

Industrialization as a factor of external conjuncture and internal environment influence on financial stability of non-ferrous metals companies

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Abstract – The subject of the present study is the financial soundness of metallurgical enterprises during the period of Russia's industrial development. The aim of the present study is to compare the financial data of enterprises operating in the Russian Federation metallurgical industry, to identify existing problems, and to propose innovative solutions to improve performance. The study employs statistical, comparative and systemic analyses, as well as synthesis and forecasting.

The outline of the study:

1. Applying financial ratios, the authors analysed financial stability of JSC Uralkatromed – one of the leading copper refineries and PJSC Nor Nickel Mining Company – Russia's leading metals and mining company.

2. As the result of this study, conclusions on current financial health of two leading Russian companies operating in non-ferrous metals industry were made.

The main study findings: 1. The financial health of companies operating in non-ferrous metals industry in 2016-2017 was demonstrating a declining trend because of the increased share of borrowed funds in the capital structure. 2. Although the financial stability of the companies studied was declining, they both reported profits. 3. Financial Ratios were used to carry out a comprehensive analysis of companies' financial health and a three component model was applied to evaluate the degree of financial stability.

Keywords - regional economy, rapid development, innovation, industrial potential, financial stability, metallurgical industry, non-ferrous industry.

I. INTRODUCTION

Currently, Ural Federal District focuses on industrialisation as the key strategy for economic development in non-ferrous metals industry [1, 2]. In fact, the industry is

fundamental for the whole Russian Federation, of great economic importance and, thus, strategically influential for the country's economic development. Copper production is the leading sector in non-ferrous metals industry, which belongs to heavy industry. Copper is a material of choice for a great number of domestic, industrial, and high-technology applications, so the volume of copper exports is significant. At present, copper production plays a significant role in the national economy of the Russian Federation, which is the reason why the present study is important.

The decrease in copper and copper alloys production in the People's Republic of China, caused by the country's attempts to improve environment and reduce damage to the ecology, on the one hand, and the increase in the number of electric cars and planes designs, on the other hand, will attract greater attention to non-ferrous metals industry. Therefore, Russian non-ferrous metals industry is likely to become a world leader in alloys and non-ferrous metals production.

II. THEORY AND METHODS

As both the Russian Federation and Ural Federal District heavily depend on the non-ferrous metal industry, there is an evident interest to a comprehensive study of this industrial sector as it remains its leadership all over Russia.

On the one hand, companies operating in non-ferrous metals industry largely influenced by the activity of other primary are commodity market participants and external competition volatility.

On the other hand, for production companies operating in non-ferrous metals sector, internal environment is of significant importance as their manufacturing conditions have

a large impact on pricing as well. In addition to external competition and manufacturing conditions, a political factor should be taken into account. Recently, the volume of certain non-ferrous metals export has decreased due to the restrictions and sanctions placed on Russian companies, and the prices of raw materials and alloys have been affected. Although, the direct negative impact of sanctions on Russia's production and export of finished non-ferrous metal products and their alloys is questionable, since Russia as well as some other countries impose extra taxes on imports of finished non-ferrous metal products in order to protect domestic producers.

Large production volumes of metallurgical companies indicate that non-ferrous metals are in great demand in the world market. Thus, in an optimistic scenario, a period of relative stability and an increase in price of non-ferrous metals can be expected.

However, a pessimistic scenario is also likely, as the increasing demand for non-ferrous scrap can lead to price volatility and price reductions. Since non-ferrous metals and their alloys are widely used in different industries, the raw materials prices are largely dependent on the non-ferrous scrap prices. The price rate of change will depend on the stage of the economic in-country cycle, i.e. a growth or a decline in country's production volumes.

