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ВИПУСКНА КВАЛІФІКАЦІЙНА РОБОТА

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**«Конкурентоспроможність Підприємства на Міжнародному Ринку
Металургійної Продукції»**

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FINAL QUALIFYING PAPER (PROJECT)

on the topic:

**“ENTERPRISE COMPETITIVENESS ON THE INTERNATIONAL
METALLURGICAL PRODUCTS MARKET”**

(based on the data of LLC “Elektrostal”, Kurahovo)

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INTRODUCTION

The relevance of the study in the area of steel products relates to the important changes and new trends in the steel industry all over the world that directly influence on Ukrainian steel market. In addition to the fast world changes in industry, the companies that act on the Ukrainian market challenge internal market crisis after political events of 2014 year and related aftermath such as decrease in a steel production, losing Russia export market and suppliers.

To be competitive in the international steel market companies should investigate and satisfy the needs of the market and respect new changing trends to adapt their businesses to the threats and opportunities of business environment mentioned above.

In order to work successfully on the Ukrainian market, companies should seek new ways to cope with external and internal factors that affect their business activity, using their internal capacities and capabilities including the marketing ones.

Several above-mentioned key issues, relates to competitiveness analysis that companies use to evaluate environmental and internal factors that influence on their activity in the international market and improve the strategy of the company on the market. In order to understand level of investigation of the chosen study, we analyzed studies of different scientists.

M. Porter. Competitive Strategy: Techniques for Analyzing Industries and Competitors [3] and M. Storper. The Regional World: Territorial Development in Global Economy [4] works which provide the classic approach to enterprise competitiveness. Ukrainian scientists on a enterprise competitiveness evaluation such as T.V. Shved works [5].

We also analyzed modern authors works: M. Grzebyk, Z. Krynski. Competition and competitiveness of enterprises. The theoretical approach, Social inequality and economic growth. [6], J. Misala. Theoretical Grounds of the Development of Long-Term Competitive Advantages in International Trade [7] to understand new approaches to the enterprise competitiveness evaluation.

In addition to analysis of scientists works, we examined in open sources the key trends on the global competitiveness that P.V. in ‘The Global Competitiveness Report, 2018’ [8].

Following analyzed information we can conclude that nowadays enterprises, must operate in a high-speed changing market environment due to globalization, technical standardization and continuing innovation processes.

These means to be successful in the market, an enterprise is forced to empower its competitiveness: arise its competitive potential, enhance competitive position, improve power of business, understand and use its technological and the financial potential.

This causes an enterprise in the process of development to continue evolving and adapting functions, objectives, goals and methods of management to fluctuating conditions in a highly competitive market. A competitive enterprise is capable of flexible and beneficial adaptation to changing operational conditions.

The discussion of problematic of enterprise competitiveness must end by developing the complete, comprehensive and consistent model with detailed, clear and structured approach to analyzing enterprise competitiveness which will be easy to understand, implement and use for company’s management to estimate current state of company’s competitiveness level and develop strategy for improvement to successfully operate on the market.

The purpose of this project is to evaluate Ukrainian enterprise competitiveness in the international steel market based on Elektrostal LLC business activity.

The object of research is a process of enterprise competitiveness evaluation of the exporting enterprise within sleet industry.

The subject of research is a theoretical, methodological and practical aspects of the study of the competitiveness of Elektrostal LLC in the international market for metallurgical products.

The task of the project is to:

- conduct a world steel market research;
- analyze financial and economic activity of Elektrostal LLC;
- determine the factors which influence on Elektrostal LLC international

market operational activity;

- evaluate Elektrostal LLC competitiveness
- define initiatives for competitiveness improvement of Elektrostal LLC
- evaluate effectiveness of proposed initiatives.

In this work we used different empiric and theoretical methods of study. We abstracted from immaterial attributes, relationships and connection. We analyzed complex data and made a synthesis of different kind of information.

For the purposes of relationships study, we used different methods such as quantitative, qualitative, Delphi expert method, as well as key methods: deduction and induction. The main difference between inductive and deductive approaches to research is that whilst a deductive approach is aimed and testing theory, an inductive approach is concerned with the generation of new theory emerging from the data. A deductive approach usually begins with a hypothesis, whilst an inductive approach will usually use research questions to narrow the scope of the study. Inductive approaches are generally associated with qualitative research, whilst deductive approaches are more commonly associated with quantitative research.

The approbation of the study is made in the article "Methodological Approaches to the Enterprise Competitiveness Evaluation in the International Market" published in the 'International Economics Collection' of scientific articles of students Part 2 released in 2019 by Kyiv National University of Trade and Economics.

Research and practice originality of the study are reflected to the following:

1. Elaboration and specification of the known data through new forms of research originality as:
 - a. Using more specific attributes than common;
 - b. New interacting of known specific attributes;
 - c. New quantity of determined relationships between attributes.
2. Suggestions that will be offered in the Part 3 might improve enterprise competitiveness in the international market of the Elektrostal LLC.

PART 1. ELEKTROSTAL LLC CURRENT STATE ANALYSIS

1.1. World Steel Market Research

The global steel sector is going through a period of improved growth after years of struggle in the face of enormous excess steelmaking capacity. The combination of the removal of Chinese outdated capacity, stronger economic growth, steel demand and the imposition of trade measures has improved general market conditions for steelmakers. However, it is vital that steelmakers use this breathing space to focus on improving competitiveness through product differentiation, exploring new markets and seeking out new ways to become more efficient, e.g., digital transformation and industry 4.0.

The steel sector is a highly competitive market, but operating conditions have improved in 2018. A tighter market means steel prices are higher, creating positive cash flows and profits, enabling steelmakers to focus on competitiveness rather than survival. Players with stronger balance sheets are considering reinvestment opportunities to optimize portfolios and boost shareholder value.

China's "Blue Sky" policy is likely to impact steel output both in terms of volume and production process. Disruption in other sectors is demanding a new way of working by steelmakers. Downstream industries are demanding increased optionality and flexibility in products – both in type and how they are delivered. Digital technologies have potential to allow steelmakers to increase competitiveness, meet the needs of customers and deliver increased value to stakeholders.

Main key trends in the steel industry sector are the following:

- 1) The global steel sector has returned to profitability on a convergence of positive market fundamentals. While the steel sector remains a highly competitive market, profits are up on improved operating conditions:
 - stronger economic growth;
 - with the exception of China, regional steel demand is growing steadily;
 - Chinese steel restructuring is removing capacity;
 - defensive trade measures are protecting steelmakers from global

competition;

- rising prices and lower raw material costs.

Overall, a tighter market is allowing steelmakers to set up higher prices, creating positive cash flows and higher profits, enabling steelmakers to focus on competitiveness rather than survival.

The global steel market is highly competitive, as we see on the figure 1.1., companies have to excess steel capacity to remain challenge.

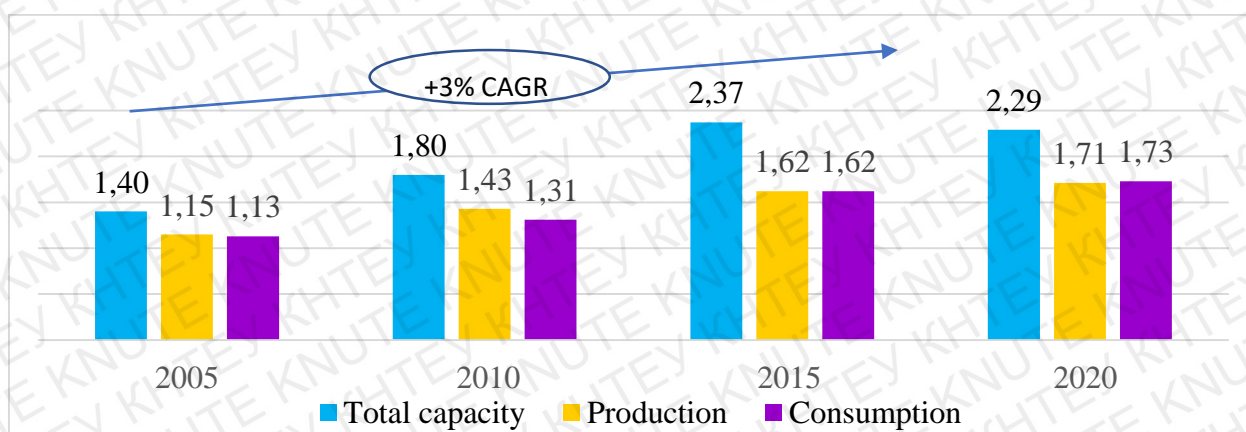


Figure 1.1 Global Steel Market Capacity, 2005-2020, billion tones [1, 10, 11, 12]

Stronger economic growth forms the basis for a positive steel sector outlook, see rising GDP in most steel-producing regions on the figure 1.2 below:

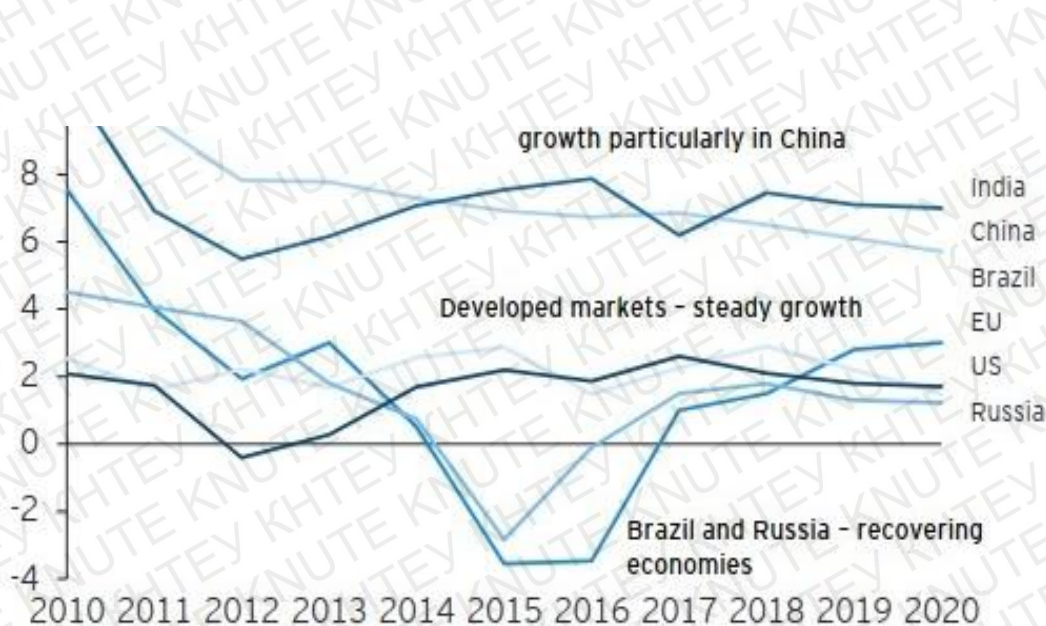


Figure 1.2 GDP in the Steel Producing Regions, 2010-2020, PPP exchange rate, real ASD, % change [13]

With exception of China, regional steel demand is growing steadily. The World Steel Association recently has concluded a global economic modelling exercise with Oxford Economics that found that in 2017 the steel industry sold US\$2.5 trillion worth of products and created US\$500 billion value added. For every \$1 of value that is added by work within the steel industry itself, a further \$2.50 of value-added activity is supported across other sectors of the global economy because of purchases of raw materials, goods, energy and services. This generates over US\$1.2 trillion of value added (see figure 1.3)

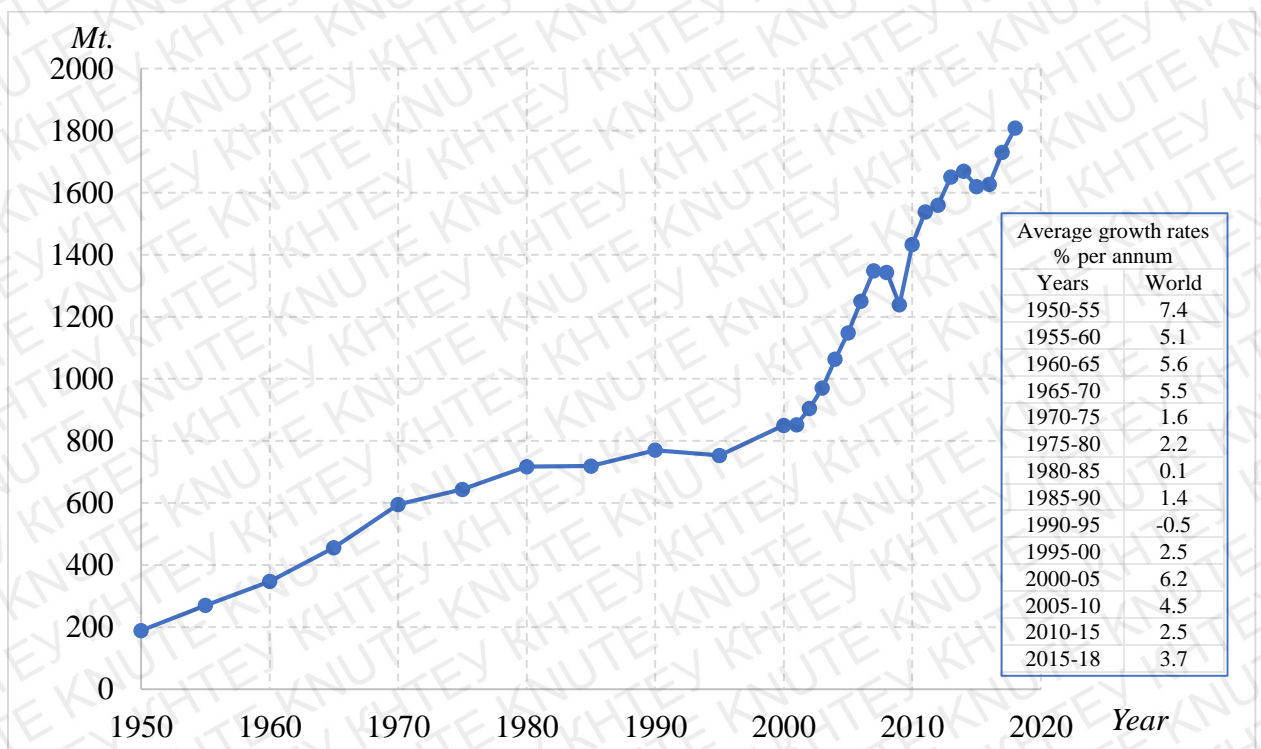


Figure 1.3 World Crude Steel Production, 1950 - 2018, million tons [10]

Crude steel production in 2018 in the World was 1 808 million tones. China is the biggest crude steel production area in the world 51.3% and growth comparing to 38.1% in 2017 [1].

These influences on the whole world steel market as China is the main player on the World steel market, which owns almost a half of crude steel production and use (see figures 1.4 and 1.5 below).

Most of regions use finished steel products more that produce except of: China, India, Japan, CIS.

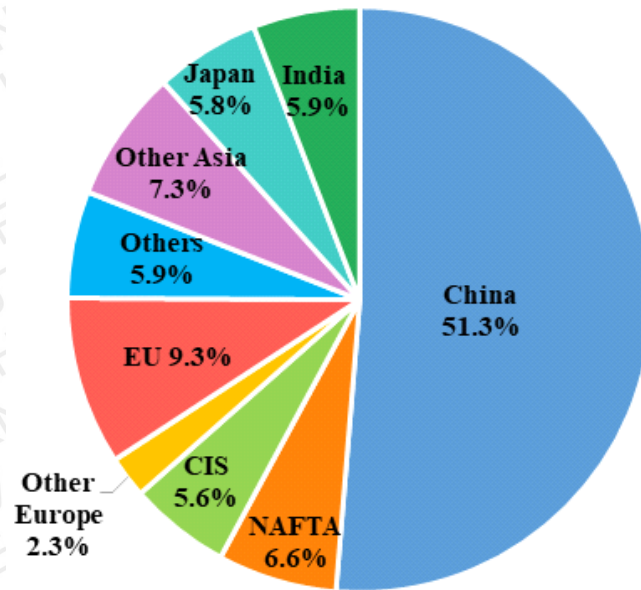
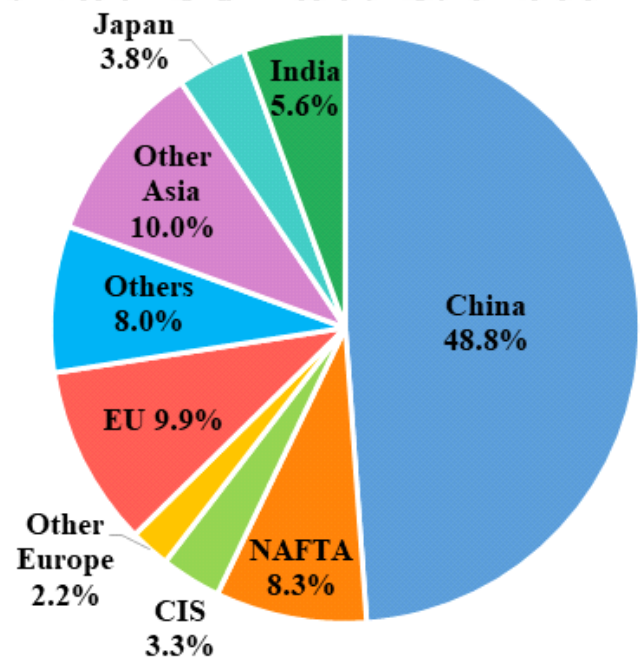


Figure 1.4 Crude Steel Production in the World 2018 (million tons) [1]

World apparent steel use (finished steel products) in 2018 was 1 712 million tones and increased comparing to 1 230 million tones previous year (figure 1.5).



