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Formation of the Financial Mechanism for Transfer Pricing of Industrial Corporations in the Context of Risk Management and Business Process Automation

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ABSTRACT
The article discusses the system of the impact of entrepreneurial risks and the financial result of the activities of industrial corporations / companies when they apply the transfer pricing mechanism in the context of digitalization of business processes, transparency and mobility of financial information, as well as improving the efficiency of managing integrated corporate structures. The study is based on the author's hypothesis about the correlation of the applied transfer pricing method in industrial corporations, the phase of the life cycle which they are currently at and the degree of possibility / impossibility of minimizing financial risks. In order to confirm this hypothesis, the authors developed and logically substantiated an algorithm for the search and selection of comparable companies, a financial mechanism for choosing the method of intra-group pricing in corporations. The authors also determined the functions of the company / corporation in a controlled transaction, systematized approaches to the selection of a possible transfer pricing method, and generalized the sources of information used in transactions in transfer pricing. All this allowed the authors to build a financial and economic model of transfer pricing management in corporate structures in order to minimize risks and practically test it on a group of industrial companies.
Keywords: *digital technologies, financial risk management, industrial corporations, choice of transfer pricing methods, transparency of financial information, profit generation*

1. INTRODUCTION

In the context of increasing economic uncertainty and increasing impact of the consequences of various business risks on the one hand, and the General, inevitable digitalization of all business processes on the other hand, the role of reliability and prompt receipt of financial information for the effective management of economic entities is increasing.

This problem is most acute in large corporate structures that include a group of companies, when generating and distributing profits within the group, which is typical when applying the transfer pricing mechanism and trying to minimize financial risks.

Economic risk is usually considered either as compensation for possible income due to a decision, or as a loss due to the implementation of an unsuccessful decision [1,2,3].

Over time, risk theory has undergone significant changes in the interpretation of approaches of various economic scientific schools. However, all scientists and economists agree that the risk factor accompanies any economic activity of the company, and when making management decisions, the company's management should take into account the uncertainty of the final financial result, as well as possible losses, which requires a reasonable and balanced approach in choosing investment funds, especially in long-term projects [4,5,6].

In terms of risk management and risk management mechanism in the scientific field, these studies were reflected in the scientific works of R. Cantillon, F. H. Knight, and A. Smith. The methodological approach to risk assessment was discussed in the works of G. Altman, H. Markowitz, W. Sharpe, S. I. Anufriev, O. B. Veretennikova, S. V. Vorobiev, A. A. Glukhovtseva, V. M. Granaturov, M. V. Gratcheva, O. V. Leontiev, M. S. Maramygin, L. A. Mieril, A. I. Ukolov, O. A. Farrakhova, L. A. Filippov, O. A. Firsov, G. Max Markowitz, and A. Marshall, J. Morgan, F. H. Knight, O. Renn, B. Sabanti, L. N. Tepman, K. Arrow, N. Luhmann.

Today, the economic science and practice of business entities have not developed methodological recommendations for assessing and managing business risks in industrial corporations.

In this regard, the authors were attracted to the study of the mechanism of financial risk management in industrial corporations when they apply transfer pricing methods in the course of their activities.

The relevance of the chosen topic is due to the following :
First, there is no established theoretical base in the stated field of research, in particular:

- research allows us to state the absence of a formalized methodology for identifying and assessing the level of effectiveness of financial risk management in order to minimize them when applying transfer pricing methods in corporate structures in the industrial sector;
- there are no scientific developments that systematize the tools for assessing, monitoring and managing financial risks in corporate structures in order to minimize them when applying the transfer pricing mechanism [7].

Secondly, there is no empirical base that would allow us to assess the level of effectiveness of financial risk management in order to minimize them when applying transfer pricing methods in corporate structures in the industrial sector.

2. RESEARCH METHODOLOGY

Research methodological base is built on the theory of finance, risk management and problem oriented approach, tailored to the complexity of the search for financing at all stages of the life cycle of corporations/companies.
In this study, the authors applied various methods: dialectical, deductive, cause-effect and structural-logical analysis, which allows us to organize the theoretical aspects of transfer pricing as a possible alternative source of financing for industrial corporations by mobilizing their own financial resources, as well as as a tool for managing their profits.
The author's hypothesis of the research is based on the statement about the correlation between the applied transfer pricing method in industrial corporations, the phase of the life cycle which they are currently at and the degree of possibility/impossibility of minimizing financial risks.