Naturally, domestic consumers have the greatest influence on the cost of non-ferrous scrap; however, the price of secondary raw materials depends on external factors as well, with the ruble exchange rate to key currencies being one of the factors. The exchange rate has an important influence on the price level because it represents the link between domestic prices on non-ferrous metals and their alloys and foreign prices. When domestic prices in rubles are calculated in dollars or euros, they match international prices on copper. As a result, even when the prices of non-ferrous scrap in world markets remain stable, the prices in rubles can demonstrate either a sharp decline or rise due to revaluation or devaluation of national Russian currency.

III. PRACTICAL ANALYSIS

PJSC Nor Nickel Mining Company, JSC Uralektromed and The Russian Copper Company are current three largest copper producers and exporters in the Russian Federation. Their market shares in Russian copper production are shown in Table 1.

TABLE 1. THE MARKET SHARES OF THE LARGEST RUSSIAN COPPER PRODUCERS IN THE PERIOD FROM 2015 TO 2017, IN % [3]

№	Company	2015	2016	2017
1	PJSC Nor Nickel Mining Company	40.7	41	41
2	JSC Uralektromed	43.7	40	40
3	The Russian Copper Company	15.6	19	19
4	Total	100	100	100

As shown in Table 1, PJSC Nor Nickel Mining Company dominated the market in 2017 with the total copper production volume of 41%, closely followed by JSC Uralektromed with the total copper production volume of 40%, and, finally, The Russian Copper Company accounted for the remaining 19 %.

Large enterprises of the industry studied disclose data on their financial and non-financial capitals in integrated reports [5]. However, recently a number of companies have moved their headquarters offshore in order to benefit from advantages offered there, i.e. tax reasons, reduced costs. Since public disclosure of data on financial and non-financial capitals is not compulsory for companies incorporated offshore, no data on their performance is available and it becomes impossible to examine their financial activities.

The Russian Copper Company operates as a holding company and is now headquartered in British Virgin Island. The company's operational assets are located in Sverdlovsk Region, Chelyabinsk Region, Orenburg Region, Novgorod Region and Kazakhstan. As The Russian Copper Company does not disclose its financial data, it is impossible to analyse its financial health in the present study. Therefore, the authors examined only two leading Russian non-ferrous metal production companies, JSC Uralektromed and PJSC Nor Nickel.

Given that net profit plays an important role in ratio analysis and financial statement analysis and is a measure of the profitability of a venture, we opted for comparing net and gross profit and loss (data is presented in table 2).

TABLE 2. NET AND GROSS PROFIT AND LOSS COMPARISON DATA FOR THE PERIOD FROM 2015 TO 2017, IN THOUSANDS RUBLES [6,7]

Indicator	2013	2014	2015	2016	2017	Increase, %				
						2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016	
<i>JSC Uralektromed</i>										
Gross Profit (Loss)	326297	6752	4784765	2671619	1988226	-97.9	70764.4	-44.2	-25.6	
Net Profit (Loss)	-149780	-105400	2842810	2173672	1299676	-29.6	2797.2	-23.5	-40.2	
<i>PJSC Nor Nickel Mining Company</i>										
Gross Profit (Loss)	122922329	195932541	242945904	218791006	232911638	59.4	24.0	-9.9	6.5	
Net Profit (Loss)	76540686	34056538	146212750	122770291	130038748	-55.5	329.3	-16.0	5.9	

As shown in Table 2, there was a sharp increase of net profit and gross profit in 2015 compared to 2014. This increase is explained by a significant rise in copper production under the government defense order.

In 2016, net profit of JSC Uralektromed decreased by 23.5%, and in 2017, the decrease accounted for 40.2%.

Moreover, the significant amount of accounts receivable in the capital structure led to a noticeable reduction in profit. In 2017, net profit of PJSC Nornickel Mining Company demonstrated positive dynamics and grew by 5.9%.

To examine financial health of the companies, evaluate companies' capital structure and identify their compliance with the standards, we chose to use several financial ratios in our analysis. The present study covers the period from 2013 to 2017 inclusive, thus, it provides comprehensive research data.