Others comprise:

Africa	2.2%	Central and South America	2.5%
Middle East	2.9%	Australia and New Zealand	0.4%

Figure 1.5 - Apparent Steel Use (consumption) in the World 2018 [1]

Chinese steel sector restructuring aims to remove 200 million tons of capacity

by 2035. Reduction in Chinese capacity is releasing pressure on the Global market (see figure 1.6 below):

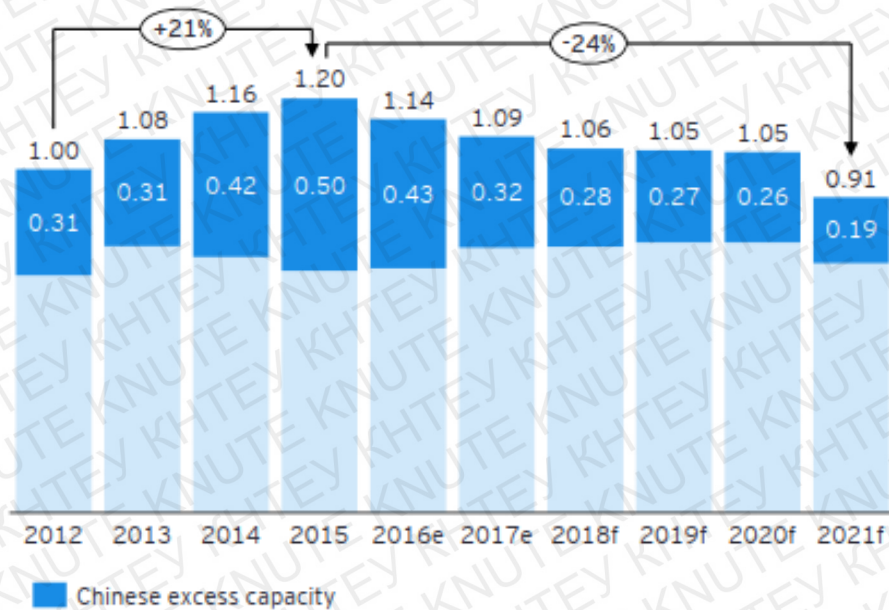


Figure 1.6 Chinese Steel Marking Capacity, billion tones [12]

Defensive trade measures are protecting regional steel makers from global competition. Global steel trade flows surged in 2014-2015 and countries started imposing trade measures, such as anti-dumping duties, to protect local steel makers against unfair competition.

Anti-dumping duties were only stopping specific products, so the US decided to take a broader approach and imposed a 25% import duty on steel in 2018. In response, the EU, Mexico and Canada imposed retaliatory tariffs on US products. The EU has also initiated a quota system to prevent steel previously headed for the US flooding its market. These measures should only be a short-term solution [1, 13].

Rising margins and improving cash flow will enable steel makers to focus on competitiveness rather than survival [14].

2) Steel makers are focused on values creation strategies. Players with stronger balance sheets are considering reinvestment opportunities to optimize portfolios and boost shareholder value:

- increased M&A activity expected as firms adjust portfolios;

- access to capital has improved, but steelmakers remain cautious about the growth agenda;
- focus on product differentiation and diversification;
- digital will drive productivity as well as allow for optionality and flexibility in steel products.

Focus of steel companies is on reinvestment strategies to support value creation. There is still some scope to deleverage further in the steel sector; an efficient capital structure needs to reflect sector cyclicality. Players with stronger balance sheets are considering reinvestment opportunities to optimize portfolios and boost shareholder value [15].

Focus on leaders on the market is product differentiation and diversification. The long-term objective is to reorient the product mix towards high value-added products and systems/solutions while reducing participation in commodity markets with low margins due to oversupply.

However, the sources of competitive advantage for such players are cyclical, arising and decaying as competitors imitate their technology and strategic moves [1, 15].

Ukraine is in Top 20 Steel-producing countries in the world on the 13th place by producing 21.1 Mt of steel in 2018 (21.4 in 2017) – by process. Continuously-cast steel output is 11.4 million tons in 2018 (10.8 in 2017), see table 1.1.

Table 1.1

Apparent Steel Use (finished steel products) in Ukraine, 2012-2018

Indicator	2012	2013	2014	2015	2016	2017	2018
Apparent steel use (million tons)	6.1	5.6	4.2	3.3	4.2	4.5	4.6
Apparent steel use per capita (kilograms)	135.6	123.4	94.3	74.1	95.6	100.7	105.6

Source: Developed by author based on World Steel in Figures 2019 [1]

Even though there was a significant decrease of apparent steel use in Ukraine in 2014 because of the start of hostilities in eastern Ukraine there is steady growth of the apparent steel use beginning in the 2016 which means that steel companies in the Ukraine steel market managed to reorient their production.

Ukraine is also listed in the world major exporters of steel in the 2018 ranked 10th by exporting 15.1 Mt of steel with Net exports 13.5 Mt (see tables 1.2 and 1.3).

Table 1.2

Major Exporters of Steel 2018, million tons

Rank	Total exports	Mt
1	China	68.8
2	Japan	35.8
3	Russia	33.3
4	South Korea	30.1
5	European Union (28)	28.4
6	Germany	26.0
7	Turkey	19.9
8	Italy	18.2
9	Belgium	18.0
10	Ukraine	15.1

Source: Developed by author based on World Steel in Figures 2019 [1]

Even though Ukraine is listed in the major producers and exporters of steel in the world, most of the exported steel products in Ukraine are not finished goods.

Table 1.3

Major exporters of steel (net exports) 2018, million tons

Rank	Net exports (exports-imports)	Mt
1	China	54.4
2	Japan	29.8
3	Russia	27.0
4	South Korea	15.1
5	Ukraine	13.5

Source: Developed by author based on World Steel in Figures 2019 [1]

Such goods do not have a lot added value, they are mostly raw materials, so, the country loses money, which could be earned while sale finished products. Such situation may happen because Ukraine does not have enough new plants with modern equipment for the steel products production.

1.2. Analysis of Financial and Economic Activity of Elektrostal LLC

Elektrostal LLC enterprise was established in 2004 in the city of Kurakhovo, Donetsk region. In 2006, the company began construction of an electric steel smelting plant. The general designer of the plant was the Research Institute "GIPOSTAL" (Kharkov). The main metallurgical equipment was supplied by the well-known Italian company STB. The equipment of the plant is DSP-50, a transformer with a capacity of 35 MVA, 3 gas-oxygen burners with a capacity of 3.5 MW each, a bottom argon purge system, and a ladle-furnace unit.

Steel ladles are equipped with Interstop slide valves, CS60L slide gate model, continuous casting machine (continuous casting machine) 3-strand, radial type, with a radius of 6 meters, intermediate ladles are equipped with Interstop MNC dispenser cups quick change system. The planned steel production capacity is more than 300,000 tons / year of continuous cast billets of square section with the following dimensions 120x120; 125x125; 130x130; 135x135; 150 x150.

The company employs about 1000 workers. The construction of the plant was completed in February 2008. On March 2, 2008, the first smelting was launched and successfully bottled at the Elektrostal plant. The Elektrostal LLC produces and exports steel square continuous casting. The square continuous casting can be produced from the steel of different quality. Elektrostal LLC exports only carbon steel square continuous casting.

Financial analysis of Elektrostal LLC is based on 2014-2018 financial reports received from the company (see addendum C). Basically, we analyzed balance and financial statement reports.

To perform financial analysis in the most efficient way we analyzed key indicators/ratios which were divided into seven categories: growth ratios (dynamics current year to the previous year), profitability indicators, efficiency ratios, cost estimates, liquidity ratios, financial strength ratios, vertical analysis indicators.

Note: meanings/formulas for indicators are in the Glossary in Addendum D.

Growth ratios in the table 1.4 show the trend of the value of key financial indicators of enterprise business activity in their financial report for 2014-2018

years. Overall, these indicators in the 2018 have negative value and negative trend.

Table 1.4

Growth Ratios of Elektrostal LLC, 2015-2018

Ref.	Type of indicators/ratios	2015	2016	2017	2018
Growth Ratios (current year to the previous year)					
1	Revenue	0.57	1.19	77.39	-34.53
2	Total Operational Revenue	7.23	-2.08	91.23	-38.27
3	Gross Profit	-65.13	-64.67	356.43	-16.28
4	Operational Income	-96.98	-90.87	-30,190.01	-126.28
5	Net Income	-614.18	-148.28	-53.52	-141.08
6	Accounts Payable	73.06	-51.68	140.65	-63.42
7	Inventory	15.95	21.72	36.17	-51.84
8	Property, Plant and Equipment	-17.68	-9.06	-18.61	39.31
9	Total Assets	51.15	-23.84	69.05	-22.17
10	Balance Value	1.15	0.82	1.52	1.06

Source: Developed by author using financial reports of Elektrostal LLC

Vertical Analysis indicators (see table 1.5) show the part of each assets/liability/ expenses in the total amount.

Table 1.5

Vertical Analysis Indicators of Elektrostal LLC, 2014-2018

Ref.	Type of indicators/ratios	2014	2015	2016	2017	2018
Vertical Analysis Indicators						
1	Cash/Assets	16.53%	14.18%	24.32%	0.00%	0.00%
2	Accounts Receivables/ Assets	15.73%	40.89%	11.43%	10.63%	6.28%

Source: Developed by author using financial reports of Elektrostal LLC

Continued Table 1.5

Ref.	Type of indicators/ratios	2014	2015	2016	2017	2018
Vertical Analysis Indicators						
3	Inventory/Assets	14.89%	11.43%	18.26%	14.71%	9.10%
4	Fixed Assets/Assets	19.08%	10.66%	12.83%	6.21%	10.62%
5	Salaries / GP	7.16%	18.41%	59.41%	24.63%	36.41%
6	Admin. exp. / GP	-0.80%	-2.75%	-17.22%	-5.25%	5.49%
7	Selling exp. / GP	-15.18%	-56.38%	-185.72%	-55.15%	34.29%
8	Other exp. / GP	-11.97%	-165.69%	-105.24%	-113.22%	104.32%

Source: Developed by author using financial reports of Elektrostal LLC

According to the table 1.5, the Elektrostal LLC had a losses as net financial result for 2014-2016 years. Such negative financial results of company's business activity are the reason of negative indicators (e.g. ROA, NPM).

Return on Assets indicator in 2018 is lower than in 2017, because of high amount of account receivables as in 2017 (1,654,256 and 1,341,529 thousand UAH accordingly) and lower Gross Profit (305,944 and 256,133 UAH thousand accordingly).