3. RESEARCH RESULTS

There has not been yet formed a unified scientific opinion regarding the term"corporation" [8,9]. The authors understand a corporation as a form of business organization that provides for shared ownership, legal status, and the concentration of management functions in the hands of the upper echelon of professional managers who are employed.
Features of corporate structures integration (horizontal or vertical integration) allow them to successfully apply the transfer pricing mechanism in their activities in order to minimize financial risks and more effectively manage the profit of the corporation/group of companies [10,11,12].
The most important advantage of transfer pricing is that through this mechanism, companies get a unique opportunity to win new markets by artificially lowering prices for certain goods or services [13,14]. However, it is necessary to take into account the risks that arise when setting transfer prices on the part of supervisory authorities.

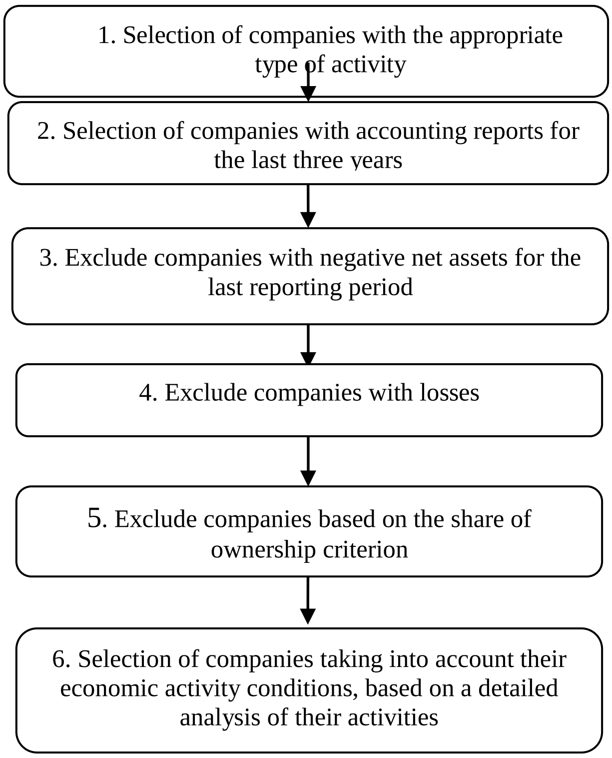

Figure 1 Algorithm for searching and selecting comparable companies (compiled by the authors)

In this regard, it is necessary to form a single transfer pricing methodology:

- taking into account all the features of the corporation's activities (including the stage of the life cycle);
- formed on the basis of common principles for the entire group of companies;
- does not contradict the current legislation and allows you to quickly and reliably justify prices at request from the fiscal authorities.

To analyze a controlled transaction, it is necessary to compare prices with the market level, so the authors have formulated an algorithm for searching and selecting comparable companies to analyze market prices (figure 1).
The author's algorithm consists of six consecutive stages.
Stage 1. It should be noted that the OKVED, as well as similar classifiers, can be used to select companies with the corresponding type of activity.
Stage 2. From the resulting selection according to p.1. it is necessary to take the company with accounting records for the last three years before the year of the transaction (setting controlled prices in it);
Step 3. Exclude from the remaining sample according to p.2. companies that have negative net assets for the last year of the analyzed period.

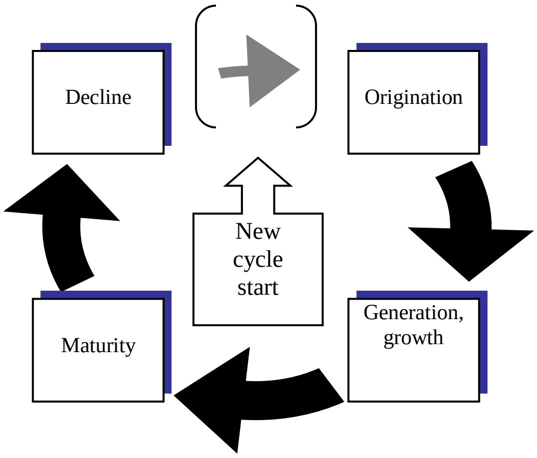

Figure 2 Stages of the life cycle of industrial corporations (compiled by the authors)

When moving from one stage to another, the corporation's financial risks change, so it is possible to change management decisions regarding the transfer pricing methods used [15].

