

Current issues of optimal capital structure based on forecasting financial performance of the company

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Abstract. This article describes the ways of improving capital structure, results of cash flows redistribution at the enterprise. The paper proposes a complex procedure for optimizing capital structure based on reducing weighted average cost of capital (WACC) and increasing return on equity (ROE). Forecasting methods can be used for assessing financial state of the company and for planning process with the view to improve the performance of the company in the coming period, taking into account all factors affecting the final result.

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Introduction

Various approaches and principles of forming economically rational capital structure are considered in economic literature. However, in most cases, they are limited because of their dependence on one specific criterion: in one instance, it is maximization of the level of projected financial return, in another case it is minimization of the capital cost and thirdly it is minimization of financial risk [1, 2, 3]. Using a one-sided approach to the choice of funding sources does not lead to an optimal capital structure, which adversely affects the economic performance of an enterprise.

Due to this fact, we propose an approach that takes into account at least two principles simultaneously - minimizing the cost of capital and maximizing return on capital (ROC). First and foremost, it is necessary to make a preliminary assessment of possible capital structure of a given enterprise and the conditions of implementation for each structural option. Thereafter, we calculate the weighted average cost of capital (WACC), return on equity (ROE) and construct a graph using them for each of the options. The graph shows the values of WACC and ROE for each option of the capital structure.

The (of optimal capital structure for meat processing industry were touched upon in the papers of Babenko I.V., Hartmann M., Schornberg S., who analyzed the development trend of the industry [1, 3, 4, 5]. At the same time the problem of predicting these processes has not been solved yet. In order to find the answer we have studied the publications of Mukhtar N., Khan S.H., Khan R.N., Ali J., Konstantinidis C., Mattas K., Katrakilidis C., Drakos P., who researched the (of forecasting company's

financials, as well as their impact on the enterprise competitiveness [6, 7, 8, 9].

General

One of the areas for improving financial condition and increasing the value of an enterprise is to optimize the effectiveness of capital structure. The capital structure is considered effective, when the ratio of debt and equity provides the optimal proportion between return on capital and cost of capital from the standpoint of increasing market value of an enterprise and ensuring its financial soundness [10, 11, 12].

Analysis of the financial activity of meat-processing industry showed the formation of irrational capital structure, as evidenced by the financial leverage ratio (Table 1).

Table 1. Dynamics of changes in financial leverage ratio for enterprises of meat processing industry of the Republic of Tatarstan

Enterprise name	2008	2009	2010	2011	2012
JSC (Joint Stock Company) "Kazan meat-processing plant"	2,04	2,67	3,2	4,34	4,32
JSC "Sviyazhsk meat-processing plant"	13,68	17,09	11,69	12,97	24,19
JSC "Shemordan meat-processing plant"	0,21	0,14	0,18	0,25	0,23

In the capital structure of JSC "Kazan Meat-Processing Plant" and JSC "Sviyazhsk Meat-processing plant" there is a big weight of equity, while in the structure of "Shemordan meat-processing plant" there is a big weight of debt. Since the optimum leverage ratio equals to one, none of the

enterprises meets this condition. This can be seen from Table 1.

Table 2 shows initial and calculated data for the selection of optimal capital structure for "Sviazhsk meat-processing plant" in 2012 from the standpoint of minimizing the WACC and increasing ROC.

The dynamics of these indicators is shown in Figure 1, which includes the graph illustrating the dynamics of change in the WACC and ROE, depending on its structure, expressed in terms of financial leverage ratio.