TABLE 3. THE COMPARATIVE ANALYSIS OF THE COMPANIES' FINANCIAL HEALTH FOR THE PERIOD FROM 2013 TO 2017 [9,10]

Financial Ratio	2013	2014	2015	2016	2017
<i>JSC Uralektromed</i>					
Long and Short- Term Debt to Capital Ratio	0.15	0.23	0.20	0.25	0.32
Working Capital To Working Assets Ratio	0.56	0.45	0.44	0.24	-0.04
Equity To Total Assets Ratio	0.81	0.75	0.76	0.72	0.67
Equity To Debt Ratio	6.89	4.34	4.92	3.98	3.11
Equity Plus Long-Term Debt To Total Assets Ratio	0.93	0.88	0.86	0.79	0.81
<i>JSC Nornickel Mining Company</i>					
Long and Short- Term Debt to Capital Ratio	0.73	1.61	3.72	3.26	2.58
Working Capital To Working Assets Ratio	-0.83	-0.90	-0.72	-1.30	-1.86
Equity To Total Assets Ratio	0.58	0.38	0.21	0.23	0.28
Equity To Debt Ratio	1.37	0.62	0.27	0.31	0.39
Equity Plus Long-Term Debt To Total Assets Ratio	0.85	0.88	0.78	0.77	0.85

Let us now examine the data obtained during the comparative analysis in order to properly evaluate financial health of the companies studied.

First, in the period studied, Long and Short-Term Debt to Capital Ratio of JSC Uralektromed does not meet the required value (the required value is 1); although, there is a slight increase in the value by 0.17 for the period of 5 years which can be explained by higher usage of borrowed capital.

Increased Long and Short-Term Debt to Capital Ratio of PJSC Nornickel Mining Company for the same period is also explained by higher usage of borrowed capital.

In 2017, JSC Uralektromed accumulated more fixed assets which resulted in the decrease in Working Capital to Working Assets Ratio with the value falling to as low as -0.04

and going beyond the required value of 0.1. The negative trend is evident throughout the period studied.

Working Capital to Working Assets Ratio of PJSC Nornickel Mining Company demonstrated the negative trend throughout the period studied. The decrease in Working Capital to Working Assets Ratio can be explained by the increase in the amount of fixed assets and the decrease in equity.

Equity to Total assets ratios of the companies studied meet the required value of <0.8 which confirms the adequate financing of current production activities.

Equity to Debt Ratio of JSC Uralektromed exceeds the required value and, in 2013, it reached the highest point of 6.89. On the other hand, in 2017, Equity to Debt Ratio equaled to 3.11 which is twice as little as the value of the pre-crisis period. This was caused by the increase in the number of long-term funding sources.

As for PJSC Nornickel Mining Company, its Equity to Debt Ratio did not meet the required value and demonstrated a downward trend.

For the period from 2013 to 2017, Equity Plus Long-Term Debt To Total Assets Ratios of both companies demonstrated stable positive values.

Considering the findings of the comparative analysis of two leading Russian non-ferrous metal production companies, we conclude that, overall, they both demonstrated positive trends despite current complicated macroeconomic and geopolitical environments.

The findings of the study are presented in figures 1 and 2.