Based on the above, the authors suggest an approach to applying methods of intra-group pricing in corporate structures in order to minimize risks depending on the stages of the life cycle of an industrial corporation and the product produced by the corporation. This approach is described in Table 1 below.

The choice of method depends on the stages of the life cycle of the industrial corporation and the product, and the methods are ranked from the most preferred to the least preferred. However, not every method can be used within the framework of the above-mentioned lifecycle/product matrix.

The product is based on a product (in General), a product (for further resale), works and services (without intangible assets) that affect the profitability of expenses, as well as works and services (with intangible assets) that affect the profitability of expenses.

Table 1 Financial mechanism choice of intra-group pricing method in corporations

Product / **Life cycle stage of a company/corporation**	**Product (in general)**	**Product (further resale)**	**Works and services (without IA) that affect the profitability of expenses)**	**Works and services (with IA that affect profitability of expenses)**
Market entry	1. Method of comparable market prices 2. Cost method	1. Subsequent sale price method 2. The method of com arable market prices 3. Cost method	1. The method of com arable market prices 2. Cost method	Not applicable
Growth phase	1. The method of comparable market prices 2. The cost method 3. The method of comparable profitability 4. Profit distribution method	1. Subsequent sale price method 2. The method of comparable market prices 3. The cost method 4. The method of comparable profitability 5. Profit distribution method	1. The method of comparable market prices 2. The cost method 3. The method of comparable profitability 4. The method of profit distribution	1. The method of comparable profitability 2. The method of profit distribution
Maturity phase	1. The method of comparable market prices 2. The cost method 3. The method of comparable profitability 4. The method of profit distribution	1. Subsequent sale price method 2. The method of comparable market prices 3. The cost method 4. The method of comparable profitability 5. Profit distribution method	1. The method of comparable market prices 2. The cost method 3. The method of comparable profitability 4. The method of profit distribution	1. The method of comparable profitability 2. The method of profit distribution
Market exit	1. The method of comparable market prices 2. The cost method	1. Subsequent sale price method 2. The method of comparable market prices 3. The cost method	1. The method of comparable market prices 2. The cost method	1. The method of comparable profitability 2. The method of profit distribution

Transfer pricing risks must be taken into account in the activities of corporations and companies that are part of it [16]. The main task of company management in this direction is to effectively manage and minimize all transfer pricing risks. You can do this as follows:

- Use current arbitration practice. It is necessary to understand that companies can confirm market prices in controlled transactions economically and legally correctly in reasonably drawn up documents. They should be prepared taking into account trends in arbitration practice and changes in national legislation [17].
- Create a unified transfer pricing methodology that will take into account all the specifics of the Corporation/company's activities (including the stage of the life cycle). It should be noted that the tax code of the Russian Federation obliges the company to justify the prices for a specific operation as part of the audit (article 105.15 of the tax code). However, there is no tax liability for failure to submit documents. However, an internal transfer pricing methodology should be formed (uniform for the entire group of companies and consistent with current legislation), which allows you to quickly and reliably justify prices in the event of a request from the fiscal authorities.
- Document the transfer pricing method. There must be a developed transfer pricing methodology that confirms the market value of prices. Therefore, in the case of claims from the regulatory authorities, they will have to first refute the validity of the chosen method, and then look for a new one and prove that it is better. However, to minimize risks, it is not enough to simply document the transfer pricing methodology. It is necessary to justify why it is better than the one that the fiscal authorities consider a priority (for example, the method of comparable market prices). If the corporation / company uses a different method, it must prove that there was no publicly available information on comparable prices at the time of the controlled transaction.
- Conduct continuous monitoring of transfer pricing risks. The corporation must periodically check documents for controlled transactions. As part of the ongoing monitoring, the essence of the transaction must be verified using information that is reflected in the transfer pricing methodology. Often, the terms of controlled transactions may change significantly during the execution process. Due to constant amendments made by the legislator, the essence of the transfer pricing methodology may become irrelevant in the tax code of the Russian Federation [18].