The reason of negative Return on Sales in 2014-2016 is the same as for ROA. Return on Sales ratio in 2018 is higher than in previous years, because of higher other operational income, but not sales of goods.

Gross Profit Trend in 2017 is higher because of high sales in 2017 (GP is 305,944 thousand UAH). Other account receivables in 2017 is 1,654,256 thousand UAH, which is much higher than in previous year 390,427 thousand UAH.

GPT in 2018 is low, because company has produced less products comparing to previous years. Gross Profit in 2018 is 256,133 thousand UAH to 305,944 thousand UAH in 2017.

Operating Profit Margin was low in the years, when we sold goods on the lower price.

Table 1.5

Profitability Indicators of Elektrostal LLC, 2014-2018

Ref.	Type of indicators/ratios	2014	2015	2016	2017	2018
Profitability indicators						
1	Return on Assets (ROA)	-1.92%	-9.30%	-3.86%	1.61%	1.51%
2	Return on Equity (ROE)	-	-	-	-	-
3	Return on Sales (ROS)	-5.29%	-27.05%	-12.91%	3.38%	2.12%
4	Operating Profit (EBIT) Margin (OPM)	19.22%	-0.58%	0.05%	8.83%	3.55%
5	Operating ROA	34.98%	-0.70%	0.08%	14.91%	5.04%
6	Net Profit Margin (NPM)	-5.29%	-27.05%	-12.91%	3.38%	2.12%

Source: Developed by author using financial reports of Elektrostal LLC

Efficiency ratios in 2017 had the most optimal value comparing to other years due to high sales. These ratios in 2018 were lower, because there were low sales and accordingly lower turnover (see table 1.6).

Table 1.6

Efficiency Ratios of Elektrostal LLC, 2015-2018

Ref.	Type of indicators/ratios	2015	2016	2017	2018
Efficiency ratios					
1	Inventory Turnover Ratio	11.38	9.67	13.24	10.14
2	Accounts Receivable Turnover	4.72	4.94	19.41	14.24
3	Current Asset Turnover	1.70	1.57	2.32	1.35
4	Non-current Asset Turnover	10.40	11.99	24.47	15.27
5	Asset Turnover Ratio	1.46	1.39	2.12	1.24
6	Accounts Payable Turnover	3.11	3.35	5.35	3.63

Continued Table 1.6

Ref.	Type of indicators/ratios	2015	2016	2017	2018
Efficiency ratios					
7	Working Capital Turnover	6.52	6.40	8.92	4.45
8	Inventory Turnover Period	33.97	40.86	31.37	23.07
9	Accounts Receivable Turnover Period	121.57	25.57	22.68	15.93

Source: Developed by author using financial reports of Elektrostal LLC

Even though Balance Value indicator is positive and growth each year Net Cash and Net Debt ratios are negative which means that company cannot pay by cash for their liabilities. (see table 1.7).

Table 1.7

Cost Estimates of Elektrostal LLC, 2014-2018

Ref.	Type of indicators/ratios	2014	2015	2016	2017	2018
Cost estimates						
1	Balance Value (BV)	550,985	633,452	517,862	785,371	832,579
2	Net Cash	-531,564	-1,048,938	-611,991	1,738,449	-1,131,762
3	Net Debt	-214,348	-277,882	-363,105	-85	-64
4	Working Capital (WC)	303,509	424,393	326,310	628,637	623,879
5	Market Capitalization (MC)	0.06	0.06	0.07	0.04	0.04

Source: Developed by author using financial reports of Elektrostal LLC

Elektrostal LLC current and quick liquidity ratios increased due to an increase in assets compared to current liabilities.

The results on the Liquidity ration evaluation on the Elektrostal LLC is

provided below in the table 1.8 (we calculated ratios on the end of each year).

In the short term, the company under analyzed five-year period has sufficient liquidity, even though the company has a number of long-term liabilities and needs to make payments on them.

Table 1.8

Liquidity Ratios of Elektrostal LLC, 2014-2018

Ref.	Type of indicators/ratios	31.12. 2014	31.12. 2015	31.12. 2016	31.12. 2017	31.12. 2018
Liquidity ratios						
1	Current Ratio	1.41	1.32	1.33	1.36	1.55
2	Quick Ratio	1.15	1.15	1.06	1.15	1.39
3	Cash Ratio	0.29	0.21	0.37	0.00	0.00

Source: Developed by author using financial reports of Elektrostal LLC

Considering the long-term financial sustainability (financial strength ratios see in the table 1.9), much of the enterprise's business activity is financed by long-term liabilities. This situation is exacerbated the activity of the company during the years under analysis was unprofitable.

Table 1.9

Financial Strength Ratios of Elektrostal LLC, 2014-2018

Ref.	Type of indicators/ratios	31.12. 2014	31.12. 2015	31.12. 2016	31.12. 2017	31.12. 2018
Financial strength ratios						
1	Debt to Total Assets	0.58	0.68	0.65	0.69	0.58
2	Financial Leverage (DSE)	-1.24	-1.06	-0.63	-1.23	-0.89
3	Capital Multiplier (EM/ATSE)	-2.15	-1.57	-0.96	-1.79	-1.55

Source: Developed by author using financial reports of Elektrostal LLC

Overall, analysis on Elektrostal LLC financial reporting shows that company is in the difficult financial situation as it has to pay for the number of long-term liabilities, but for the past two years it shows positive dynamics by increasing sales.

Conclusions to Part 1

The world steel market shows significant growth 1950-2018 years. These led to the important changes and new trends in the steel industry which influence on Ukrainian steel market and steel product producing companies.

The World Steel Association (world steel) is the main institute for the steel market research in the world. It has published the latest report of World Steel in Figures for 2018. Main figures from this report provide a comprehensive overview of steel industry activities, stretching from crude steel production to apparent steel use, from indications of global steel trade flows to iron ore production and trade.

Key trends in the steel industry are the following:

- 1) The global steel sector has returned to profitability on a convergence of positive market fundamentals.
- 2) Steelmakers are focused on value creation strategies.

Ukraine is in Top 20 Steel-producing countries in the world on the 13th place. Ukraine produced 21.1 million tons of steel in 2018 (21.4 in 2017) – by process. Continuously-cast steel output is 11.4 million tons in 2018 (10.8 in 2017). Ukraine is also listed in the world major exporters of steel in the 2018 ranked 10th by exporting 15.1 Mt of steel with Net exports 13.5 Mt.

Elektrostal enterprise was established in 2004 in the city of Kurakhovo, Donetsk region. The company employs about 1000 workers. The main product of Elektrostal LLC for producing and export is Square continuous casting.

The analysis of financial and economic activity of Elektrostal LLC shows that the business activity of the Elektrostal LLC is not profitable. The cost of producing goods is high which is the reason why the margin is low.

Also, the company uses long-term liabilities to finance the production of goods, spends large amount of financial resources for marketing and transporting goods to the customers, but still cannot sale enough amount of goods to pay to suppliers.

PART 2. ELEKTROSTAL LLC COMPETITIVENESS EVALUATION ON THE INTERNATIONAL STEEL MARKET

2.1. Determination of Factors Which Influence on Elektrostal LLC

International Market Operational Activity

The Elektrostal LLC exports the square continuous casting. Elektrostal LLC exports to the following countries: Algeria, Bulgaria, Egypt, Italy, Turkey, Jordan, Tunisia, Morocco, Romania.

Top countries for export of Elektrostal LLC products are Turkey and Egypt – 39% and 27% of total export in 2018.

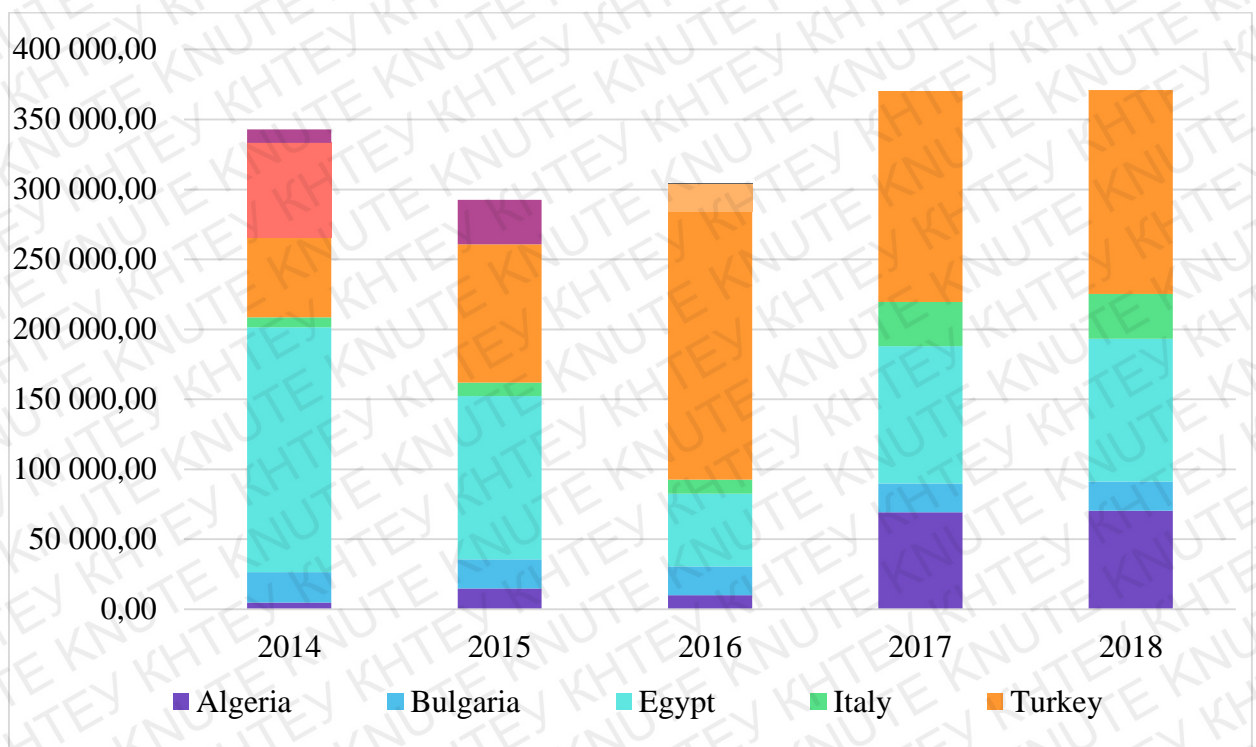


Figure 2.1 Export Structure of Elektrostal LLC by Countries 2014-2018, thousands tones [Constructed by author based on Elektrostal LLC reports]

