the problems in the category of finance.

Keywords: Asset, stock, market value, dividend, investment, investor, capital, debt, value, optimization, finance, financing, liabilities, tax, composition, weighted average cost, expenses, issue.

I. INTRODUCTION
In the modern financial system, the theory of capital formation of joint-stock companies is considered a concept of financial management. It is inextricably linked with the theory of capital cost and the theory of the market value of the enterprise, because it is based on the comparison of the cost of raising equity and debt capital and the analysis of the impact of various complex processes of financing on the market value of the enterprise. The aforementioned interaction represents the development of these theories in a single conceptual complex.

Indicators determining the value of capital serve as an important tool for justifying the rationality of the formation of the capital structure and the decisions aimed at effective management of the financial and economic activities of the enterprise. Professor I. According to Blank, in the process of forming the capital structure, its value assessment consists of the sum of individual elements of private and debt capital [1]. But theoretically, the weighted average value of capital represents information about the composition of its elements, the value of each element and its contribution to the result.

There are various concepts that make up the theory of capital formation, which investigates the question of whether the ratio of equity or debt capital can affect the market value or not, how the complex elements of capital are reflected in its average value, and what ratio can ensure the increase in the market value of the capital of the enterprise. Almost all of them are built on the study of the ratio of equity capital, which represents debt capital, and the share of issued shares, which represent bonds.

II. LITERATURE REVIEW
The first stage of the theory of capital composition was written by Dj from foreign scientists. Related to Williams’ work on financial asset valuation published in the 1930s and later. However, extensive analyzes in this area began in the second half of the 50s, that is, F., who made an important contribution to the development of a modern approach to the analysis of the financial structure of capital. Modilyan and M. Miller's scientific works began from the time of publication [2]. Further development of the theory and practice of financial management, as well as summarizing the results of the first research on the financial structure of the capital of corporations, new theories of the financial structure of capital, defining modern approaches to its optimization (as well as complementary, alternative) began to appear.

Economic processes, including economic crises, lead to changes in theories of capital. In this article, we would like to analyze the stages of the theory of the financial structure of capital, its characteristics, main ideas and shortcomings. F. Modilyan and M. Prior to Miller's scientific views, the traditional theory based on the analysis of financial issues is considered one of the first theories of the financial structure of capital. A characteristic feature of the theory is that the weighted average value of the enterprise's capital depends on a certain extent on its structure and the possibility of optimization based on taking into account the composition of the capital and the value of its components, as well as the assumption that the value of the debt capital of the enterprise is always lower than the value of its private capital. The latest scientific views are expressed by the difference in the level of risk of using debt and private capital according to the following circumstances:
In contrast to private capital, which is formed in conditions of uncertainty and is related to the financial results of future periods and describes the expected profitability in the case where the period of attraction is not limited, the previous level of profitability of all forms of debt capital conditioned by the fixed interest rates and repayment periods.

- Obligation of security (in the form of collateral and guarantees) when attracting debt capital;
- The primary right of creditors to return the funds invested in the liquidation of the enterprise, in contrast to the rights of the owners who receive the property.

Based on the lower value of debt capital compared to property, in the traditional theory, it is concluded that the reduction of the average cost of capital of the enterprise is ensured by the increase of the share of the underlying debt capital in order to optimize the capital structure.

### III. ANALYSIS AND RESULTS

In our opinion, the rule that there is a relationship between the structure of capital, the cost of capital and the market value of enterprises \( B_q \) can be included among the advantages of this theory. The indicated interaction is expressed as follows:

\[
B_q = \frac{\sum_{t=1}^{n} x_t}{x_{\text{peq}} X_{pc} + Q_{sh.dc} + Q_{dc}},
\]

where:
- the mathematical expected value of the company's income \( X(1), X(2), \ldots X(t) \) in the period \( X(t) \) expressed by randomly different values of the company's income at time \( t \);
- \( X_{\text{peq}} \) – private equity interest, %
- \( Q_{sh.dc} \) – share of debt capital, %
- \( X_{pc} \) – cost of private equity;
- \( Q_{dc} \) – cost of debt capital.