To minimize tax risks, such monitoring should be conducted annually before submitting a notification of controlled transactions [19]. Thus, having considered the theoretical issues of transfer pricing, determining the transfer pricing risks and determining the ways to minimize these risks, it is necessary to move to the model of financial and economic indicators that characterize the state of transfer pricing in the corporation.

The subject of management is the company of the corporation (PC - parent company or MC - managed company). Financial risks affect the subject of management, they must be identified and strategies for neutralizing threats must be developed for them. Since the corporation's company operates in the market, transfer pricing should give a competitive advantage over other competitors. The participants in the group of companies are interested in making a profit on the group as a whole, and not in obtaining a sufficient level of profit by its individual members, in connection with this they can apply any prices in transactions between themselves. In the future, profits can be distributed among the members of the group. The use of transfer pricing for these purposes is considered by the state regulator as a violation of fiscal interests.

Next, figure 3 presents the economic and financial management model of transfer pricing in corporate structures to minimize risk, which provides for financial risk management in terms of factors external and internal environment, lifecycle stage of the Corporation/company, product, possible sources of funding, which directly affects the choice of transfer pricing method, it is also based on four consecutive actions for calculating certain indicators and their value intervals and analyzing the results obtained (or adjusting the standard values if necessary).

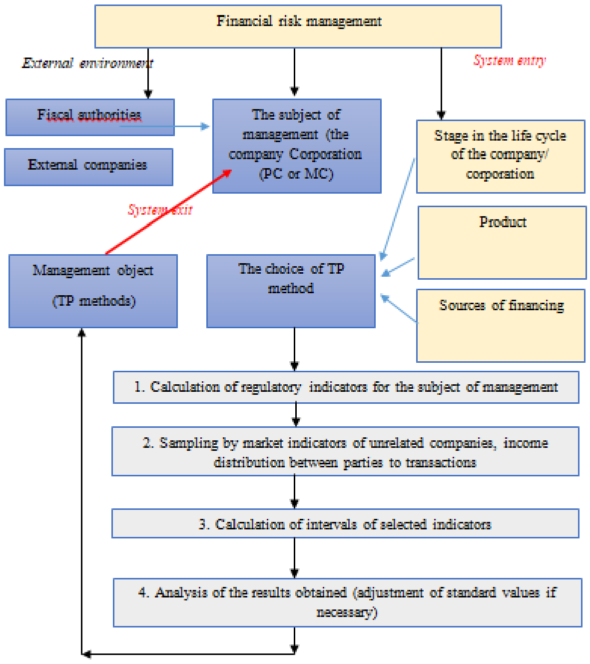

Figure 3 Financial and economic model of transfer pricing management in corporate structures in order to minimize risks (compiled by the authors)

The choice of transfer pricing method is influenced by the following factors:

- stage of the life cycle of a corporation/company;
- kind of product.

To compare the intra-group price with the market price and select the TP method, the following steps are used (figure 3):

- Calculation of regulatory indicators for the management subject;
- The construction of samples for market indicators unrelated companies, the distribution of income between the parties to the transactions;
- Calculation of intervals for selected indicators;
- Analysis of the results obtained (adjustment of standard values if necessary);
- The sources of funding.
- Based on the results of the above process, the transfer pricing method is selected, which in turn is the object of management, which affects the subject of management.

4. DISCUSSION OF RESULTS

As an example of practical application of the developed financial and economic model of transfer pricing management in corporate structures in order to minimize risks, we will consider the activities of a group of industrial companies that are part of one corporation. Let's define their functions in a controlled transaction according to Table 2.

As part of a controlled transaction, the MC sells product 1 to PC. Transactions are recognized as controlled in accordance with clause 1, clause 2, article 105.14 of the tax code of the Russian Federation, since the amount of revenue exceeds 1 billion rubles for 2019.

Table 2 Functions of a company / corporation in a controlled transaction [compiled by the authors]

Company	Function in a controlled transaction	Tax residency
PC (parent company)	Purchase of products (product 1) for the purpose of producing higher-grade goods	Russia
MC (managed company)	Production and sales of the product 1	Russia

The price of product 1 (including the cost of packaging, labeling, and delivery) from the MC to the PC is determined in accordance with the principles of market pricing. The procedure for determining the price of products in accordance with the principles of market pricing takes into account the functions and risks of the PC and the MC. Prices in a controlled transaction are set as a result of negotiations between the MC and the PC based on the actual purchase prices of the main raw materials, which are documented.