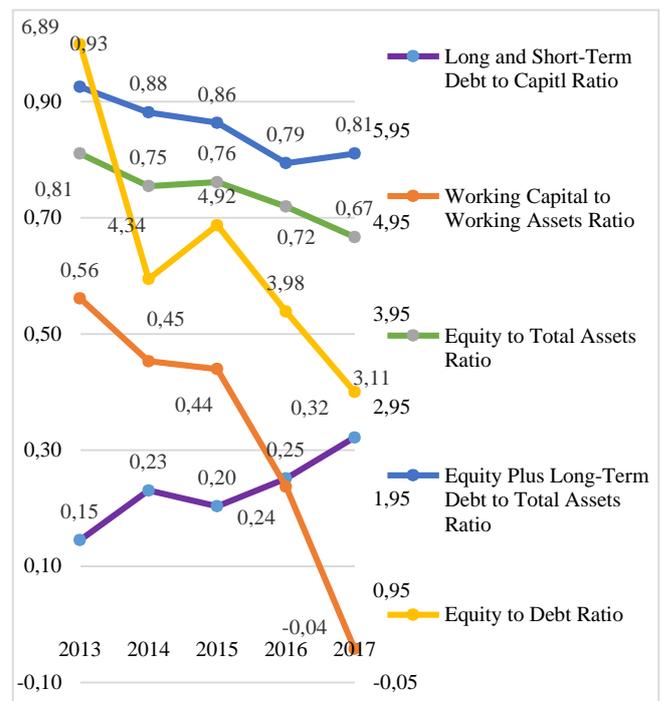


Fig. 1. JSC Uralektromed Financial Stability Data for the Period from 2013 to 2017.

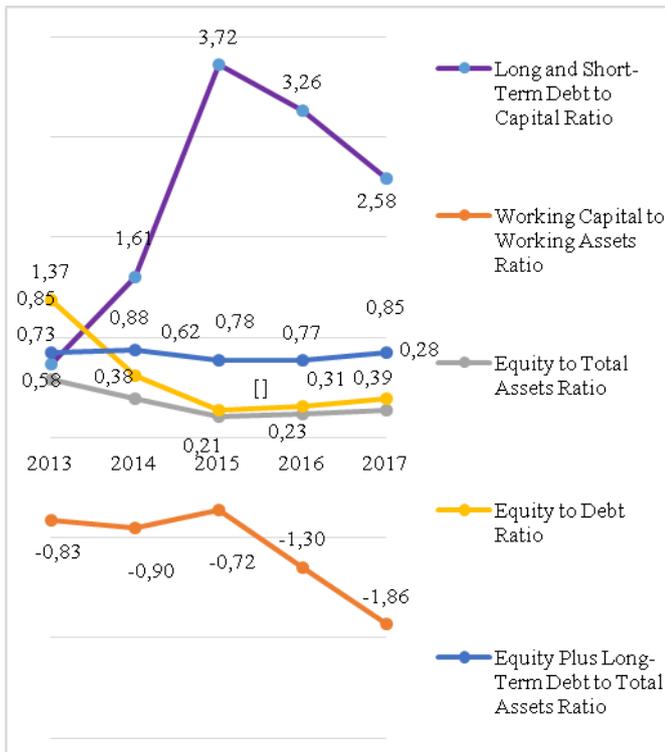


Figure 2. PJSC Nor Nickel Mining Company Financial Stability Data for the Period from 2013 to 2017.

The authors consider important to examine both companies' sources of funding (table3).

TABLE 3. SOURCES OF FUNDING OF PJSC NOR NICKEL MINING COMPANY AND JSC URALLEKTROMED FOR THE PERIOD FROM 2013 TO 2017[11]

Indicators	2013	2014	2015	2016	2017
<i>PJSC Nor Nickel Mining Company</i>					
Working capital surplus (+), lack of working capital (-)	-184426573	-252888831	-393473060	-490367423	-530372918
Surplus (+), lack (-) of owned and long-term sources of funding	3190103	90915787	164723276	21590060	-21529242
Surplus (+), lack (-) of owned and short-term sources of funding	101929819	177341774	383019783	243761296	112447571
<i>JSC Uralektromed</i>					

Working capital surplus (+), lack of working capital (-)	545685	-2894325	-875265	-4059431	-7336207
Surplus (+), lack (-) of owned and long-term sources of funding	4262083	1499926	3013248	-1087036	-1517982
Surplus (+), lack (-) of owned and short-term sources of funding	6678268	5607249	8210629	7114932	6420609

Having compared sources of funding, we can analyse the financial health of the companies for the period studied.

Let us now define the types of financial stability, applying a three component model (table 4).

