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Management Accounting and Analysis of the Financial Lease Effectiveness

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Abstract. The successful strategic management of organization's resources is chiefly defined by the extent of implementation of the management accounting in its operations. Management accounting data is essential for economic analysis of the factors, which are of great significance to saving resources spent on financial lease, and acquiring the maximum effect from their utilization. The article substantiates the necessity of periodic updating of analytical methods for defining the effectiveness of financial lease of long-term assets, in order to improve the accuracy of the estimations of such methods. The already existing analytical methods objectively require constant enhancements due to the increase in quality and transparency of the management analysis database. The aim of the conducted research is to create a method for analyzing the effectiveness of financial lease, based on the estimations, gathered from the current requirements of International Financial Reporting Standards. The authors of the study suggest the effect of the financial leasing agreement to be defined as the difference between the potential costs of the enterprise receiving the property when acquiring fixed assets under a financial lease agreement and the potential costs of the borrowing enterprise when acquiring property under a purchase or sale contract at the expense of a loan. Comparative effectiveness of a financial lease is offered to be defined as a ratio of the lease contract effect to the potential expenses of the recipient of the leased property.

1. Introduction

The necessity to update the key production assets of enterprises exists under any state of economy. Repurposing the production in the period of economic growth allows enhancing the performance and quality of a product, and this in its turn enables an enterprise to become more commercially valuable. The renewal of the fixed assets also allows setting the foundation for the forthcoming growth in a period of stagnation or crisis. However, selecting the right source of financing within the volatile economic environment appears to be one of the most important factors in deciding upon renewal the means of production.

Among the possible sources of financing for the fixed assets renewal are internal funds (stock issue, borrowed funds or financial lease). Economic entities usually lack the internal funds capabilities, so making the right choice of the borrowed assets is a critical task for them.

Strategic management of the organization is closely connected to the management accounting. The information used for the means of management accounting should be credible and qualitative, since management accounting data is vital for rational use of organization's available resources. Accuracy and quality of financial data used by economic entity to make a decision about borrowing funds, whether it is a credit or a lease, is strictly regulated by the set of international standards. IAS 1:

Presentation of Financial Statements, IAS 10: Events after the Reporting Period, IAS 21: The Effects of Changes in Foreign Exchange Rates, IAS 32: Financial Instruments: Presentation, IAS 37: Provisions, Contingent Liabilities and Contingent Assets, and IAS 39: Financial Instruments: Recognition and Measurement give the definition of the terms “credit” and “credit-related contingency”. IAS 39 regulates the terms of initial recognition and subsequent loans evaluation, as well as an impairment test. IAS 39: Financial Instruments: Recognition and Measurement establishes the procedure of acknowledging the interest income and defining non-market interest rate. IAS 23: Borrowing Costs describes the accounting treatment of capitalized interests for loans not connected with acquisition and construction of fixed assets, but used for these purposes in practice anyway.

Accurate elaboration of the accounting rules and reporting the data on the use of financial lease transactions sets the solid foundation for conducting analytical research in this field.

2. Analysis of the issues of selecting the type of borrowing for the means of capital funds renewal

Confrontment of justification of a loan and a financial lease is reviewed in the following works [1-5]. The influence of an operational leasing revenue on an operating revenue (before deducing the interest expense) and on the net revenue is also described in publications [6] apart from the financial lease. Perspectives and profits of using the financial lease is justified in the following publications [7-11].

The questions of practicality of the renewal of the capital assets with the help of loans is reviewed in many different publications of Russian authors. In work [12] it is explained that there is no strict recommendations for evaluation of the effectiveness of a loan. Authors offered to outline the economical effectiveness and mission effectiveness of a loan. They established that the evaluation of the economic effectiveness of a loan for an enterprise using the traditional methods is unacceptable, that’s why they have invented a proprietary technique of a loan effectiveness evaluation based on the interest margin rate with certain adjustments in the deduction. As a credit resource rate authors offer to use the banking loan price index, and as an interest yield rate – a return on equity. An interpretation of the possible results of a comparison between the profitability of capital and the price of borrowed capital is presented in case study. The received positive value means the possibility of using the remaining part of the profit for expenditure and accumulation, and a negative value indicates that the target efficiency of borrowing is not accompanied by the necessary level of economic effect.

Considerable place in the economic literature is given to the review of the conditions for the effectiveness of financial leasing. In work [13] it is shown that the loan is beneficial only for the replenishment of current assets, and it is more rational to use leases to purchase fixed assets. In work [14] a model of the investment transaction is proposed that contains the initial data under the lease agreement, settlement results, lease payments flows and loan repayment flows by the lessor. The authors also describe the possibilities of applying this model to coordinate the interests of participants in the financial lease agreement.