Table 2. Options for the formation of capital structure for JSC "Sviazhsk meat-processing plant"

Indicators	Options for the formation of capital structure								
	I	II	III	IV	V	VI	VII	VIII	IX
Total capital, RUB, thous.	42793	42793	42793	42793	42793	42793	42793	42793	42793
Equity, RUB, thous.	1953	4513	6363	10233	18153	24453	30153	39420	41593
Borrowed capital, RUB, thous.	40840	38280	36430	32560	24640	18340	12640	3373	1200
Financial leverage ratio	20,91	8,48	5,73	3,18	1,36	0,75	0,42	0,09	0,03
Debt ratio	0,95	0,89	0,85	0,76	0,58	0,43	0,30	0,08	0,03
Equity ratio	0,05	0,11	0,15	0,24	0,42	0,57	0,70	0,92	0,97
Weighted average cost of capital (WACC)	17,63	16,21	15,11	14,04	12,73	12,14	12,30	12,46	12,97
Weighted average cost of capital /%	3,53	3,24	3,02	2,81	2,55	2,43	2,46	2,49	2,59
Net profit, RUB, thous.	6000	6000	6000	6000	6000	6000	6000	6000	6000
Return on equity (ROE)	3,07	1,33	0,94	0,59	0,33	0,25	0,20	0,15	0,14

According to Figure 1, if the financial leverage ratio is close to zero, the company finances its activities only at its own expense, WACC is high, and ROE, on the contrary, is low, which is certainly a negative indicator of the company financial condition. Currently, the share of borrowed capital in the capital structure of the enterprise is only 8 %, while return on equity is 0.15. Moreover, for the period of 2008-2012, according to the balance sheet of "Sviazhsk meat-processing plant", its equity has increased by 39 %.

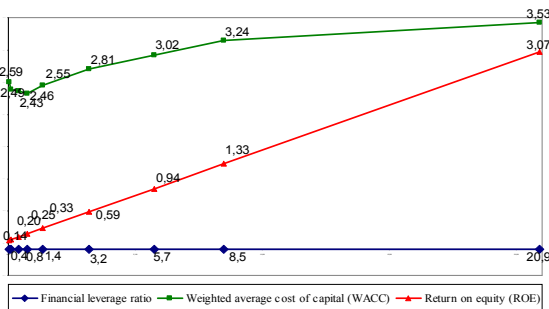


Fig.1. Dynamics of changes in the ratios of capital structure for "Sviazhsk meat-processing plant"

With the advent of borrowed funds in the capital structure financial position of the enterprise is changing for the better: with the increased ratio of borrowed capital WACC begins to decline, and ROE increases. The graph clearly defines the descending trend of WACC of the enterprise and at the same time the ascending trend of ROE. This suggests that during the period the increase in borrowed capital will produce a positive effect. It is expressed in increased market value of the company as long as financial soundness is maintained.

According to our proposed comprehensive methodology for optimizing capital structure, which simultaneously satisfies two principles (reduces WACC and increases return on capital), the obtained results will be the basis for a decision on the formation of an optimal capital structure, enabling to consider the possibility of increasing debt ratio at JSC "Sviazhsk meat-processing plant" to 43%.

Similar calculations were performed for JSC "Kazan Meat-Processing Plant" and JSC "Shemordan meat processing plant". The results of forming optimal capital structure are given in Table 3. According to Table 3, the activity of "Shemordan meat-processing plant" is significantly associated with borrowed capital.

Table 3. Formation of capital structure JSC "Shemordan meat-processing plant" and JSC "Kazan meat-processing plant" (data for 2012)