Figure 2.1 represents exporting square continuous casting to EMEIA countries from 2014 to 2018. The dynamics of exporting to Egypt was positive: 102,004.01 tons in 2018 to 52,062.21 tons in 2016. The situation with export to Turkey is different: 145,678.81 tons in 2018 comparing to 191,485.05 tons in the 2016. Management explains this decrease by risen transport costs to Turkey in 2017. Also,

export to Algeria has grown rapidly from 9,970.48 in 2016 to 70,556.28 tons in 2018. The reason of that was a new big counterparty contract win in 2017.

Below in the table 2.1 there is a structure of Elektrostal LLC export activity by countries in the five years under analysis. As stated in the table 2.1 the structure of the export by countries for 2014-2018 years has changed a lot. On the one hand, for 2017-2018 years there were no export activity to the Jordan, Morocco and Romania. On the other hand, Algeria, Bulgaria, Egypt, Italy and Turkey are sustain partners for Elektrostal's LLC export activity for the past 5 years.

Table 2.1

**Elektrostal LLC Export Structure of Steel Square Continuous Casting
in Total Export in 2014-2018, %**

Year/ Country	2014	2015	2016	2017	2018
Algeria	1%	5%	3%	19%	19%
Bulgaria	6%	7%	7%	6%	6%
Egypt	51%	40%	17%	27%	27%
Italy	2%	3%	3%	9%	9%
Turkey	17%	34%	63%	41%	39%
Jordan	20%	0%	0%	0%	0%
Tunisia	3%	11%	0%	0%	0%
Morocco	0%	0%	7%	0%	0%
Total	100%	100%	100%	100%	100%

Source: Developed by author using production and reports of Elektrostal LLC in Addendum G

Overall, the trend of total export in tones was positive till 2018 by exporting more goods to Egypt, Algeria and Tunisia.

Elektrostal LLC produces and exports only steel square continuous casting. Elektrostal LLC is an export-oriented company. Export takes up to 90% in average

of total sales of the company during the five years under analysis.

Table 2.2

Elektrostal LLC Export of Steel Square Continuous Casting in Total Sales in 2014-2018, tones

Year/ Net sales	2014	2015	2016	2017	2018
Total steel square continuous casting sales	397,310	311,836	316,409	417,614	418,462
Export	342,896	292,474	304,159	370,272	371,098
Internal market	54,414	19,362	12,250	47,342	47,364
Export % in total sales	86%	94%	96%	89%	89%

Source: Developed by author using production and reports of Elektrostal LLC in Addendum H

Prices on the steel square continuous casting on the internal market in 2016-2018 years were higher (see figure 2.2), these was because of higher competition on the international steel market in 2016-2018 and the company was forced to make the prices reduction in those years.

Elektrostal LLC management usually does not have direct connection with end customers. Company's policy is to sale as much as possible products to the trader who takes all trading risks for the products.

Demand forecast to remain steady, but production and imports are expected to increase (see figure 2.3), which also influences on the enterprise under analysis [9]:

- Rising steel production is putting pressure on steel prices, which is impacting both margins and investment plans
- Capacity utilization, which improved to over 75%, is likely to decline if s232 tariffs or quotas are reduced or removed.

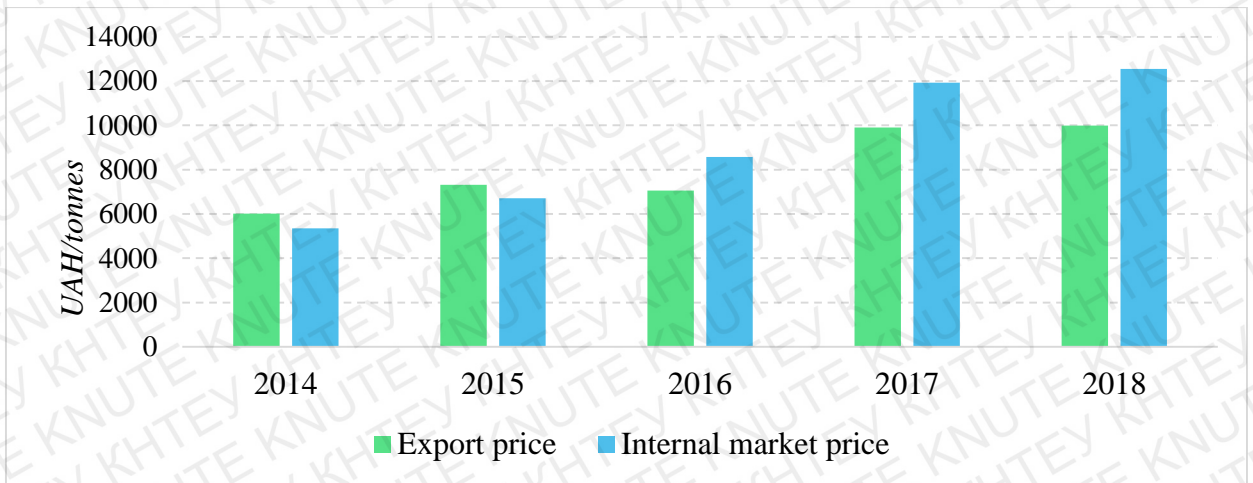


Figure 2.2 Prices on Export on the Steel Square Casting of Elektrostal LLC for Internal Market and Export 2014-2018, UAH/tones [Constructed by author based on Elektrostal LLC reports]

- BOF producers, such as US Steel, are unable to easily adjust capacity utilization and will find it harder to adjust to changing market conditions.
- If prices decline by a further 10% then this will put further pressure on capacity utilization and may also delay some of the new capacity [9].

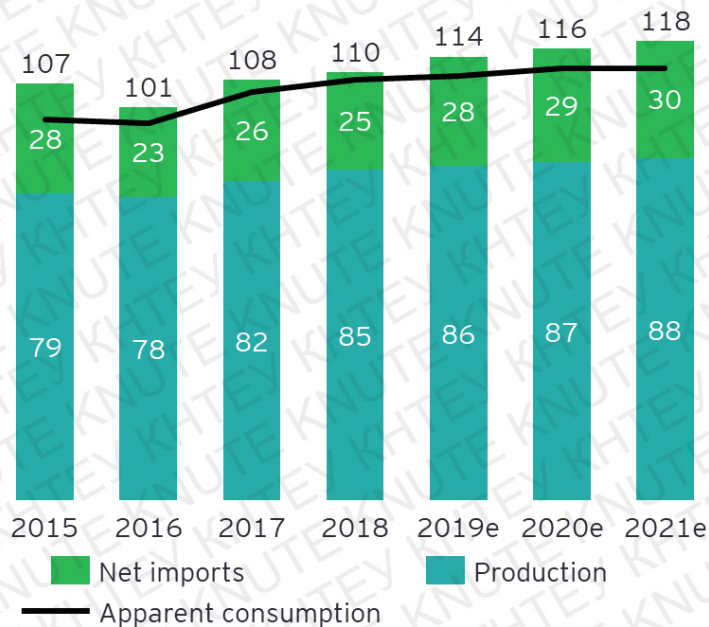


Figure 2.3 US Steel Outlook 2018, million tonnes [9]

One of the methods of external factors evaluation on enterprise international business activity is PEST-analysis, which is based on listing of all possible

influences on the company for the following group of factors in the table 2.3.

The PEST analysis is a strategic business tool used by organizations to discover, evaluate, organize, and track macro-economic factors which can impact on their business now and in the future. The framework examines opportunities and threats due to Political, Economic, Social, and Technological forces.

- 1) Political (P) - The Political aspect of PEST Analysis focuses on the areas in which government policy and/or changes in legislation affect the economy, the specific industry, and the organization in question. Areas of policy that may particularly affect an organization include tax and employment laws. These factors are all about how and to what degree a government intervenes in the economy or a certain industry. This can include government policy, political stability or instability, corruption, foreign trade policy, tax policy, labour law, environmental law and trade restrictions. These are all factors that need to be taken into account when assessing the attractiveness of a potential market.
- 2) Economic (E) - The Economic portion of the analysis targets the key factors of interest and exchange rates, economic growth, supply and demand, inflation and recession. These factors may have a direct or indirect long term impact on a company, since it affects the purchasing power of consumers and could possibly change demand/supply models in the economy. Consequently, it also affects the way companies price their products and services.
- 3) Social (S) - The Social factors that may be included in a PEST Analysis are demographics and age distribution, cultural attitudes, and workplace and lifestyle trends.
- 4) Technological (T) - The Technological component considers the specific role and development of technologies within the sector and organization, as well as the wider uses, trends and changes in technology. Government spending on technological research may also be a point of interest in this area.