A large number of works are devoted to clarifying the terminology and accounting issues of financial leasing (for example, [15-17]). In work [15] the problem of definition in the accounting legislation of concepts "financial" and "operational leasing" is considered. The authors suggested ways of solving this problem through studying the genesis of concepts from the 1930s to the appearance of international financial reporting standards.

The dynamics of financial leasing accounting practice is considered in [16]. The authors analyzed the principles of accounting for servicing commercial real estate fees and found that the current practice of accounting for rental transactions is not in the interests of users.

In work [17] it is proved that by manipulating the indicators of financial statements, it is possible to create a false idea about the financial position of the enterprise. This, in turn, calls into question the effectiveness of the management decision taken on the way of financing the renewal of fixed assets. The adoption of the Sarbanes-Oxley (SOX) Act on 30.07.2002 in the United States facilitated the solution of this problem. The goal of this act was to increase the reliability of financial statements of enterprises. One of the directions regulated by this law is the existence of a model of internal control of the enterprise. The model consists of blocks that relate to all groups of business objectives of the organization: strategic, operational, reporting and legislative, and also includes an assessment of possible risks in selecting a funding source.

Work [18] presents the technique of evaluation of financial rent operations efficiency in comparison with a loan (credit). The developed methodological foundations allow to determine the most rational way of attracting borrowed funds for the acquisition of capital assets and take into account such factors as the tax consequences arising when concluding a contract and when purchasing property, inflation (deflation) and the variability of accounting for leased property.

Despite the large number of conducted analytical studies and the existence of various methods for evaluating the effectiveness of leasing operations, the developed methods require adjustments in case the company applies international standards of financial reporting. Therefore, the authors of this article have set themselves the task of presenting, in their opinion, an actual method of assessing the effectiveness of financial leasing operations, which is developed on the basis of modern normative legal acts.

3. Methodical foundation of financial rent efficiency evaluation

Upon making a managerial decision in favor of a loan or a financial lease, the authors of this article propose to determine the effect of the lease contract as the difference between the potential costs of the property-receiving enterprise when acquiring property under a financial lease (P_L) and the potential costs of the borrowing enterprise when acquiring property under a purchase-sale contract using the fund of a loan (P_C). Thus, the efficiency of leasing (E_L) is proposed to be defined as the ratio of the effect of the lease contract ($P_C – P_L$) to the potential costs of the recipient of real estate (P_L).

A choice in favor of a financial lease in comparison with a bank loan or a banking rate loan is obvious (when $P_L < P_C$ or $P_L / P_C < 1$). At the same time, there are conditions under which a financial lease seems to be less preferable then a contract borrowing ($P_L > P_C$), and, therefore, there conditions of equality of the two alternatives ($P_C = P_L$).

Potential costs of the lessee in the acquisition of property under a financial lease PL in accordance with IFRS. As a result of settling the financial lease agreement, the asset will be recorded on the lessee's balance sheet in accordance with paragraph 24 of IFRS 16 in the amount of the lease obligation and other expenses related to the lease and the obligation in accordance with paragraph 26 of IFRS 16 in the amount of the present value of the obligation to pay future rental payments [19].

The aggregate expenses incurred by the tenant on leasing will be determined by the formula

$$P_L = P(L) + \Delta P(VAT) + P(PT) – P(IT_D) – P(IT_{PL\text{-}D}) – P(IT_{PT}), \quad (1)$$

where *P (L)* is the present value of lease payments without VAT for the period of the financial leasing contract; *ΔP(VAT)* is the change in the current value of VAT payments due to changes in the timing of their payment; *P(PT)* is the discounted value of the property tax that will be paid by the organization before the asset is fully depreciated; $P(IT_D)$ is the discounted amount of income tax reduction due to depreciation of the asset during the period of its depreciation; $P(IT_{PL\text{-}D})$ is the discounted amount of income tax reduction due to the accrual of lease payments without VAT, less the amount of depreciation for the asset; $P(IT_{PT})$ is the discounted amount of income tax reduction due to property tax.

The present value of lease payments P (L) for the period of the contract is determined as the sum of the productions of lease payments without VAT over the *i*-th period in accordance with the payment schedule (L without VAT i) and the discount rate (Fdisc), which is determined by the interest rate, pledged in the lease. In the event that such a rate can not be easily determined, the lessee must use the rate of borrowing additional borrowed funds by the lessee.

