Financial Opportunities Management of Ensuring Enterprise Investment Costs

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Abstract

The article examines the current state tax system's impact on the ability to finance investment costs of enterprises. In unstable market environment conditions of domestic enterprises' financial management system, the investment activity intensification problem for the purpose of their sustainable development and competitive position strengthening maintenance is actual. The insufficient level of modern enterprises' investment activity is due to limited investment resources. One of the important factors influencing this process is the current taxation system. For businesses, taxes are part of the profits that can be invested in their own development. In these conditions, the objective is to form an investment management system that would provide the company with the opportunity for sustainable development, contribute to the growth of production, increase profitability, increase competitiveness in the market. The scientific work proposes enterprise investment costs financing sources planning model depending on the limit value of the tax burden integrated coefficient. The developed model is an important component of financial management, which determines the level of financial constraints on the opportunities for enterprise development. The assessment of investment financing opportunities depending on the level of the tax burden was carried out according to Ukrtranstorg LLC. The comparison of the actual and the limit tax burden integrated coefficient values made it possible to determine the periods in which the enterprise's tax burden did not limit the possibility of borrowing funds to finance investment activities.

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1 Introduction

The main purpose of enterprise financial management is to maximize the enterprise's and its owners' welfare, by steadily increasing its market value. This goal is largely provided by one of the important special financial management functions - investment management, which is aimed at continuous development and improvement of enterprise operating activities and to maintain sufficient and stable investment financing.

Each business entity in its activities constantly strives to maximize profits, optimize capital structure and ensure financial stability, enterprise investment attractiveness for all stakeholders, creating an effective mechanism for managing the enterprise, attracting additional funds. Absolutely all spheres of economic life are sensitive to the influence of the current taxation system. Enterprises' investment activity is no exception. Every manager, trying to maximize his profits, tries to reduce his costs, including through taxes and other mandatory payments. That is why, in order to make informed investment decisions, financial managers need to take into account the impact of the tax burden on the ability to raise funds from outside, which will ultimately affect the enterprise's investment activity.

2 Literature Review

Scientific researches of many domestic and foreign scientists are devoted to the methodological bases of enterprise investment activity management.

Way back, Ricardo [1] discuss the beginnings of political economy and taxation that place concepts as foundations to these days [3]. Demchenko and Odnolko [4] report comparative characteristics of the tax burden of Ukraine and the world.

Malyshkin [5] studied the tax burden coefficient at the micro-level. Shcherbatenko and Ryaboshapka [6] investigate the impacts of taxes on investment activities. Ledovskaya et al. [13] identify the influence of taxpayers' behavioral factors on tax evasion.

Danylchuk et al. [11] model investment attractiveness of countries via entropy analysis of regional stock markets. Kuzmin et al. [12] discuss macro-environmental factors in the development of public-private partnerships in Russia.

However, the impact issue of such external factors, as the current tax system, regarding the financing of enterprise investment costs remains insufficiently studied. That is why it is important to develop a financial management system that will take into account the tax impact as a limitation of opportunities for business development.

3 Methodology

To achieve the goal of scientific work and solve problems in the research process used general and special methods: abstraction, analysis and synthesis, induction and deduction to justify the importance of studying taxes impact on financing investment costs of the enterprise; comparative (for the tax burden diagnosis, its integral and marginal value); graphical (to illustrate the results of comparing the actual and critical values of the integrated tax burden coefficient). The

method of constructing schemes and models was used to visualize the algorithm for planning sources of financing investment costs depending on the level of the tax burden.

4 Results

Discussions about the impact of taxes on investment and business development last quite a long time. Thus, Ricardo (1955) argued that taxes hinder the process of capital creation and accumulation, each new tax becomes a new burden for production and leads to an increase in the natural price of goods, destroying the incentive for development [1]. According to the study results of taxes impact on incentives to invest, Menkew [7] identified two main factors - changes in corporate income taxes and investment tax credit. In his opinion, corporate income tax reduces the incentive to invest, because determining the amount of profit for taxation is based on the amount of depreciation, determined on the basis of prices paid for capital goods at the time of their acquisition. However, inflation increases the replacement cost, which usually becomes higher than the initial one, and therefore the income tax base grows. As a result, financial opportunities for investment are reduced. This is the most relevant for countries with intense inflation. Thus, in order for income tax not to undermine investment incentives, it is necessary to adjust depreciation amounts to take into account the increase in the cost of acquisition and restoration of fixed assets. But the investment tax credit reduces the cost per unit of capital and stimulates its accumulation [2]. Modern foreign experience shows that in order to minimize taxes, it is necessary to spend most of the income on investments, not dividends, because in world practice, income from the increase in the value of shares is taxed at a lower rate than income in the form of dividends. In the system of tax management, which according to a very common point of view, there is a component of enterprise financial management [3], to assess the impact of the tax system on the enterprise activities it is advisable to use the following indicators [4, 5, 6]:

Partial tax burden coefficients:

from income tax (CTB_{IT})

$$CTB_{IT} = IT_i / P_i \tag{1}$$

where IT_i - corporate income tax accrued in the i-th period;

P_i - the company's profit in the i-th period;

- on other taxes and fees (CTB_{OTFi})

$$CTB_{OTFi} = TP_{Oi} / E_{Oi} \tag{2},$$

where TP_{Oi} – other taxes and mandatory payments accrued by the enterprise in the i-th period;

E_{Oi} – operating expenses in the i-th period.

Tax Payments Ratio (TPR) – sets the share of actual outgoing cash flow from taxes and mandatory payments of the i-th period in the total amount of incoming cash flow from operating activities for the same period:

$$TPR_i = (TP_i + TC_i)/ICF_i \qquad (3)$$

TP_i - the total amount of taxes paid and mandatory payments in the i-th period;

TC_i - transaction costs of the i-th period;

ICF_i - incoming cash flow of the i-th period from operating activities.

Tax capacity of products (TCP) - the ratio of the total amount of accrued tax liabilities and income from operating activities:

$$TCP_i = TATL_i / IOA_i \qquad (4),$$

where IOA_i - income from operating activities of the i-th period.

To determine the possibilities of financing enterprise investment activity depending on the tax burden level, an appropriate algorithm has been developed (Fig. 1).

The algorithm uses the following symbols:

FR_I - financial result of the i-th period;

GFR_i - gross financial result of the i-th period;

R_i - revenue from the sale of goods, works, services of the i-th period;

TP_i - the total amount of taxes and mandatory payments of the i-th period;

i - serial number of the planning period.

n - is the total number of planning periods;

r_{expect} - the expected interest rate on bank commercial loans;

EFL_i - the expected value of the lever of financial leverage of the i-th period;

AFL_i - acceptable value of the lever of financial leverage of the i-th period;

$ICTB_{limi}$ - limit value of the integrated tax burden coefficient of the i-th period;

$ICTB_i$ - integrated tax burden coefficient of the i-th period.

According to the algorithm:

Block 1. To determine the integrated tax burden coefficient and its threshold value, an array of input information is formed.

Block 2. Starts a cycle that determines the number of planning periods.

Block 3. If the financial result is less than 0, then there is a transition to block 4, otherwise to block 5.

Block 4. If the financial result is negative, the planning process is completed.

Block 5. The maximum value of sales profitability of the i-th period is calculated:
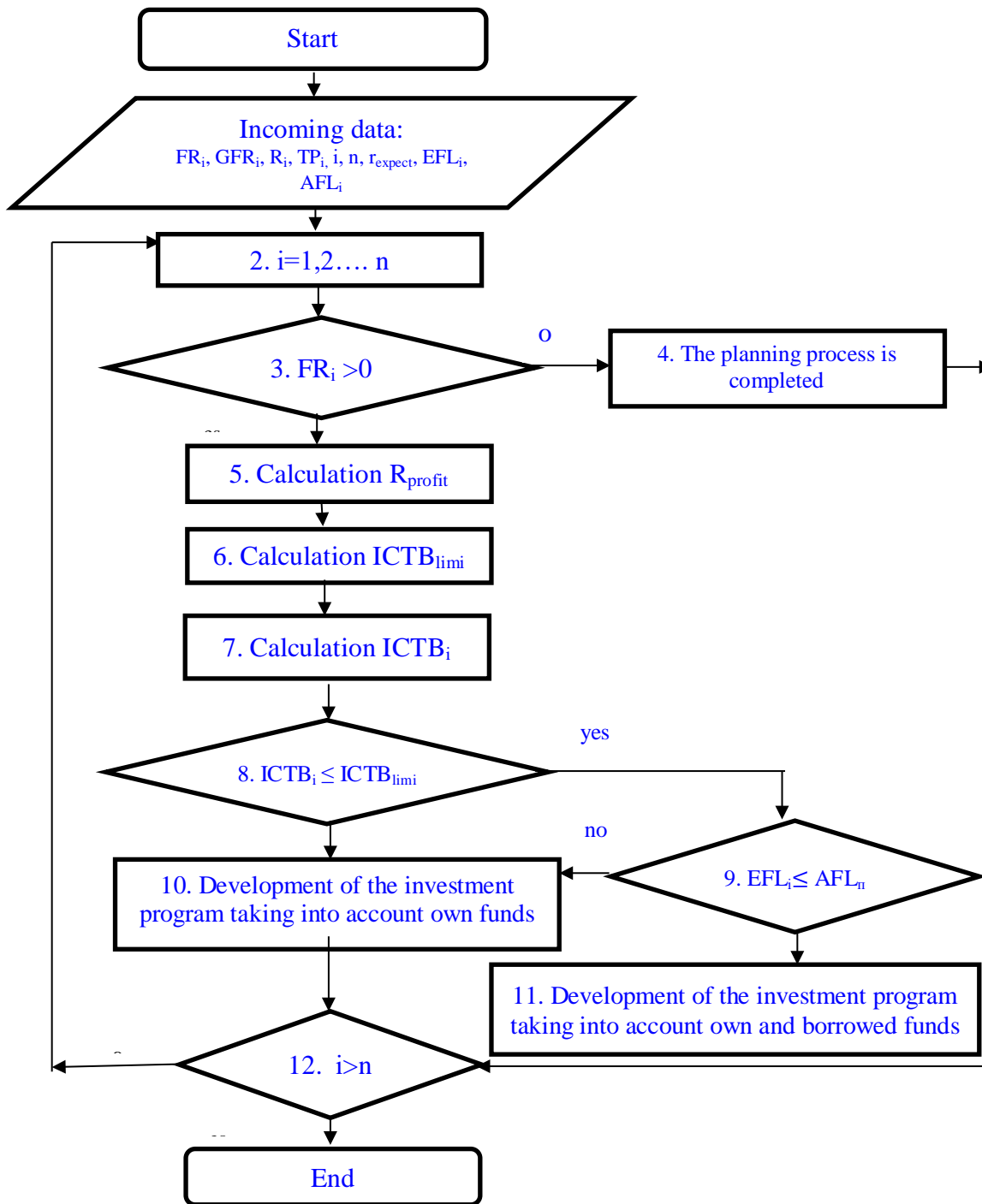
Figure 1: Algorithm for planning sources of financing investment costs depending on the level of tax burden[1]