The following distribution of risks is inherent in the activities of the PC and the MC:

- Market risk. Product 1 is purchased by the PC from the MC for the production and subsequent sale of Product 2. Thus, the PC bears market risk in the event of a drop in demand for finished products or other adverse changes in macroeconomic indicators. This risk is limited for the MC due to the fact that the PC purchases a pre-agreed volume of product 1 and only indirectly depends on changes in market conditions.
- Credit risk. PC pays for product 1 within 30 calendar days from the date of shipment. At the same time, payments of the PC with buyers of products can be made on the terms of pre-payment and /or post-payment. Thus, both the PC and the MC bear limited credit risk, since they receive payment for the product after it is delivered.
- Currency risk. Payments for all products delivered under a Controlled transaction are made in rubles. At the same time, the MC's payments with suppliers of raw materials for product 1, as well as the PC's payments with buyers of final products, are made in rubles and other currencies. However, the operating currency of the PC and MC is the Russian ruble and they bear limited currency risk.
- Logistics risk. In the scope of delivery of the product 1 from the MC to the PC, the cost of transportation is included in the price of goods transported by the MC. PC assumes no logistics risk as it will not perform transportation within the controlled transaction. Thus, the MC bears the full logistical risk. The PC does not bear this risk.
- Risk associated with improper product quality. The MC bears the risk associated with improper quality of the product 1 until they are transferred to the PC. The GC accepts product 1 for quality. Due to the fact that PC then uses product 1 as one of the types of materials to manufacture of final products, in case of improper quality of the PC is responsible to final customers.
- The risk associated with the partial supply of products. The PC bears this risk in full, when the MC bears a limited risk, since the PC's risk is more significant in connection with the delivery of finished products to final customers.
- Reputational risk. The PC purchases product 1 from the MC, which is used for the production of product 2, which is then sold to final consumers. Thus, the further sales of product 2 by the PC depends on the quality of the MC's product 1 , as well as the performance by the MC of terms and conditions of delivery under the contract. Failure of the PC to fulfill its obligations to its customers may negatively affect the PC's reputation in the market, as well as lead to significant losses for both the PC and the group of companies as a whole. Thus, the PC bears this risk in full, while the MC bears a limited reputational risk.

5. CONCLUSIONS

When using the financial mechanism selection of the method of intra-group pricing in corporations , you can determine the stage of the life cycle of the MC and the PC based on the risk analysis and functional analysis, as well as the type of product – necessary for choosing the transfer pricing method.

Table 3 Approaches to selecting a possible transfer pricing method (compiled by the authors)

Name	MC	PC
Stage of the life cycle	Maturity	Growth
Product	Product in general	Product in general
Possible TP methods	1. Method of comparable market prices 2. Cost method 3. The comparable profit method 4. The profit split method 5. Subsequent sales price method	1. Subsequent sale price method 2. Method of comparable market prices 3. Cost method 4. The comparable profit method 5. The profit split method

The following information sources can be used to calculate the market level of applied prices in a controlled transaction (table 4).

Table 4 Sources of information used in the TP (compiled by the authors)

Sub-item item 1. article 105.6 of the tax code of the Russian Federation	**Information source**
1.1	stock quotes
1.2	customs statistics
1.3	official sources of information of authorized bodies
1.4	data from information and pricing agencies
1.5	information about transactions made by the taxpayer
2.1	information about prices (limits of price fluctuations) and quotations contained in published and / or publicly available publications and information systems
2.2	information on accounting (financial) and statistical reports of companies/corporations
2.3	market value of valuation items
2.4	other information

Next, it is necessary to make a choice of the transfer pricing method that can be applied or justify the impossibility of its application.

This mechanism of selection of transfer pricing methods with constant monitoring of financial risks in corporations/companies is impossible without the automation of business processes and the improvement of digital technologies in order to effectively manage their financial performance.

Thus, it is worth noting that the development of economic relations in the field of intra-group (transfer) pricing of a corporation / company must be carried out on the basis of a more complete consideration of the interests and requirements of the state, which is consistent with progressive world practice, as well as through a review of approaches to the formation of a transfer pricing methodology in accordance with with legislative changes and increased digitalization of all social and socio-economic processes in order to implement more more effective management of industrial corporations and economic growth of the state in general.

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