TABLE 4. FINANCIAL STABILITY FOR THE PERIOD FROM 2013 TO 2017.

Financial Stability Types	Three component model	2013	2014	2015	2016	2017
<i>PJSC Nor Nickel Mining Company</i>						
1. Absolute financial stability	M* = (1, 1, 1)					
2. Normal financial stability	M = (0, 1, 1)	+	+	+	+	
3. Unstable financial situation	M = (0, 0, 1)					+
4. Critical financial situation	M = (0, 0, 0)					
<i>JSC Uralektromed</i>						
1. Absolute financial stability	M = (1, 1, 1)	+				
2. Normal financial stability	M = (0, 1, 1)		+	+		
3. Unstable financial situation	M = (0, 0, 1)				+	+
4. Critical financial situation	M = (0, 0, 0)					

M* = model

The data obtained helps to make a reasoned judgment that for the period from 2013 to 2017 the financial stability of the companies studied demonstrated a negative trend.

According to the data of the financial report of 2017, both companies should be considered in an unstable financial situation. The downward trend in financial stability of PJSC Nor Nickel Mining Company and JSC Uralektromed was mainly influenced by the increased share of borrowed funds in the capital structure.

IV. STUDY FINDINGS

The research findings confirm the impact of new industrial technologies on regional development, especially on the development of the metallurgical industry.

The results received point to the need of using financial ratios when examining a company's financial situation and applying a three component model when evaluating a company's financial stability. As we believe, that the three component model provides a reliable assessment of company's financial health.

V. ISSUES FOR FURTHER DISCUSSION

Innovative development plays an important role in the study of financial stability of companies operating in non-ferrous metals industry. In order to explore the influence of external and internal factors on the whole industry, further studies should include a greater number of companies.

As our current study is limited to only two large companies, the findings cannot be generalized. Moreover, the reasons for forecasting the development of industries in general and companies in particular should be formulated.

VI. CONCLUSIONS

Our study has led us to conclude that financial stability of companies operating in non-ferrous metals industry is largely influenced by both internal and external factors, with

industrialisation of the regions being one of them. At the same time, we should note, that business cycle volatility reflects raw materials market fluctuations, when the lack of raw materials changes to its surplus and vice versa. Consequently, the main objective for the whole non-ferrous metals industry is to maintain financial and capital structure stability.

References

- [1] Official Site of JSC Uralektromed [Electronic source]. Retrieved from <http://www.e-disclosure.ru/portal/company.aspx?id=2003>.
- [2] Official Site of PJSC Nornickel Mining Company [Electronic source]. Retrieved from <https://www.nornickel.ru/contacts/>.
- [3] Annual Financial Reports of JSC Uralektromed for the Period from 2013 to 2017, *JSC Uralektromed*, Verkhnyaya Pyshma.
- [4] Camilleri, Mark Anthony (2018) Theoretical Insights on Integrated Reporting, The Inclusion of Non-Financial Capitals in Corporate Disclosures, *Corporate communications*, Volume: 23 Issue: 4, pp. 567-581.
- [5] Financial Report of PJSC Nornickel Mining Company for the Period from 2013 to 2017, *PJSC Nornickel Mining Company*, Dudinka.
- [6] Financial Report of JSC Uralektromed for the Period from 2013 to 2017, *JSC Uralektromed*, Verkhnyaya Pyshma.
- [7] Eugene F. Brigham, Michael C. Ehrhardt (2007) Financial Management: Theory and Practice, *Saint Petersburg*, p. 960.
- [8] Balance Sheet of JSC Uralektromed for the Period from 2013 to 2017, *JSC Uralektromed*, Verkhnyaya Pyshma.
- [9] Balance Sheet of PJSC Nornickel Mining Company for the Period from 2013 to 2015, *PJSC Nornickel Mining Company*, Dudinka.
- [10] R. Bank, S.V. Bank, A.V. Taraskina (2006) Finansovaya ustoychivost, Financial Stability, *Prospekt*, p.338.