

## EVALUATION OF THE REGIONAL JOINT-STOCK COMPANY'S BUSINESS COST

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**Keywords:** cost of capital, market value, business, income approach, hang-the-expense approach, comparative approach, net wealth, economic value added, sectoral coefficient, method with due account to the requirements of the international accounting standards.

The present article represents and analyzes the approaches towards the capital rating of a joint-stock company: income, hang-the-expense, comparative, authoring, with due account to the requirements of the international accounting standards. There is also the focus upon their comparative characteristics together with advantages and disadvantages.

On the basis of learning the features of the regional joint-stock companies financing, the practice of capital management in them, the financial market development, there are the methods adopted for capital rating under the conditions of the regional joint-stock companies functioning.

As a result, there can be differentiated the following methods of capital rating: net wealth, economic value added which meet the requirements of the international accounting standards. The article features the well-balanced results of rating by means of mathematical weighing.

Under present-day conditions, when we face the concentration of capital, the increase of bargains about mergers and takeovers of companies and organizations, the special interest is laid upon the cost approach towards the very essence of joint-stock company's capital (JSC). By joint-stock company's (JSC) capital hereby we mean the value, advanced in to business, actualized in capital, making for it to function and capable of making profits (and/or create the necessary prerequisites for it). It is generally admitted that in theory the best measurer of capital is the indicator which is set in a strict accordance with the theoretical conception; in connection with all that, the question of its rating acquires quite an actual character.

Both in international and Russian theory and practice, they differentiate the following various approaches towards the market rating of capital which are all represented with the help of the whole range of different approaches (fig. 1).

Income approach primarily rests upon the evaluation of cost of capital by means of discounting or capitalization of one profit type which produce certain influence on its quantity of value by rate that reflects the average market profitability of alternative enterprises.

Property (hang-the-expense) approach (an approach on the basis of assets) is based upon the element-by-element evaluation of assets and the company's obligation, in plainer words, the very property which is in its possession. The essence of it is composed by the method of net