[1] Author's development

Block 6. The marginal integrated enterprise tax burden coefficient of the i-th period is determined.

Block 7. The integrated enterprise tax burden coefficient of the i-th period is determined.

Block 8. If the integrated coefficient of the tax burden does not exceed the limit value, then there is a transition to block 9, otherwise – to block 10.

Block 9. The level of financial risks associated with lending is checked. If the expected value of the financial lever is more than acceptable for the company, then there is a transition to block 10, otherwise – to block 11.

Block 10. The investment program is being developed taking into account its own sources of financing.

Block 11. The investment program is being developed taking into account own and borrowed funds.

Block 12. The condition of the cycle completion is checked. If the calculations are made for all periods, the planning process is completed, if not – there is a transition to block 2.

If in the i-th period profitable activity is expected and the tax burden coefficient is greater than its marginal value, the possibility of financing investment costs is limited by own funds. If the ratio is less than the threshold value, it is possible to borrow funds, which expands the volume of investment activity. However, it is necessary to take into account the level of financial risks associated with lending. If the expected value of the leverage is more than acceptable for the company, then borrowing funds is impractical. It allowed us to estimate the relationship between the total amount of taxes and fees that are accrued and the set of indicators that can serve as a basis for comparison. The results of the calculation showed that the highest relationship is inherent in the gross financial result, which is recommended to be used as a basis for comparison in terms of the enterprise's profitable activities. If the activity becomes unprofitable, the basis of comparison is net income. The reliability of the analysis results was confirmed by the corresponding values of the Student's T-test and Fisher's F-test. Therefore, the integrated tax burden coefficient should be determined by the following parametric models:

- at GFR > 0:

$$ICTB = ATL / GFR \tag{5}$$

- at GFR > 0:

$$ICTB = NI / GFR \tag{6}$$

where GFR - gross financial result;
ATL - the total amount of accrued tax liabilities;
NI - net income from product sales.

The possibility of financing investment costs is influenced by the limit value of the integrated tax burden coefficient, which is the limit on the possible use of own and borrowed funds to finance investment costs. The procedure for calculating the threshold value of the integrated tax burden coefficient is based on the method of financial leverage, according to which the price of

borrowed funds is acceptable for the company if the economic return on assets exceeds or equals the current average rate on loans [8]. Therefore, the limit value of the integrated tax burden coefficient is determined by the formula:

$$ICTB_{limi} = TP_i / (R_{profit} * R_i) * 100 \qquad (7)$$

where R_{profit} – the marginal value of profitability of sales, determined by the formula:

$$R_{profit} = 0{,}07 + 0{,}18 \cdot r + 0{,}04 \cdot r \qquad (8)$$

where r - is the current average interest rate on loans.