Depending on the timing of the transfer of rental payments to the lessor and the payment of debts to the budget for VAT, the discount multiplier will be calculated differently. Let's give the final formula for calculating the current cost of payments for VAT, omitting the order of mathematical transformations:

$$\Delta P(VAT) = \Sigma^{j=k}[P(VAT_{p.land.})_i - P(VAT_{p.bud.})_i];$$

$$\Delta P(VAT) = \Sigma^{j=k}[VAL_{L\ mon\ i} \times F_{disc}(1 - 1/(1 \pm h)^{b'/d'})], \quad (2)$$

where $P(VAT_{p.land.})_i$ is the VAT rate paid to the lessor on the day b within the i-th number of rents, with due account to inflation (deflation); $P(VAT_{p.bud.})_i$ is the discounted amount of reduction of the lessee's VAT tax liability for the i-th month, subject to redemption on the b-th day (i + 1) -th month, by VAT amount already paid to the lessor as part of i-th rent payment; k - period of validity of the agreement, in months; j - conditional number of the current month of the financial lease agreement;

h - the average monthly inflation rate (deflation), in the number of times; $VAL_{L\ mon\ i}$ - the amount of VAT of the monthly i-th lease payment; b`- the calendar day of the month in which the amount of VAT is transferred to the budget, in days; $d$`- the number of days in the month in which the amount of VAT is transferred to the budget, in days.

After calculating all potential costs associated with the acquisition of an asset under a financial lease agreement, the economic entity will determine the real value of this contract.

Assets purchased under a contract of sale are the property of an economic entity and are recorded on the balance sheet as a fixed asset. Items of property, plant and equipment are valued at historical cost. In accordance with paragraph 16 of IAS 16 Property, plant and equipment, the initial value of property, plant and equipment includes:

a) the price of its purchase, including import duties and non-refundable purchase taxes, less trade discounts and concessions;

b) all costs that directly relate to the delivery of the asset to the intended location and bringing it into a state necessary for operation in accordance with the intentions of the organization's management.

When the asset becomes available for use, amortization begins on it (paragraph 55 of IAS 16). There are tax consequences that also need to be taken into account in the analysis, namely property tax, value added tax and changes in the taxable base for income tax.

When acquiring an asset under a contract of sale, the supplier issues to the company the amount of VAT that it can present to the deduction from the budget.

The potential costs of an enterprise for the acquisition of an asset under a purchase-sale contract at the expense of a loan will be determined by the formula:

$$P_C = P(C) - P(VAT) - P(IT_D) + P(PT) - P(IT_{PT}) - P(IT_{GR}), \quad (3)$$

where $P(C)$ is the discounted amount of payments on the loan (loan). Provided that the size of the loan or loan (excluding accrued interest) will be equal to the value of the acquired asset; $P(VAT)$ - the amount of VAT specified in the relevant tax document, taking into account inflation (deflation); $P(IT_D)$ - the amount of income tax reduction due to depreciation of the acquired asset during the period of its depreciation, taking into account inflation (deflation); $P(PT)$ - the current value of the property tax, which will be paid by the organization before the full depreciation of the acquired asset, taking into account inflation (deflation); $P(IT_{PT})$ - the discounted amount of income tax reduction due to property tax; $P(IT_{GR})$ is the amount of the reduction in the profit tax due to the attribution to expenditure of the amount of interest under the loan or credit contracts, taking into account inflation (deflation).

Interest on loans is calculated using the effective interest method in accordance with IFRS 9.

Thus, the calculation and comparison of the amounts of potential costs for the acquisition of property under a financial lease agreement and under a purchase and sale contract at the expense of a loan justify the choice of the type of borrowing as a source of financing, if it is necessary to update the fixed production assets in the event of a deficit in the company's own funds.

4. Conclusion

The result of the research is to develop a methodology for management analysis of the effectiveness of financial leasing operations based on indicators adjusted to meet the requirements of international accounting standards. At the heart of the methodology proposed by the authors is a comparison of the amounts of potential expenses of an enterprise depending on the type of borrowing: lending (loan) or lease. The lists of potential expenses are compiled in accordance with the applicable regulatory legal acts, taking into account the tax consequences of transactions and the inflation component. The choice of the source of borrowing is determined by the result of a comparison of potential costs when acquiring property under a financial lease agreement and under a purchase or sale contract at the expense of a loan. The decision is made in favor of the source of borrowing, whose potential costs will be the least. The method of management analysis developed by the authors of the article allows to achieve the main goal of accounting, that is, to make the right management decisions regarding the choice of the source of financing when updating the organization's means of production, improve the efficiency of transactions, and optimize the costs of the enterprise.

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