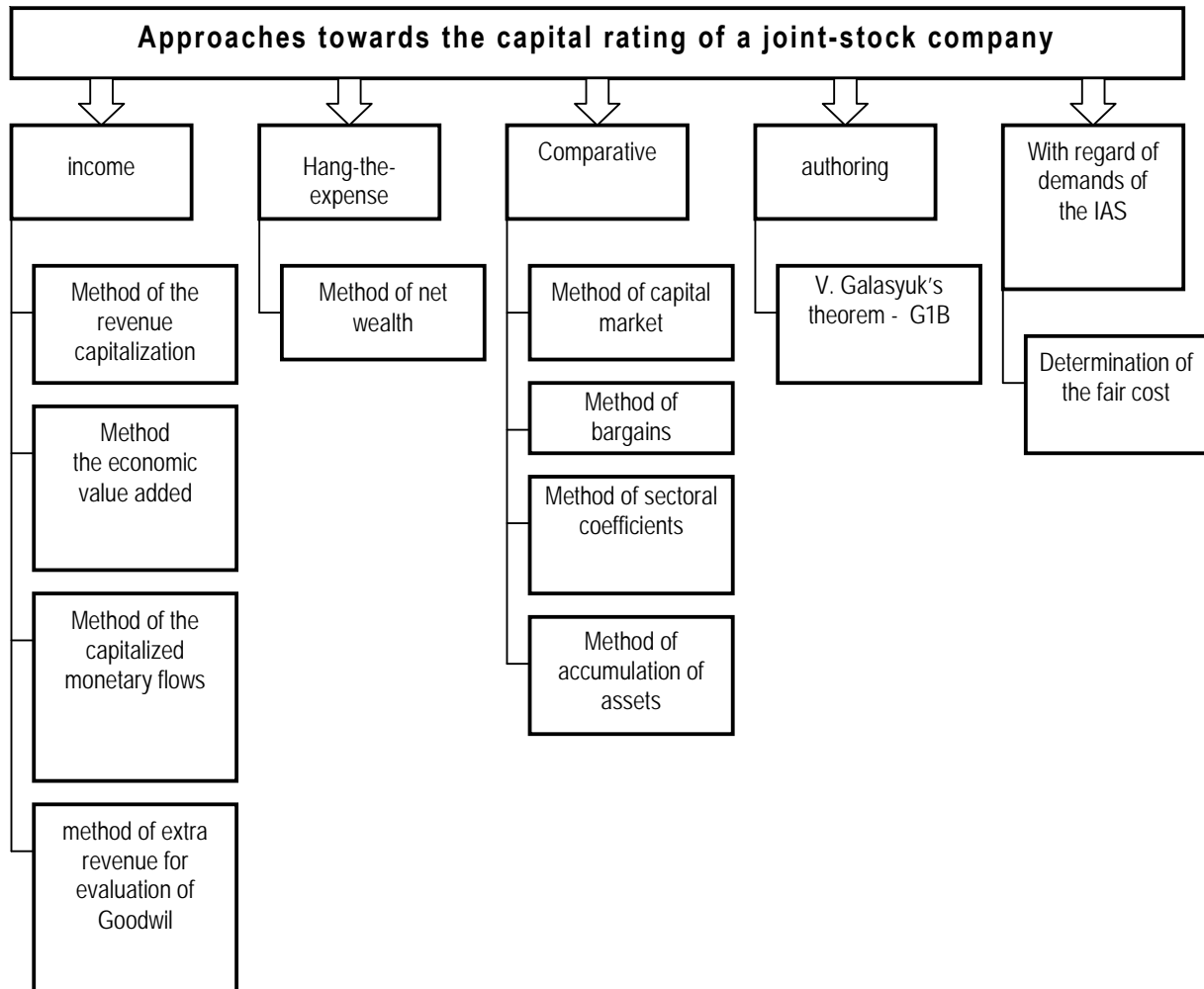
wealth. The basic idea and conception of the given method consists in reorganization of the balance sheet into the economic estimating balance.

It is worth mentioning that the nag-the-expense method reflects the earlier incurred expenses for the creation of an asset or obligation and does not take in to consideration the would-be flows which are generated by these assets and obligations.

The principally new approach towards the cost of capital evaluation can be seen from the theorem by V. Galasyuk - G1B (the concept of conditionally monetary flows): "The cost of business is determined by its immediate cost (the cost that is determined by the method of net wealth) and expectation about its immediate cost variation in future." The principally important and crucial aim of this approach is to overcome the uncertainty of expectations about the business profitability. That is the reason why the author of the theorem G1B pays special attention to the property approach, at the same time he suggests the modifications of the cost with due regard to the expectations of organization property profitability [5]. Such an approach, unlike the hang-the expense one, manages to reflect the real market situation, to much greater extent.

Comparative approach is oriented for the analysis of demand and supply which were formed at the market relative to the shares of the evaluated organization, and, like property

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**Fig. 1. Classification of approaches towards the capital rating of a joint-stock company**

approach, does not make the slightest focus upon the prospects of the evaluation object.

It is possible to evaluate the actual condition of the capital only during the process of the enterprise's functioning [6]. It seems rather reasonable to stress the fact that the underdevelopment of the securities-based regional market sets obstacles in rating the cost of the capital itself, and that is why there might appear certain necessity in adaptation of the already-existing methods of evaluation for the regional peculiarities and conditions.

The evaluation is to be done for every particular joint-stock company of the region.

Public corporation "Azot Nevinnomysk" is the largest chemical enterprise of the Russian Federation and the leading one in the South federal District, being a part of the corporation structure public corporation mineral-chemical company (MCC) "EuroKhim" - the vertical integration (Moscow). The company's shares are included in the system RTS Board, which does

not mean the public circulation in the stock market bids.

Public corporation "Pyatigorsksemlash" - is the country's largest producer of machines for the agricultural sector. Since 2006 it is a part of the concern public corporation "Concern Energomera".