All factors are rated by author in the table 2.3 on the level by their influence on the Elektrostal LLC business activity.

Table 2.3

External Factors Influencing on the Elektrostal LLC International Business Activity Rated by Influence

Factor	Influence (Weighting factor)	Grade (1-5)	Grade considering influence
Political			
Political stability	0,3	3	0,9
Legislation in the field of energy conservation and energy efficiency improvement	0,4	2	0,8
Government influence on the industry	0,1	1	0,1
Steel trade regulations & tariffs	0,2	2	0,4
The extent of government support for the industry (investment).	1	-	2,2
Total	0,3	3	0,9
Economic			
Prices on the resources	0,4	3	1,2
Economic growth of the alternative energy sector	0,1	1	0,1
The level of income of the citizens	0,2	1	0,2
The economic situation in the Ukraine	0,3	2	0,6
Total	1	-	2,1
Social			
Increased consumer attention to environmental issues	0,3	3	0,9
Population and population growth rate	0,4	3	1,2
Culture (e.g. gender roles)	0,2	2	0,4
Attitude towards imported goods and services	0,1	1	0,1
Total	1	-	2,6
Technological			
Technology development	0,3	2	0,6
Introduction of science and technology into everyday life	0,4	3	1,2

Source: Developed by author based on steel market research

Continued Table 2.3

Factor	Influence (Weighting factor)	Grade (1-5)	Grade considering influence
The share of technology-intensive technologies in production	0,2	2	0,4
Requirements to the scientific and technological level of production, ensuring competitiveness.	0,1	1	0,1
Total	1	-	2,3
Total all	4		7,9

Source: Developed by author based on steel market research

The model's factors will vary in importance to a given company based on its industry and the goods it produces. For example, consumer and B2B companies tend to be more affected by the social factors, while a global defense contractor would tend to be more affected by political factors.

Additionally, factors that are more likely to change in the future or more relevant to a given company will carry greater importance. For example, a company which has borrowed heavily will need to focus more on the economic factors (especially interest rates).

Furthermore, conglomerate companies who produce a wide range of products (such as Sony, Disney, or BP) may find it more useful to analyze one department of its company at a time with the PEST model, thus focusing on the specific factors relevant to that one department. A company may also wish to divide factors into geographical relevance, such as local, national, and global.

The total weighted estimate is 7.9 (see table 2.3). Elektrostal LLC reacts in a timely manner to current and forecasted environmental factors and can minimize them.

According to the scale: from 20 to 15 - very high impact zone; 15 to 10 - zone of significant influence; 10 to 5 - a zone of moderate impact; 5 to 0 - the zone of insignificant influence and the analyzed data, the enterprise is in the zone of moderate influence of environmental factors on the activity of the enterprise.

2.2. Elektrostal LLC Competitiveness Evaluation

Indicators of export efficiency of the Elektrostal LLC in 2014-2018 years of steel square continuous casting are calculated in the table 2.4.

Net profit from export in 2014-2016 was decreasing both in UAH and USD. In 2017 the situation has changed when the company produced and sold more products as usual (see paragraph 1.2). The costs of finished products were significantly rising each year e.g. 1,980,786,322.17 to 1,557,050,905.51 UAH in 2015 and 2014 accordingly. These changes were caused of dramatically risen inflation of Ukrainian hryvna in 2015 due to political instability in the country. For more information on this point see Addendum I.

Spending on in accordance with FOB port Mariupol in hryvna under analyzed five-year period were rising too even though in 2015-2016 they were decreasing in USD 4,860,997.25 and 4,792,545.98 accordingly.

Calculated effect from export was positive only in 2014: 377,280,947.73 UAH or 30,007,651.22 USD. For the next three years it was always negative, and these negative dynamics was increasing each year from -813,081.96 USD in 2015 to -974,881.64 USD in 2017. The worst results on the export activity on the enterprise was in 2016 -6,800,233.32 USD.

Coefficient of export efficiency dynamics is also negative from 1.22 in 2014 to 1.00 in 2018.

Usually for product's competitiveness analysis scientists need to make both – product quality and price competitiveness analysis. Elektrostal LLC exports a steel square continuous casting which is a standardized product for the export for all players on the steel market. Elektrostal's LLC carbon steel square continuous casting is made according to government and international standards for this type of the product. These means that all exporters of such type of product must have a unified quality. Because of that, the only product competitiveness factor which has high impact on Elektrostal's LLC export product competitiveness is price.

Table 2.4

Indicators of export efficiency Elektrostal LLC in 2014-2018, thousands UAH and USD

Indicator	2014		2015		2016		2017		2018	
	UAH	\$	UAH	\$	UAH	\$	UAH	\$	UAH	\$
Net profit from export	2,065,252	164,263	2,138,770	100,435	2,146,924	84,151	3,666,733	138,476	3,765,423	136,626
Cost of finished products	1,557,050	123,842	1,980,786	93,01	2,114,127	82,866	3,431,377	129,587	3,523,357	127,843
Spending in accordance with FOB port Mariupol:	80,549	6,406	103,514	4,860	122,270	4,792	165,536	6,251	138,838	5,037
-loading	34,489	2,743	51,382	2,412	63,242	2,478	77,945	2,943	76,025	2,758
-transportation to main carrier	31,433	2,500	37,778	1,774	45,623	1,788	61,709	2,330	62,812	2,279
Administrative expenses	3,526	280	3,836	180	9,708	380	13,990	528	14,000	507
Financial expenses (% per loan)	46,845	3,725	67,947	3,190	74,308	2,912	81,642	3,083	82,312	2,986
Total cost of finished products	1,687,972	134,255	2,156,084	101,248	2,320,415	90,951	3,692,547	139,451	3,758,509	136,375
Effect from export	377,280	30,007	-17,314	-813	-173,491	-6,800	-25,814	-974	6,914	250
Coefficient of export efficiency	1.22	1.22	0.99	0.99	0.93	0.93	0.99	0.99	1.00	1.00

Source: Calculated based on export reporting of Elektrostal LLC in 2014-2018.

Note: USD/UAH currency exchange rates are provided in the Addendum I

To evaluate the Elektrostal LLC products' price competitiveness we analyzed the dynamics of price changes both for export and internal market. Then, we compared these prices to the average prices on steel continuous casting for FOB Black sea of Ukrainian exporters, Russian and CIS exporters.

The steel market in Ukraine and CIS is a highly confidential industry, so we could not use prices on the steel square continuous casting of exact Elektrostal LLC competitors. In our analysis we used the researches of change on prices for metal products and used metal resources in 2014-2018 years by Elektrostal LLC marketing department [15, 16, 17, 18].

Under analyzed five-year period the prices on exported steel square continuous casting vary from 276 USD in 2016 to 479 USD in 2014 (see table 2.5).

Table 2.5

Prices on Steel Square Continuous Casting of Elektrostal LLC for Export and Sales in Internal Market 2014-2018 (UAH, USD to tones)

Year	Export		Internal market	
	UAH/tones	USD/tones	UAH/tones	USD/tones
2014	6,022.97	479.05	5,200.42	413.62
2015	7,312.68	343.4	6,614.76	310.63
2016	7,058.56	276.67	9,135.81	358.09
2017	9,902.80	373.98	12,017.02	453.83
2018	9,969.81	378.99	12,550.02	473.96

Source: Reports of Elektrostal LLC in 2014-2018.

Note: USD/UAH currency exchange rates are provided in the Addendum I

Comparing to the prices on the same Elektrostal LLC product on internal market in 2014-2015 export prices were higher but in the next three years the situation has changed: in 2016 price for the export was on 29% lower than for internal market and 21% lower in 2017.

For understanding the reason of such changes, we need to compare these prices with market prices on steel continuous casting in 2014-2018 years (see table 2.6 below).

Table 2.6

Comparison on Steel Square Continuous Casting Export Prices of Elektrostal LLC with Average Export Prices FOB Black sea Ukraine, Russia and CIS 2014-2018 (USD to tones)

Year	FOB Elektrostal LLC Black sea (Mariupol)	FOB Ukraine Black sea	FOB CIS Black sea	FOB Russia Black sea
2014	479.05	496.50	495.50	501.50
2015	343.40	324.50	321.50	322.00
2016	276.67	330.50	335.00	333.50
2017	373.98	436.50	444.00	445.50
2018	378.99	439.40	446.00	447.20

Source: Reports of Elektrostal LLC in 2014-2018 and UEX research

To determine the most competitive product, it is required to define a price competitiveness of Elektrostal LLC steel square continuous casting. For that we calculated price indexes in the table 2.7. During five years under analysis the etalon prices were the following:

- In 2014 the lowest export price was by Elektrostal 479.05 USD
- In 2015: FOB CIS Black sea and FOB Russia Black sea
- In 2016, 2017 and 2018: Elektrostal LLC

Table 2.7

Price Indexes on Competitiveness of Main Steel Square Casting Exporters in 2014-2018, USD/tones

Year	Elektrostal LLC FOB Black sea	FOB Ukraine Black sea	FOB CIS Black sea	FOB Russia Black sea
2014	1.00	1.04	1.03	1.05
2015	1.07	1.01	1.00	1.00
2016	1.00	1.19	1.21	1.21
2017	1.00	1.17	1.19	1.19
2018	1.00	1.16	1.18	1.18

Source: Calculated by author based on the table 2.6.