From the above relationships, including in all similar conditions, it is concluded that by reducing the average cost of capital, the market value indicator of the enterprise is maximized (increased). At the same time, the traditional theoretical rule that the value of the company's debt capital is lower than the value of its private capital leads to the conclusion that the optimization of the financial structure of the capital is ensured by the formation of capital strictly at the expense of debt funds; debt capital participates as the primary and only factor determining such an optimization mechanism.

Such a conclusion contradicts the practical and theoretical methods of calculating financial risks in the cost of capital. Financial risk increases with the increase of indebtedness in the total structure of the enterprise's capital, which represents an increase in the average cost of the enterprise's capital. In this case, maximizing the use of debt capital creates the risk of loss of financial stability and bankruptcy. The above-mentioned traditional theory and the one-factor capital formation model based on it are oversimplified, and their application in practice causes uncertainties. In 1958, the Modigliani-Miller theory (hereinafter referred to as the MM theorem) was proposed, which later filled in and clarified the above uncertainties. In its initial form, this theory was called the indifference theory of capital structure. Its essence is that the optimization of the financial structure of the enterprise's capital cannot be fully achieved both by the criterion of minimizing the weighted average cost of capital and by the criterion of the market value of the enterprise, because the financial structure of the capital does not affect these indicators.

The feature of the theory of indifference of the financial composition of capital is the research of the mechanism of formation of the composition of capital in an inextricable connection with the mechanism of functioning of the capital market in the presence of the following restrictions and opportunities:

- means that the capital market has improved, there are uniform conditions for obtaining loans and investments, the same interest rates for all investors and creditors, the effect of uniform low interest rates, the absence of transaction costs related to the formation of separate elements of capital and included in their calculation;
- investors and creditors are not subject to profit tax;
- lack of sustainable development and profit growth (receipts from sales, excluding fixed and temporary costs, are equal, and its value is constant);
- equality of private and equity capital (net profit is distributed in dividends, outdated equipment is updated due to depreciation deductions);
- absence of "bankruptcy costs" (risks associated with the composition of capital elements and representing the threat of permanent loss of part of assets during bankruptcy are not taken into account);
Based on these conditions, F. Modigliani and M. Miller mathematically proved that the market value of the enterprise, respectively, the weighted average value of the capital used by them, is determined only by the total value of its assets and does not depend on the financial structure of the capital. The proof of this rule is built on the basis of the idea that the profitability of the enterprise in the course of its economic activity is not determined by individual elements of capital, but by the assets formed by it, in the analysis of financial transactions. In the current conditions of economic reforms, as a result of investors buying the shares of revalued companies and investing in the shares of undervalued companies, these prices are equalized, and the possibility of the existence of companies with the same type of risk and operating profit, but with different market prices, is disappearing. Thus, according to the logic of the model, the market value and weighted average value of the enterprise are indifferent to the composition of the capital.

The MM theorem is fair in the conditions of perceived constraints and possibilities far removed from the financial constraints of economic practice and is only theoretical in nature. At the same time, it describes a set of conditions under which the financial structure of the capital does not affect the market value of the enterprise.

F. Modigliani and M. Miller removed a number of limitations in their future research (models taking into account taxes, as well as profit tax and income tax of stock-bond owners), which allowed them to conclude that there is an interaction between the market value of the enterprise and the composition of its capital. Allows[4].

M. Brennan, E. Schwartz, H. The controversial theory (stationary ratio theory) discussed in the scientific works of Leland and other researchers takes into account real economic conditions such as the factor of profit taxation and bankruptcy costs[5].

In the practice of many enterprises, debt service costs are fully and partially excluded from the taxable base for profit tax. It has been found that the cost of debt capital is always lower than the cost of private capital in other similar circumstances due to the tax-free basis effect. As a result of the share of liabilities in the total composition of capital exceeding the level that does not cause an increase in the risk of bankruptcy, the weighted average value of capital will decrease.