Indicators	Option of forming capital structure								
	I	II	III	IV	V	VI	VII	VIII	
	1	2	3	4	5	6	7	8	9
JSC "Shemordan meat-processing plant"									
Total capital, RUB, thous.	134273	134273	134273	134273	134273	134273	134273	134273	
Equity, RUB, thous.	3713	19575	53513	71933	89273	93023	104273	106673	
Borrowed capital, RUB, thous.	128560	114698	80760	62340	45000	41250	30000	27600	
Financial leverage ratio	22,50	8,86	1,51	0,87	0,50	0,44	0,29	0,26	
Debt ratio	0,96	0,85	0,60	0,46	0,34	0,31	0,22	0,21	
Equity ratio	0,04	0,15	0,40	0,54	0,66	0,69	0,78	0,79	
Weighted average cost of capital (WACC)	17,66	15,98	13,61	12,59	12,17	12,27	12,34	12,60	
Net profit, RUB, thous.	376	376	376	376	376	376	376	376	
Return on equity (ROE)	0,0058	0,0192	0,0070	0,0052	0,0042	0,0040	0,0036	0,0035	
JSC "Kazan meat-processing plant"									
Total capital, RUB, thous.	248135	248135	248135	248135	248135	248135	248135	248135	
Equity, RUB, thous.	37575	107275	138192	168135	184135	205795	222405	235375	
Amount of borrowed capital, RUB, thous.	210560	140860	109943	80000	64000	42340	25730	12860	
Financial leverage ratio	5,60	1,31	0,80	0,48	0,35	0,21	0,12	0,05	
Debt ratio	0,85	0,57	0,44	0,32	0,26	0,17	0,10	0,05	
Equity ratio	0,15	0,43	0,56	0,68	0,74	0,83	0,90	0,95	
Weighted average cost of capital (WACC)	16,64	13,54	11,89	11,77	11,79	11,93	12,55	12,95	
Net profit, RUB, thous.	5671	5671	5671	5671	5671	5671	5671	5671	
Return on equity (ROE)	0,1509	0,0529	0,0410	0,0437	0,0408	0,0276	0,0255	0,0241	

Borrowed capital increases ROE, but given the financial risks of the enterprise, it can lead to financial uncertainty [13, 14, 15]. Therefore, in accordance with the proposed approach of the optimal capital structure, which satisfies the

condition of reduced WACC and increased ROC for JSC "Shemordan meat-processing plant" it is recommended to increase the proportion of equity to 66%, and to reduce the level of borrowed capital to 34% with the view to improve financial state and value of the enterprise.

Analysis of JSC "Kazan meat-processing plant" performance shows that currently the company is meeting the condition recommended by financial analysts, where the approximate ratio of debt to equity is 1:1. However, analysis of the financial state of these companies according to the proposed approach in order to increase their market value allowed to form the following capital structure: 68% of equity and 32% of debt capital.

Conclusion

The optimal capital structure in the long term ensures the financial soundness of an enterprise, maximizes return on capital, minimizes financial risks. All activities aimed at optimizing the capital structure will result in improved financial performance, increased enterprise value and, correspondingly, increased integrated indicator of financial efficiency [16, 17].

Cash inflow is one of the basic conditions for ensuring financial soundness of an enterprise, enabling it to make all preferential payments. Lack of minimum spare cash is the evidence of serious financial difficulties of analyzed enterprises. The prerequisite of financial problems is a tendency to reduce the working capital of the company with the increasing amount of its current liabilities. Therefore, the problem of optimizing cash flow is an important (to be solved in the process of improving working capital management. As it is known, the change in cash flows is directly affected by changes in equity, liabilities and fixed assets.

In order to identify the ways of optimizing cash management we have changed some initial data (increased equity and reduced fixed assets) and calculated specific indicators to determine the effect of each on the level of cash flows, and, respectively on the level of financial soundness.

The results of prediction calculations in the changes of cash flows for 2015 considering measures for their optimization are presented in Table 4.

Table 4. Results of cash flow optimization for the analyzed companies for 2015

Indicators	JSC "Sviyazhsk meat-processing plant"		JSC "Shemordan meat-processing plant"		JSC "Kazan meat-processing plant"	
	actual	optimal	actual	optimal	actual	optimal
Changes in equity RUB thous	-603	-1570	8868	78566	1402	29943
Changes in fixed assets, RUB thous	2114	2008,3	52659	50026	12179	11570
Changes in liabilities, RUB thous	1031	15998	36792	-32906	25905	-2038
Changes in cash, RUB thous	-1686	-1580,3	-6999	-4366	15128	16335
Increase in cash due to optimization, %	6,6		60,3		7,9	

Table 4 shows that the capital structure optimization, as well as change in the value of fixed assets will lead to improvements in cash flow for the analyzed companies and will have a positive impact on their solvency.

Thus, improvement of the economic efficiency of an enterprise requires an integrated approach based on the results of the financial analysis that will greatly improve financial soundness and overall economic performance of the enterprises.

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