For Elektrostal LLC products' price competitiveness evaluation we calculated price indexes in the table 2.7. According to these indexes we can conclude that Elektrostal LLC products' prices were highly competitive to average prices at Ukrainian steel continuous casting market as well as on CIS and Russia steel continuous markets. Under the years under analysis the Elektrostal's LLC products had the lowest price in 2014, 2016 - 2018 which was a competitive advantage for the company. At the same time, dynamics for the prices on the raw materials for Ukrainian steel industry companies shows that in 2015 prices for the raw materials and energy resources were overall decreasing (figure 2.4).

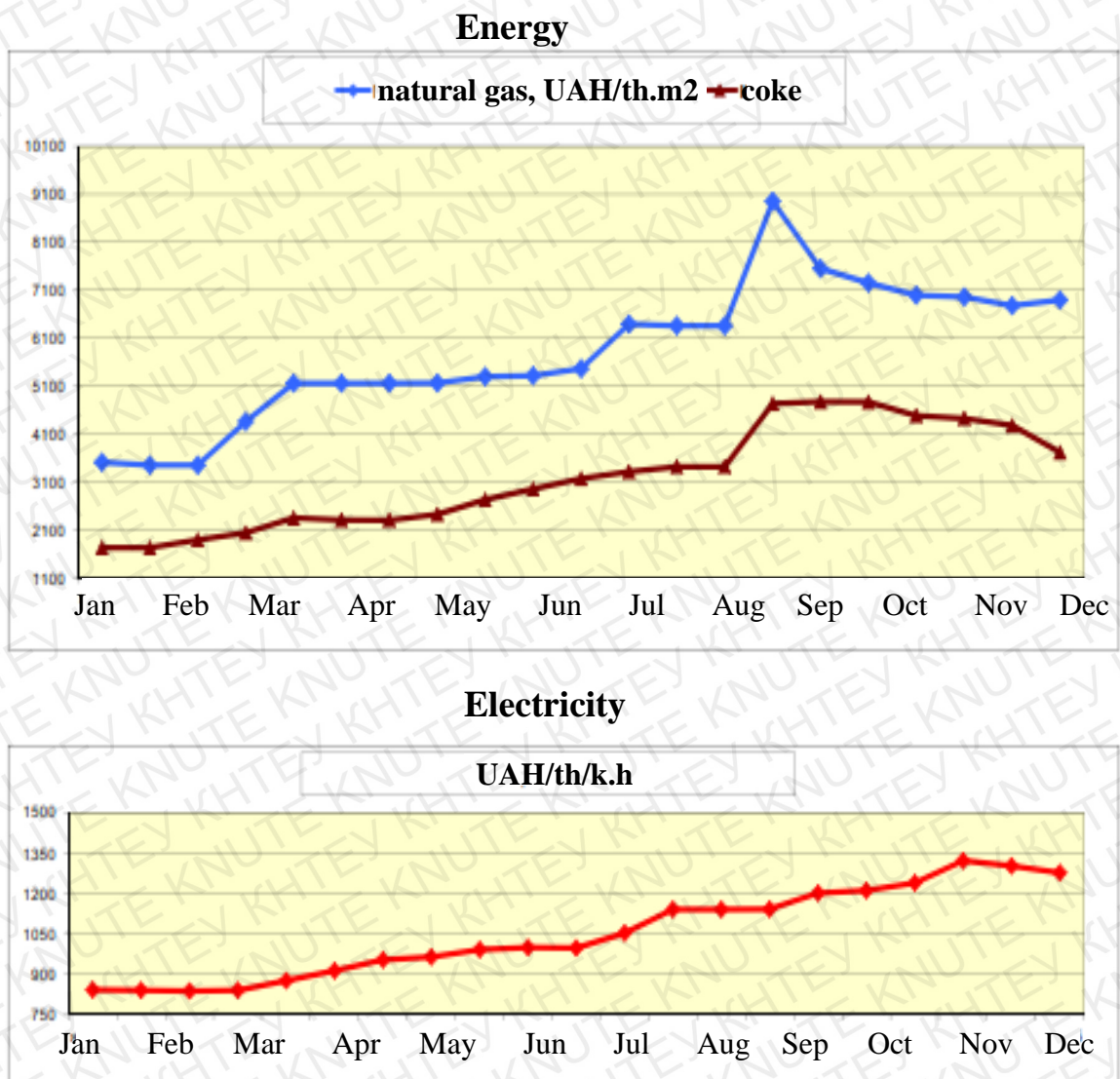


Figure 2.4 Dynamics on the Prices Change on the Raw Materials for the Ukrainian Steel Industry Companies, 2015, UAH (without VAT) [17]

While during the 2016-2017 years prices for resources and materials have rapidly grown. These was caused by several reasons, mostly political ones, and had impact on Ukrainian steel products producers and exporters (see figure 2.5).

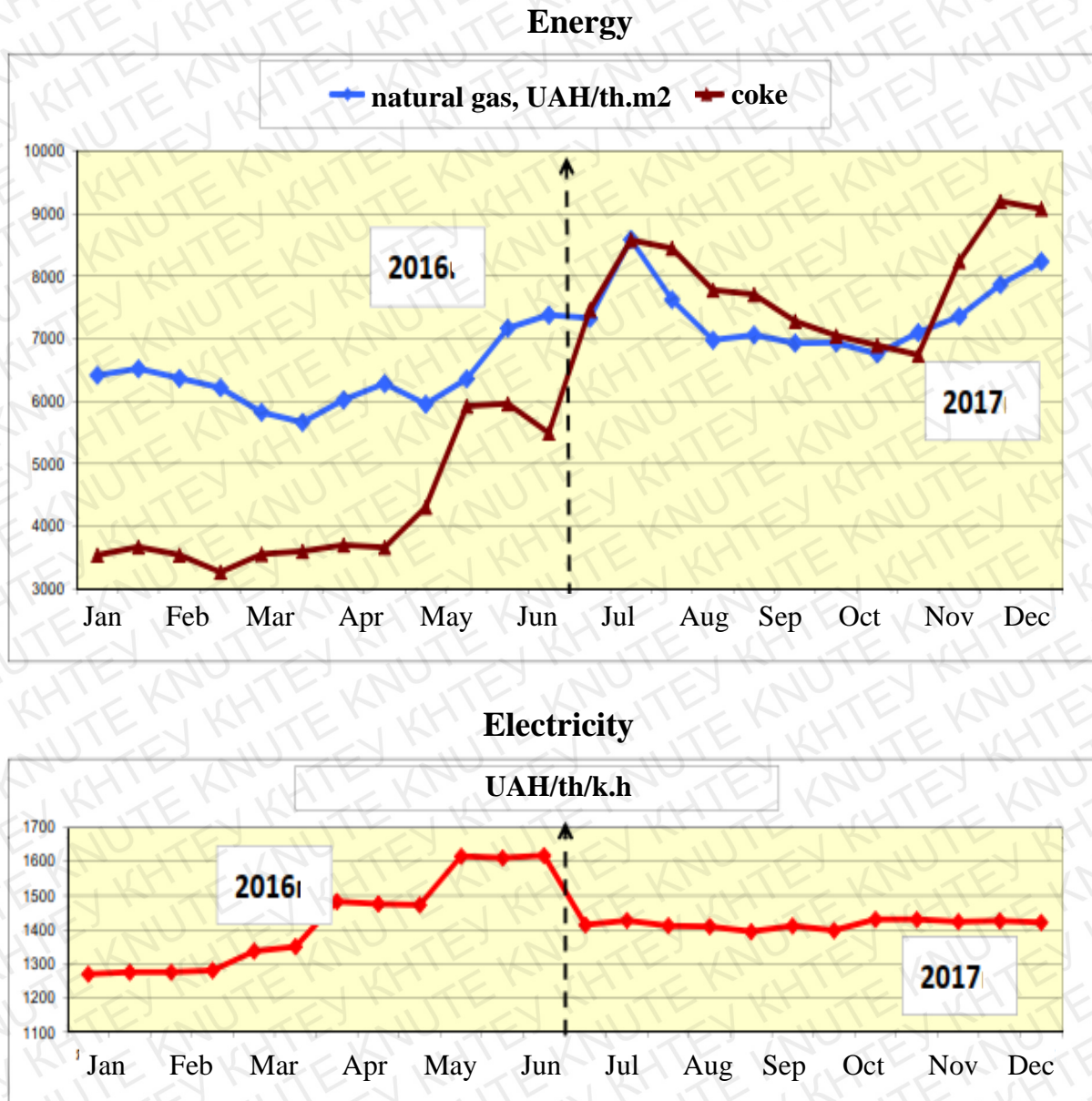


Figure 2.5 Dynamics on the Prices Change on the Raw Materials for the Ukrainian Steel Industry Companies in 2016-2017, UAH (without VAT) [19]

Comparing prices on the recourses and raw materials to the average market prices on the steel square continuous casting in 2016 the margin on the steel square continuous casting was the lowest for Elektrostal LLC.

To evaluate the level of Elektrostal LLC competitiveness position let's

compare it to the key players on the international steel market (see table 2.8 below). In order to do so we need to take into consideration not just product price factor, which is one of the most important factors on the steel market (for 0,4), but also quality characteristics (for 0,3), terms & speed of delivery (0,2) and product range (0,1).