By using various forms of debt funds in the formation of the financial structure of the enterprise's capital, the risk of bankruptcy increases with the growth of debt. We note that bankruptcy costs can be divided into direct and indirect costs. Direct costs occur when businesses go bankrupt, and they include a reduction in the liquidation value of assets due to moral and physical wear and tear due to complexity among the company's creditors, court costs, attorneys' fees, and outside administrators' fees. Indirect costs appear at the stage of financial difficulties before the enterprise is declared bankrupt; they can include ineffective financial decisions, changes in the behavior of creditors, buyers, and other participants.

After all, as the level of bankruptcy of the enterprise increases, its creditors may reduce the amount of debt capital provided, or the increase in liabilities may require a higher level of income to cover the risk of non-repayment. In this and other cases, this leads to an increase in the weighted average cost of capital and a decrease in the market value of the enterprise. As a company's debt capital increases, the value of the business increases at the expense of the tax-free basis (the "tax-free cost" effect), but after a certain period of time, the increase in debt is associated with a decrease in the value of the business. The debt capital leverage limit for an enterprise represents the level of the cost of debt capital associated with the risk of bankruptcy that offsets the benefits provided by taxes and profits. Thus, the optimization of the capital structure is determined by the ratio of the profit from tax payments to the possible bankruptcy losses. H. Leland stated that the value of the capital structure can be determined strictly by the tax payments of debt capital and the expected costs of bankruptcy [6].

In the theory of stationarity, the company determines the composition of its capital by taking into account two factors of the optimal value weighted average of the corresponding minimum amount: profit and bankruptcy costs. At the same time, it does not take into account the economic behavior of owners and other participants of the economic process, as well as a number of other factors.

If, for example, we take into account the transaction costs associated with the recapitalization process, it may be more profitable for enterprises with high costs to not change the capital structure, even if it is disadvantageous for a certain period of time. E. Fisher, R. Henkel and Dj. In their empirical research, Zechner studied the difference between the minimum and maximum level of the company's debt, suggested changing the capital structure without restructuring, and showed that the actual and target capital structure can be differentiated by costs[7]. The results of the research confirmed the need to select the value of individual elements of the capital structure and their weighted average value, not only the costs of capital service, but also the costs of attracting it, i.e., the transaction costs of recapitalization.

Further improvement of the agreement theory is related to taking into account the type of financial strategy (acute, moderate, conservative) adopted by the enterprise. Depending on the attitude of the owners and managers
of the enterprise to the level of risk, the point of compromise may deviate from the minimum amount of the weighted average value, which reflects the nature of the financial decisions of the enterprise within the framework of the ratio of risk and profitability. The agreement of the current period derives from the multifactorial nature of the theory of capital structure and determines the possibility of its dynamic selection.

Neoclassical concepts (traditional, Modigliani-Miller) assume that financial decisions are made in perfect economic conditions, where information is complete and general, and the economic behavior of participants is considered rational. At the same time, in real life, market prices do not reflect all information, information is not considered open and common for all its participants, that is, information is asymmetric, and the rationality of economic entities is limited.

The effect of information asymmetry on the optimization of the capital structure is reflected in a number of concepts arising from the asymmetry of information about the development prospects of the enterprise for individual market participants and the lack of improvement of real economic processes. The asymmetry of information, in turn, represents the conditions for the different assessment of future profitability and risk level, optimization of the capital structure. After all, company management usually has more accurate information in this area than investors and creditors, which means information asymmetry. If investors and creditors had the same information, managers, like managers, could better express their requirements for the level of profitability provided to the enterprise, which would allow to optimize the capital structure and its specific financial situation in accordance with the development prospects.

These situations, information asymmetry is represented by the actions of managers in the capital market, were taken into account in the original theory, which foresees the possibility of reduction based on certain information for creditors and investors (Ross, Myers-Mailuf, Miller and Roca, Welch, etc.).