Ordinary registered shares of the enterprises under the analysis are not allowed for being circulated by the trades' organizer at the stock market.

Closed joint-stock company "Khelebozavod 3" eventually refers to the food industry (production of bakery goods and floury pastries).

In order to evaluate the capital of the joint-stock companies in Stavropolsk region the following methods find possible application.

Within the frames of the hang-the-expense (property) approach the method of net wealth is the matter of vital importance. According to the Order of the Ministry of Finances and the Federal Committee for the Equity Market dated

Table 1

Figures indicating the net wealth of the regional JSC, thousands rub.

Years	PC "Azot Nevinnomysk"	PC "Pyatigorskselemash"	CJSC "Khelebozavod 3"
2001	3 879 225	181831	16166
2002	5 546 864	182469	18237
2003	5 771 184	169245	11321
2004	7 216 963	177661	13826
2005	10866182	136517	33089
2006	13 683 206	116527	34652
2007	18705824	1354	31976

29.01.2003, № 10Н/03-6/пз, named "On the Approval of the Procedure of the Joint-stock Companies net wealth evaluation", by the cost of net wealth one should understand the measure which is determined by means of subtraction of the liabilities sum from the assets holding [3].

Thus, PC "Azot Nevinnomysk" during the analyzed period of time can be marked by the step-by-step growth of the net wealth by 148265599 thousands rubles (18705824 - 3 879 225) or up more than four times.

For PC "Pyatigorskselemash" 2007 is the year of the most significant recession of the net wealth value during the last seven years, which as compared to 2006 is 115173 thousands rubles (1354 - 116527), while since 2001 is 180477 thousands rubles (1354 - 181831).

CJSC "Khelebozavod 3" witnessed the growth by 15810 thousands rubles (31976 - 16166), therefore, during the retrospective period of time there can be seen recession from 18237 thousands of rubles in 2002 to 11321 thousands of rubles in 2003.

$$EVA = (r - WACC) * K, \quad (1)$$

where  $r$  - internal norm of the capital returns.

In its turn,

$$WACC = \sum Ki * di, \quad (2)$$

where  $Ki$  - cost of  $i$ -money resource;  $di$  - share of  $i$ -money resource within the total sum.

Weighted-average cost of the capital demonstrates a minimal level of returns of the company's monetary funds for the capital invested into the activity or its profitability. In other words, it reflects the risk level which is relevant to the company's business, that is why its figure can be used as the norm for discount.

If the gap is positive, the return of the capital exceeds its alternative expenses, and as a result there is proliferation of the cost of the capital, invested in to the mentioned business, which also speaks about the advantageous situation of the evaluated company in comparison with all the rest which provide the financial market with services, and vice versa. Besides that, the figure of the value added can be properly used for evaluation of the decision that are being made. It is well worth mentioning that through

Table 2

Figures of the weighted-average cost of capital of the JSC in the region, %

Years	PC "Azot Nevinnomysk"	PC "Pyatigorskselemash"	CJSC "Khelebozavod 3"
2001	0,5	1,4	0,5
2002	2,9	4,7	-
2003	3,0	0,3	1,4
2004	1,8	0,3	-
2005	2,1	0,2	0,6
2006	2,1	0,4	0,7
2007	1,8	3,4	2,7

The above said means that the most progressive figures of the business cost, under this method, belong to PC "Azot Nevinnomysk"

Among the methods of the income approach for the evaluation of the regional JSC rating the most noticeable one is the method of the economic value added by the company Stern Stewart&Co:

the figure of the weighted-average cost of capital the setting of the connection between the capital's structure and the market value of the company can be done.

While managing the cost of capital the basic priority is laid upon the optimization of it with the help of substitution of the expensive financial recourses by the cheaper ones. For the

companies under present analysis the figure of the owned capital is the gratuitous source because they did evade the dividends to pay during the analyzed period of time. The pay-for sources are the long-term credits and lends.