Estimation of financing investment expenses possibilities depending on the tax burden level is carried out according to LLC Ukrtranstorg specializing in automobile transportations of construction and industrial freights across Ukraine and the countries of the European Union [9].

Analysis of the tax burden partial indicators of Ukrtranstorg LLC in 2018-2020 (Table 1) showed their reduction. Thus, the tax burden coefficient on income tax during 2018-2019 was 18% as provided by tax legislation. In 2020, the company had a negative financial result, which explains zero value of the tax burden on income tax in this period.

Table 1: Indicators of LLC «Ukrtranstorg» tax burden diagnostics for 2018-2020

Indicator	Years		
	2018	2019	2020
Partial tax burden coefficients on: - income tax	0.180	0.180	0.000
- other taxes and fees	0.137	0.175	0.191
Coefficient of tax payments	0.040	0.049	0.064
Tax intensity of products (goods, works, services)	0.115	0.096	0.178

The tax burden on other taxes and mandatory payments has grown steadily: from 13.7% in 2018 to 19.1% in 2020. This is largely due to the increase in the minimum wage, which led to the increase in accruals for it. Comparison of the tax burden partial indicators is not possible due to the different comparison bases used in their calculation.

The dynamics of the company's tax payment ratio, which increased every year, was also negative. This is due to the decrease in the number of cash inflows from operating activities. The dynamics of tax intensity of services in the studied period had an unstable trend and in general in 2020 increased compared to 2018.

According to the results of calculations, the dynamics of the integrated coefficient of the tax burden of LLC «Ukrtranstorg» for 2018-2020 confirms the fact of tax pressure rapid growth on the company (Table 2).

Table 2: Calculation of the integrated tax burden coefficient actual values (Ukrainian hryvnia (hrn))

Indicator	Years		
	2018	2019	2020
1. Taxes and fees, including:	294.6	365.8	356.4
- income tax, thsd. hrn.	46.9	33.2	0.0
- single social contribution, thsd. hrn.	247.7	332.6	356.4
2. Gross financial result, thsd. hrn.	2546.6	3238.0	1576.6
3. Integral tax burden ratio	0.116	0.113	0.226

The results of the integrated tax burden coefficient limit values determining are given in Table 3.

Table 3: Calculation of the tax burden integrated coefficient limit values (Ukrainian hryvnia (hrn)) [10]

Indicator	Years		
	2018	2019	2020
Taxes and fees, thsd. hrn.	294.6	365.8	356.4
Economic return on assets[1], %	0.16	0.15	0.10
Marginal profitability of sales, %	0.10	0.10	0.09
Revenue from services sales, thsd. hrn.	25520.0	32894.0	24950.3
Marginal integrated tax burden coefficient	0.118	0.115	0.162

The results of comparing the actual and critical values of the tax burden integrated coefficient of LLC «Ukrtranstorg» for 2018-2020 are evidenced by the data shown in Table 1.

Data analysis of Tables 2 and 3 testified that the company had the opportunity to finance investment costs only in 2018 and 2019, the pressure of the tax burden allowed the company to use borrowed funds to finance investment costs. And already in 2020, the source of investment activity financing was exclusively own means that considerably limits investment possibilities of the enterprise.

5 Discussion

The marginal value of the tax burden integrated coefficient is the boundary between the financing of investment activities solely from their own sources and financing, which involves borrowing. Additional opportunities for financing investment costs create the preconditions for the investment activity growth of the enterprise, and hence its investment attractiveness. The growth of investment activity due to the increase in capital investment leads to a significant increase in return on equity and economic return on assets of the enterprise, and therefore, foreign investment becomes more attractive.

Approbation confirmed the reliability of the study results, the practical use of which will allow companies to establish a system of financial management and increase the soundness of investment decisions and, consequently, create conditions for increasing financial profitability, which will increase investment attractiveness.

6 Conclusion

The article proposes an algorithm for planning sources financing investment costs of the enterprise depending on the level of tax pressure and the procedure of the limit value determining of the enterprise integrated tax burden coefficient, which establishes the boundary between own and borrowed sources of financing investment costs. The threshold value was determined using the method of financial leverage, which allowed it to set its level in accordance with the current average interest rate on loans. Comparison of the integrated tax burden coefficient with its marginal value allows to determine the possibilities of financing the enterprise investment costs: if the actual value is less than the marginal value, the enterprise has the prerequisites to borrow funds to finance investment costs; otherwise, funding should be limited to own funds.

Practical implications. The results of the study will allow companies to establish a financial management system and increase the level of the soundness of investment decisions and, as a consequence, create the preconditions for increasing financial profitability, which will increase the level of investment attractiveness of the enterprise.

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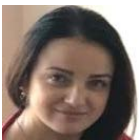
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