Myers-Maylouf model is one of the more widely known early models[8]. It assumes that managers act in the interests of shareholders (old shareholders) at the time of decision-making, that they are better informed about the profitability of investment projects than investors in the market, about the internal state of the enterprise. If investors have wrong information about the valuation of the enterprise, then the cases of financing effective investment projects with the help of share issuance will bring these projects to a level without profit for the old shareholders, so it is better to use other sources of financing for the purpose of implementing these projects, their valuation is compared to the available information about the enterprise will be less related (for example, profits or liabilities).

The optimal (favorable) strategies for attracting capital are differentiated depending on the growth of the market price of shares, prospects. In cases where such prospects are available, the issuance of additional shares for the implementation of investment projects does not increase the value of capital, and when they are not available, this resource provides the maximum market value. When information is asymmetric, investors consider this strategy in their decisions, because if the company announces additional issue, such a decision acts as a message that the stock price is too high and the investor lowers his perception of the corporation's valuation.

In the formation of the target financial structure of capital, the initial model is recommended to take into account the future involvement of capital in liabilities, the asymmetric information inherent in such involvement, the limit of taxation of the share of debt capital according to the stationary ratio theory, and the final costs of bankruptcy. Thus, when making decisions on the financial structure of the capital, it is necessary to take into account the further development of the enterprise, the current and predicted profitability of its activities.

In information asymmetry (1984) on the basis of debt theory and capital structure theory (1977), S. Myers substantiated the conclusions on the selection of the sources that make up the essence of the theory of financing order (among the sources of the pecking order theory). [9] According to Myers, among the sources of financing, retained earnings (internal source) is the main one, followed by debt capital, followed by bonds. An additional issue of shares is used as a last resort because the market sees it as negative.

The theory of the financing order explains a number of situations that are not represented within the framework of the stationary ratio theory. After all, as mentioned above, the announcement of the additional issue of shares leads to a decrease in the price of shares in the market, because investors lower their value in this company. From the point of view of the compromise approach, which assumes that enterprises of the same industry have a similar structure (same type of assets, commercial risks, price formation, profitability and taxation conditions), it remains unclear why high-profit enterprises choose low-grade debt in their practice. The theory of the order of financing allows to explain the indicated paradox, because it can re-measure the benefits and costs, the costs of which are considered in the theory of the stationary ratio, the selection of investment projects in an unfavorable situation, which determines a certain hierarchy of the means of financing (transaction costs and information asymmetry), expenses). According to his logic, high-profit enterprises do not need to attract other, more favorable sources of financing.

The conclusions of the theory of the financing order are confirmed by some empirical studies, which show that
more profitable enterprises issue debt as well as equity capital[10]. However, other empirical studies have contradictory evidence. After all, E. Fama I K. According to the results obtained by French, 86% of companies used the issue of shares to increase capital in the period from 1993 to 2003[11]. As a result of our monitoring of this situation, we found that 45% of these companies were forced to use derivative securities from 2004 to 2016 in order not to lose their value in the market. According to these scholars, such financial decisions contradict the theory of financing order, and this is seen in later periods.

The theory of information asymmetry underlies the concept of conflict of interests (agency theory, theory of corporate control and cost monitoring, stakeholder theory), as well as modern behavioral theories.

The first group of theories is aimed at calculating the conflict of interests of the group of different participants of economic activity and optimizing the financial structure of capital by them and evaluating possible risks in the process of corporate management.

The concept of the agency problem, fully explained in the scientific research of M. Jensen and U. Meckling. "Theory of the enterprise: the behavior of managers, agency costs and the structure of property", shows that the management of the enterprise can make decisions that conflict with the interests of shareholders and creditors, and the costs of monitoring its actions, respectively. also considers its damage[12]. An effective solution to agency problems is the correct selection of the composition of the compensation package (participation in property, stock bonuses, options), which allows managers to connect income with the dynamics of the value of equity capital and ensure its growth.