For PC "Azot Nevinnomysk" in 2003-2007 the pay-for sources will be the bill payable since there can be found delays. In this case, the cost of the bill payable can be calculated by means of formula:

$$CBP = TE / ПКЗ, \quad (3)$$

where *TE* - transactional expenses in the form of penalties and fines for the overdue bill payable, rub.; *OBP* - overdue bill payable, rub.

As a consequence,

$$2003 \text{ } CBP = 6982 / 28799 = 0,242 \text{ ед.}$$

$$2004 \text{ } CBP = 5301 / 61930 = 0,086 \text{ ед.}$$

$$2005 \text{ } CBP = 4388 / 41250 = 0,106 \text{ ед.}$$

$$2006 \text{ } CBP = 2853 / 30283 = 0,094 \text{ ед.}$$

$$2007 \text{ } CBP = 972 / 5210 = 0,187 \text{ ед.}$$

The carried out calculations make it possible to state the fact of proliferation of the loan capital within the structure to increase the cost of companies. For PC "Azot Nevinnomysk" it was the case in 2003 (40,0 %), for PC "Pyatigorskselemash" (99,6 %) and CJSC "Khelebozavod 3" (66,5 %) - in 2007. By the way, since 2003 the cost of capital proliferation in PC "Azot Nevinnomysk" can be also explained and clarified by the presence of the overdue bill payable.

Following the figures of the weighted-average cost of capital one should state the fact that PC "Pyatigorskselemash" assume the largest risks, then comes CJSC "Khelebozavod 3" and PC "Azot Nevinnomysk".

The results of the calculations lead to the obvious fact that from 2004 PC "Azot Nevinnomysk" manages to make regular costs, while the figures at PC "Pyatigorskselemash" cause genuine concern and, to crown it all, CJSC "Khelebozavod 3" failed to make costs at all.

Within the frames of the income approach a special treatment is devoted to the rating of the minority shares of property. The Federal Law of the Russian Federation dated 29.07.1998 "The Valuation Activity in the Russian Federation" ensures the necessity to evaluate the right of property and other laws of property or certain good of the whole property [1].

Taking into profound consideration the condition and peculiarities in Russia, it is necessary to evaluate the buyer's financial status, which will surely to accelerate capitalization with the help of attraction of the real but not fictional investments and promote the openness of rights of property for the authorized capitals of joint-stock companies.

As a rule, identification of such schemes can be carried out by means of the detailed analysis of the JSC's founders and their financial status. Thus, for that very purpose it is essential to learn the structure of their capital and make sure that its constituents, namely, revenue and contributions of founders and some third parties, had really been obtained, that they correspond to the actual form of business of certain commercial organization and are not encumbered with any kind of debts or obligations. The point of actual and future stability of capital is of utmost importance. If it is necessary, one can perform the analysis of the JSC founders' financial activities in order to find out the economic essence of the resources which had been previously invested by them in to capital of its founders. The analysis of the JSC shareholders financial status comes as one of the most efficient approaches towards the capital management. All the above mentioned facts and proposals suggest that it is necessary to develop the methods of evaluation of the JSC founders' financial status.

The Russia's enterprises and organizations adoption of the IAS precondition the necessity

Table 4

Figures of the cost of regional JSC capital by method of the economic value added, mln. rub.

Years	PC "Azot Nevinnomysk"	PC "Pyatigorskselemash"	CJSC "Khelebozavod 3"
2001	+33629	+ 88	+ 471
2002	- 58730	- 1258	+ 419
2003	- 24061	- 1550	- 571
2004	+103751	- 83	+ 497
2005	+ 327830	+ 59	+ 2020
2006	+ 240103	- 6276	+ 938
2007	+ 462763	- 2147	- 57

to reflect all the assets of an enterprise according to their market value. In accordance with the Russian standards of accounting, figures of owned and loaned capital are no way compared. The loaned capital is to be evaluated in the prices closely similar to the market ones, while the owned capital is to be reflected by the prices, lower than these at the market. This means that in connection with the lowered rating of the JSC owned capital its cost finds artificial increase. In order to ensure the compatibility of the owned capital and its cost rating the figure of its own part should find an expression in the actual market evaluation.

This very approach also finds support from state organs of government, which is reflected by the methodical recommendations on development of financial policy of a certain organization that are approved by the Order of the Ministry of Economy of the RF dated 01.10.1997 № 118 "On approval of the methodical recommendations for reforms of enterprises (organizations)" where there is an emphasis upon the fact that the market evaluation shall increase the size of the authorized capital of JSCs and, as a consequence, shall significantly strengthen

Inflation of the owned capital figures ( $K_u$ ) is calculated by means of the following formula:

$$K_u = (AC + R + NI + CS) * I_{infl} \quad (4)$$

where  $AC$  - authorized capital of organization, thousands rubles;  $R$  - reserves, thousands rubles.;  $NI$  - net income and the funds formed by means of it, thousands;  $CS$  - capital surplus, thousands rubles;  $I_{infl}$  - index of inflation (according to the Federal Agency of State Statistics of the RF).

The calculations are relevant for 2007.

PC "Azot Nevinnomyssk":  $(3436 + 515 + 14517225 + 4184259) * 1,027 = 19210481$  thousands rubles.

PC "Pyatigorskselemash":  $(912 + 46 + (-34592) + 34988) * 1,027 = 1391$  thousands rubles.

CJSC "Khelebozavod 3":  $(4013 + 201 + 27762) * 1,027 = 32839$  thousands rubles.

In order to define the degree of influence of the inflation level upon the capital we need to calculate the quantity of the monetary losses caused by the inflation devaluation (Table 5).

The results of the calculations show and prove that the level of inflation produce a considerable influence upon the size of capital.

Applying the capital ratings with the wide usage of means of inflation shall improve it ad-

Table 5

**Comparison between book value and market value of the regional JSC owned capital, thousands rubles**

Figures	PC "Azot Nevinnomyssk"	PC "Pyatigorskselemash"	CJSC "Khelebozavod 3"
1. Book value of the owned capital	18705435	1354	31976
2. Value based on means of the market rating and evaluation	19210481	1391	32839
3. Monetary losses	- 505046	- 37	- 863

the minimal guarantees of meeting the creditors' probable requirements, which in its successive turn, shall become the essential basis for solid and firm relationships between organizations [2].

In order to carry out the market evaluation of the owned capital one can use the method of inflation (according to the IAS clause 29 "Financial Statements under the conditions of hyperinflation"). The very essence of it is the adjustment of non-monetary items (authorized capital, savings in funds, additional paid-in capital, undistributed revenue from the previous years, revenue of the current year) of the owned capital, which is all based upon the index of inflation predicted by sociological or governmental bodies and organizations.

equateness for all the participants of the market. The users and investors will give a possibility to estimate the reliability of the JSC, while the organization in its turn will be able to pay attention to the real security from bankruptcy risks. Such a rating might acquire a special urgency when it comes to the conditions of the market discipline rise. The mechanism of the given rating shall be reflected in the document "The Policy of Management of The organization's Financial Resources". The market rating of the owned capital may be included as a constituent element in the scenario which is aimed at prevention of bankruptcy and stabilization of the organization's financial status.

Within the frames of the comparative approach for the regional JSCs the method of the



**Table 6**  
**Values of the regional JSC capital, calculated with the usage of the IAS**

JSC	Values, millions rubles
1. PC "Azot Nevinnomysk"	22647
2. PC "Pyatigorskselemash"	383
3. CJSC "Khelebozavod 3"	96

sectoral coefficients is more appropriate and acceptable. The basic requirement for the coefficients of comparison is compatibility and comparability between each other according to the size and orientation. This method will bear an auxiliary character, as a supplement to the above described one.

In order to carry out a sort of a comparison let us choose the figures which characterize the level of the JSC capitalization, and so, meet the notion of cost:

*POC* - profitability of the owned capital;

*Coef.* - coefficient of the stock capitalization;

*Cc* - coefficient of the constant capital (portion of the share capital and long-term credits and loans within the overall volume of capital);

*M* - multiplier of capital;

*Cd* - coefficient of debt.