Agency costs of private capital arise as a result of differences in the level of complete information and interests of enterprise owners and creditors. In information asymmetry, lenders are interested in the ability to personally control the use and return of capital while providing it. Monitoring costs are usually passed on to business owners by including them in the loan payment provided. The level of monitoring costs depends on the value of the company's used debt capital, so an increase in this value will increase the weighted average value of the company's capital and decrease its market value. In addition, the weighted average cost of capital may increase due to agency costs of debt. They can adopt investment strategies that maximize their liability for corporate liabilities at the expense of shareholders with limited equity and their debt obligations. After all, in cases where the company's liabilities are high-risk, or the company's obligations are not sufficiently secured by assets, a part of the risk is placed on the creditors when the debt increases to make investments, but such decisions reduce the market value of the company.

The calculation of the different interests of different parties in the optimization of the capital structure is based on the stakeholder theory. Stakeholders are interested persons represented by internal and external influence groups based on influence by the enterprise or having the ability to influence[13]. The main stakeholders are: owners of shares, institutional investors, senior managers, employees of the organization, consumers, distributors, suppliers, financers of the corporation, representatives of state and municipal authorities, social and public groups. The diversity and intersection of stakeholders' interests, their different assessments of possible risks create conditions for a conflict of interests, which makes certain adjustments to the process of optimizing the financial structure of capital.

Behavioral theories (market observation, investment autonomy of managers, information sequencing, etc.) try to explain how financial decisions on the formation of capital structure are made in reality, using the data of a large number of empirical studies. According to the theory of market observation, the ratio of debt to equity is determined by market dynamics. The term "market tracking" refers to the practice of companies issuing equity securities when market prices are high and buying shares when prices are low. Managers derive profits from temporary deviations in the value of private capital relative to the value of other forms of capital. D. in conditions of market asymmetry. According to Djenter, an important factor in the decision on the capital structure is the managers' subjective perception of how to evaluate shares in the market[14]. M. Baker and Dj. As noted by Wegler, "the capital structure is formed as a result of the actions of managers to monitor the capital market and shows the general result of all such actions"[15]. Thus, monitoring the market and underestimating the risk in raising capital or profiting from revaluation determines the financial composition of capital, which is the optimal strategy.

The theory of investment autonomy develops the rule of the theory of market observation, establishing a connection between the decisions of managers on the issue of shares and their market value [16]. However, the indicated relationship is caused by overvaluation and undervaluation of the enterprise, in contrast to the theory of market observation, in this model it indicates the reconciliation of investors with the influence of managers. According to the logic of the model, managers make decisions that are positively accepted by investors, correspondingly, positively reflected in the company's market value: when the market value of the company's shares, the level of expectations of managers and investors, the level of compatibility is high, the company will issue an additional issue, and otherwise - performs debt obligations. In this respect, the financial composition of
the capital occurs under the pressure of more investors, whose expectations are taken into account by the managers.

C. Bikhchandani, D. Hirschleifer and I. Based on the information flow theory proposed by Welch[17], the imitative behavior of economic agents lies. The theory of information flows, in order to save costs and not to make mistakes, the financial composition of capital is formed regardless of the calculation of the optimal composition or the formation of the enterprise's life depending on the financing sources that are convenient at different times, but to absorb successful, positional managers (leading enterprises) from other enterprises, also assumes that common methods of capital structure management can be used.

Analyzing the development process of the theory of the financial composition of capital, the researchers propose various classifications that have arisen in the theoretical approaches of M. Harris and A. Ravi [18]. After all, T.V. Teplova singles out the statistical theories that provide for the search for the optimal composition of capital and its observance, they believe that the dynamic composition of capital, which deviates from the target composition of capital at a certain time, determines the optimal state as time series[19]. I.A. Blank shows the error of such a treatment, because according to him, the dynamics of the target composition of capital is determined not by the means of a methodological theoretical approach, but by the dynamics of certain factors that are considered in any theory of the composition of capital[20].

As a result of our scientific research, we found out that the concentration of all theories on the formation of capital leads to one result, that is, it is aimed at the formation of the optimal composition of capital. According to the conclusion, based on the accuracy of the amount of capital in the society, it means that the above theories should be used sequentially depending on the level of economic processes.

For example, we do not agree with I.A. Blank's opinion that all theories to some extent take into account the factors that determine the financial composition of capital. The development vector of the theory of capital structure itself is related to the consideration of a large number of such factors. At the same time, modern theories, in contrast to the traditional theory, first of all study the actual composition of capital, its ratio with the optimal composition, the process of adaptation of the optimal composition of capital and its determinants. In doing so, they are based on the results of a large number of empirical studies of enterprise policy in the field of financial structure of capital, according to which it is formed under the influence of various factors[21]. We summarize this information in the table according to the place of occurrence (external and internal environmental factors) and the nature of the impact (institutional-legal, financial-economic and social-administrative).

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**Theoretical approaches to capital formation and optimization**

**NEOCLASSIC**

- **Traditional theory**
  - F. Modiliani and M. Miller's theory
  - Stationary theory

**INSTITUTIONAL**

- **Signal theory**
  - Ross model
  - Mayer-Maylufa model
  - Miller and Roca model
  - Welsh model
- **Conflict of interest theory**
  - Agency retention theory
  - Theory of corporate control and cost monitoring
  - Stakeholder theory
- **Theory of behavior**
  - Agreement theory
  - Information cascade theory

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Fig.1. Theoretical approaches to capital formation and optimization.
In our opinion, the typology of the theory of the financial structure of capital should be based on their initial methodological principles. After all, the traditional theories are the methodological foundations of the neoclassical approach: the irrationality of economic agents and information asymmetry of the methodological principle’s characteristic of the institutional approach to the analysis of economic processes, modern theories rely on the simultaneous development of the market and the rationality of economic subjects, which is caused by the underdevelopment of markets. Taking into account the above, the classification of the main theoretical approaches to the optimization of the financial structure of the enterprise's capital can be presented as above Fig. 1.

In financial practice, a combination of different theoretical approaches is used to determine the target composition of capital, which takes into account the variability of certain determinants. In works summarizing the results of econometric studies, it is noted that economists combine various theoretical models, taking into account the variability of the factors determining the financial structure of capital and relying on their experience and intuition[22]. In the current conditions, according to the results of our research, it is necessary to take into account the transitive nature that contributes to the formation of factors influencing the formation of the financial structure of the capital of local enterprises.

IV. CONCLUSIONS

Summarizing the results of the research, a number of scientific conclusions about the economy of our republic were reached. As an explanation for this, we have come to the following conclusions after analyzing the scientific researches and scientific articles of more than ten foreign scientists in the stages of development of capital structure.

First of all, as a result of the use of modern methods and approaches to the assessment of capital value in determining the investment flow of joint-stock companies, making investment decisions, evaluating portfolio investment efficiency, as well as private and debt capital valuation, it provides an opportunity to evaluate the capital value of joint-stock companies. At the same time, joint-stock companies serve to assess the degree of influence of factors affecting private and debt capital and to determine the rational composition of capital.

Secondly, the dividend payout ratio, dividend yield rate, enterprise value, enterprise value EV (Enterprise Value), profit before deduction of taxes, interest and depreciation, EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) coefficient, Gordon model, PEG (price/earnings to growth) coefficient, P/E (price earnings ratio) and P/B (price to book value ratio) coefficients are considered appropriate. Also, these coefficients are widely used today to determine the market price of shares in the primary public placement of shares of these joint-stock companies in order to reduce the state share in large joint-stock companies in our country.

Third, private equity valuation is one of the most important indicators when evaluating a company's capital value. Through the Capital Asset Pricing Model (CAPM), the ability to estimate the cost of capital of an enterprise has increased. Also, based on the possibility of using the capital asset valuation model (CAPM), world scientists are putting into practice alternative models of capital value estimation. It should be noted that almost all alternative models are based on the assumptions of the capital asset pricing model (CAPM) theory. In particular, in determining the value of capital of the enterprise, it is a method of implementation, including a premium for market risk, by taking into account the expected income from government bonds and treasury obligations, which are considered risk-free assets.

We would like to emphasize that in proposing the above conclusions, we have taken into account the results of the scientific and practical research of Modigliani F, Miller M, Brennan M, Leland X, Myers S, Teplova Tva and Blank I, who are mature experts in this field.

REFERENCES