The system of figures are tabulated into the table 7

ures: *POC*, coefficient of the stock capitalization, coefficient of debt, and as a result, does not take an opportunity to increase it either.

It is worth mentioning that the analyzed methods are static in time, while making predictions it is rather reasonable to apply the method of the discount monetary flows.

On the basis of the afore-stated facts, one can draw a conclusion that the received figures on every method differ, which, in the first place, is preconditioned by different volume of the given data. That is why, it is necessary to coordinate the results of estimation and rating, which can be achieved in practice by means of mathematical weighing.

Mathematical weighing suggests that the value of every method, used for cost evaluation, should be estimated by expertise, in other words, by determination of the coefficient of significance. Following the results of the procession, one should calculate the mathematical quantity which characterizes the specific weight of each of methods within the final quantity of cost. The cost, derived by using this or that method, shall be multiplied by the calculated value of the coefficient of significance. The total value of the cost is to be regarded as the weighted-average quantity of all the values, derived by different methods (table 8).

**Table 7**  
**Determination of the regional JSC capital cost by method of comparison in 2007**

Types of activities and organizations	Essence of figures				
	<i>POC</i> , %	<i>Coef.</i> , units.	<i>Cc.</i> , %	<i>M</i> , units.	<i>Cd.</i> , %
Chemical and petrochemical industries	76,8	101,174	7,9	1,318	31,8
PC "Azot Nevinnomysk"	26,8	5444,0	2,1	1,184	18,4
Mechanical engineering	-14,5	1,443	55,3	3,254	225,4
PC "Pyatigorskselemash"	- 626,2	1,485	89,3	283,2	28219,9
Food industry (bakery goods and floury pastries)	75,5	25,480	5,0	2,079	107,9
CJSC "Khelebozavod 3"	6,2	7,698	33,5	2,987	198,7

The calculations that had been carried out show and prove that PC "Azot Nevinnomysk", following all the coefficients of comparison, pursues a less risky policy of the capital cost formation than, in general, the enterprises belonging to the chemical and petrochemical industry, and hence does not take an opportunity to increase it. The business that is performed by PC "Pyatigorskselemash", on the contrary, is more risky for shareholders, investors and creditors of the organization. CJSC "Khelebozavod 3" falls behind its industry by the following fig-

For the regional JSC capital cost, taking into consideration the significance of the market value, the biggest specific weight can be ascribed to the method with the usage of elements of the market evaluation - 0,5, then comes, in terms of capital's economic essence, the method of the economic value added - 0,4, and the method of net wealth acquires the significance - 0,1.

According to the done calculations, the capital cost of the PC "Azot Nevinnomysk" will reach 198300 millions rubles, of the CJSC

Table 8

Results of the regional JSC capital evaluation

Approaches(methods)	Value of capital, millions rubles.	Weighting coefficient	Coordinated value, millions rubles
PC "Azot Nevinnomysk"			
1. Hang-the-expense (net wealth)	18706	0,1	1871
2. Income (economic value added)	+ 462763	0,4	185105
3. With regard of demands of the IAS	22647	0,5	11324
4. Total		1	198300
PC "Pyatigorskselemash"			
1. Hang-the-expense (net wealth)	1,4	0,1	0,14
2. Income (economic value added)	- 2147	0,4	- 859
3. With regard of demands of the IAS	383	0,5	192
4. Total		1	- 667
CJSC "Khelebozavod 3"			
1. Hang-the-expense (net wealth)	32	0,1	3,2
2. Income (economic value added)	- 57	0,4	- 23
3. With regard of demands of the IAS	96	0,5	48
4. Total		1	28

"Khelebozavod 3" - 28 millions rubles, of the PC "Pyatigorskselemash" will have to create the cost.

All in all, the article highlights the adoption of the methods of the capital cost evaluation for the given conditions of the regional JSC functioning.

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