Table 2.8

Elektrostal LLC competitiveness position evaluation on the international steel market, 2018

Key factor of success (KFS)	Significance of the KFS	Elektrostal LLC		Nanjing Iron and Steel Company		Ansteel Group		JSW Steel	
		Scores	Balanced score	Scores	Balanced score	Scores	Balanced score	Scores	Balanced score
1.Products price	0,4	5	2	4	1,6	4	1,6	3	1,2
2.Quality	0,3	4	1,2	4	1,2	5	1,5	5	1,5
3.Terms & speed of the delivery	0,2	2	0,4	2	0,4	4	0,8	3	0,6
4.Product range	0,1	2	0,2	5	0,5	3	0,3	4	0,4
Balanced total score	1	3,6		3,7		3,8		3,7	

Source: Developed by author based on Statista researches on the iron and steel companies [2]

From the table 2.9 it can be concluded that Elektrostal LLC competitiveness position balanced total score is lower than its' competitors have and is not high enough to compete with world steel market leaders such as Nanjing Iron and Steel Company, Ansteel group and JSW Steel.

Main reasons of such low score for the Elektrostal LLC are poor product range and unfavorable terms & speed of delivery.

The company produces only one type of steel square continuous casting with same standardized quality while other competitors produce different goods from

steel and their customers can order a range of products from one place, which gives them a competitive advantage on the market. Company Elektrostal LLC is a plant, which operates, using old equipment from USSR times, and this equipment can produce only one type of product for now [43]. The management of company states that it is pricy to re-set up existing equipment to produce other types of products and considering that company has a lot of loans to pay it is inconsistent for them to buy new equipment.

Terms of the delivery of Elektrostal LLC are mostly the same as for of the competitors; it is FOB (Incoterms)[25-33]. The difference is that for Elektrostal LLC it takes more time that competing companies need to deliver their steel goods to the port terminal. Elektrostal LLC does not have its' own trucks and railway carriages to deliver their products to port. Instead of it they always use a third-party provider of deliver services. Such delivery is not always fast, because of two main reasons:

- Not all third-counterparties in the delivery sector are reliable: sometimes even if Elektrostal LLC conducted a contract for the delivery at the last point service provider can refuse to deliver in case it currently has more profitable deal.
- The only provider of railway carriage services in Ukraine is government company Ukrzaliznytsya, which is the monopolist on the market and always challenges companies with high prices, new requirements and terms of delivery. For example, recently Ukrzaliznytsya established new rules for the delivery, when mostly only route delivery is available. These means that the carriage has a predetermined route along the stations through which delivery is carried out by Ukrzaliznytsya schedule.

All in all, these two factors above influence on the Elektrostal competitiveness position of the market the most even though company has one on the lowest prices on the steel square continuous casting market and is highly competitive by this factor. In the Part 3 we descried how to improve Elektrostal LLC competitiveness and how would it influence on the company competitiveness on the market overall.

Conclusions to Part 2

Competitiveness of enterprises is a multi-dimensional and relative notion without a universally approved definition. It is most commonly understood as the ability for rivalry against other market players. A competitive enterprise is capable of flexible and beneficial adaptation to changing operational conditions. In case of modern enterprises, competitiveness is a prerequisite for their survival and growth in the market. These requires an appropriate competitive potential, as well as formulating and implementing competitive strategies, observing the actions of competitors and forecasting their behavior [44].

Indicators of export efficiency of the Elektrostal LLC in 2014-2018 years of steel square continuous casting show the following:

- Net profit from export in 2014-2017 was decreasing both in UAH and USD except of 2017.
- Spending on in accordance with FOB port Mariupol in hryvna under analyzed five-year period were rising.
- Calculated effect from export was positive only in 2014. For the next three years it was always negative, and these dynamics was increasing.
- Coefficient of export efficiency dynamics was also negative.

To evaluate the Elektrostal LLC products' price competitiveness we analyzed the dynamics of price changes both for export and internal market. Then, we compared these prices to the average prices on steel continuous casting for FOB Black sea of CIS exporters. Elektrostal LLC price competitiveness analysis shows that its' products' prices were highly competitive to average prices at Ukrainian steel continuous casting market as well as on CIS and Russia steel continuous markets.

For Elektrostal LLC competitiveness position level we compared it to the key players on the international steel market. The analysis shows that that Elektrostal LLC competitiveness position balanced total score is lower than its' competitors have and is not high enough to compete with leading companies on the market. Main reasons of such low score for the Elektrostal LLC are poor product range and unfavorable terms & speed of delivery.

PART 3. METHODS OF ELEKTROSTAL LLC COMPETITIVENESS LEVEL IMPROVEMENT

3.1. Initiatives on the Enterprise Competitiveness on the International Metallurgical Products Market

In order to be successful in foreign markets, more significant and focused efforts must be made, while carefully adhering to the principles and methodology of marketing than in the internal market.

External markets place higher demands on the goods and services they offer. This is due to the tough technical and economic conditions of access to these markets, strong competition and the predominance of the buyer's market, which is a noticeable excess of supply over demand in most foreign markets [34-40].

From Part 2 of the analysis on the Elektrostal LLC enterprise competitiveness it can be concluded that Elektrostal LLC product (steel square continuous casting) is highly competitive from the price factor and quality.

Nevertheless, overall competitive position of analyzed enterprise on the international steel market is lower than of its' competitors and leaders of the market, because of poor product range and unfavorable terms & speed of delivery.

When developing methods of increasing Elektrostal LLC competitiveness on the international steel market we took into consideration the following factors on the Ukrainian steel market and business environment overall as well as limitations established by management.

1. Poor product range. Elektrostal LLC stock range is limited to one type of steel square continuous casting for export, which is made from a carbon steel. The quality of this product is determined by government standards on steel products quality.

In order to improve this competitiveness factor for the Elektrostal LLC might consider possibility to diversification of product range. These would have helped company to attract new clients and improve relationships with existing one by providing them exceptional client service. While other middle-market companies specialize in one typical product, Elektrostal LLC could offer its' clients possibility

to buy different steel products required for their further business and production activity made from various type of steel in one place – Elektrostal LLC.

On the one hand, such initiative will help company to become strategic partner of its' clients by reducing clients' delivery costs (when client needs to by range of steel products from different vendors) [41-46].

On the other hand, decision on diversifying Elektrostal LLC business is high-risk type of decision and could be unprofitable. Steel business is difficult and always costly to re-set up and diversificate. Elektrostal LLC operates on a plant based on usage of old USSR equipment. This equipment can produce only one type of steel square continuous casting. Readjustment of it is disadvantageous for the company.

First, readjustment requires up to 3-8 month depending on the difficulty. These requires stopping production, which is always high material losses for the company in the repairs period. Also, finding detail for such old equipment is a challenge on the market for all companies.

Then, if company decides to buy new machine-tools they won't work properly with old one, because technologies are too different.

New machine tools are pricy, qualified specialist required to set it up and modern machine tools for the steel products production not always available on the Ukrainian machine tools market, which mean they have to be imported causing more additional costs.

Discussing with Elektrostal LLC management our initiatives they established limitations on buying new equipment and readjustment of existing one because of reasons stated in the paragraph before.

One more point on it was that Elektrostal LLC does not have enough financial resources for such modernizations. Company has loans to pay and they cannot take more credits as it would affect companies cash flow. That is why management opinion is that it is inconsistent for Elektrostal LLC to buy new equipment or re-set up old one.

2. Terms & speed of delivery. Elektrostal LLC always delivers on the FOB basis (Incoterms) the same as its' competitors on the Black sea basis.

Factor which influences the speed of the delivery is a part of logistic chain to the port terminal. Elektrostal LLC uses a third-party provider of deliver services from plant to the terminal.

Ukrainian delivery market has special features. First, sometimes delivery companies are not reliable: there is a high demand of delivery services in Ukraine and lack of providers. Which means that delivery companies tend to change their mind and refuse to deliver even after the contract on the delivery is signed if they currently have more profitable deal with another client.

The only provider of railway carriage services in Ukraine is state monopolist company Ukrzaliznytsya. This enterprise regular rises challenges prices on its' services and establish new requirements with terms of delivery. Such requirements make the delivery process more complicated for the companies which do not have their own transport.

Limitations mentioned above by management of Elektrostal LLC and those which caused by policy of the monopolist cause that Elektrostal LLC cannot influence in the external factors and improve its' product range.

Company could buy the railway carriages to improve the speed of the delivery, but management refuse such decision because railway carriages are impossible to buy for the company now as it will affect its' cash flow in the current situation of variety of liabilities to pay.

To buy own transport Elektrostal LLC first need to manage it's accounts payable for the loans and then buy the carriages, but even own railway carriages will not positively influence on the speed of the dilevery if Ukrzaliznytsya always stricts terms of providing services.

Ukrzaliznytsya railway carriage estimate cost in 837,000 UAH. Elektrostal LLC needs not less than five such carriages considering the production volume to improve the delivery time. Also, two locomotives are required to schedule shifts for the delivery. Average Ukrzaliznytsya price on the one locomotive is 1,105,000 UAH.

Calculations for the two locomotives, five railway carriages are provided in the Table 3.1 below.

Table 3.1

Estimate Costs on Ukrazaliznytsya railway carriages, UAH

Cost item	UAH
Ukrazaliznytsya railway carriages (for 5 items)	4 185 000
Locomotives (for 2 items)	2 210 000
Total for five carriages	6 395 000

Source: Constructed by author.

In such difficult situation, the only way for Elektrostal LLC to improve its competitiveness position on the international market is to increase the company client's loyalty. Thus, could be reached by the defining marketing strategy on the international market.

Elektrostal LLC does not have any defined strategy on the international market. The company sells standardized product and can hardly influence on the prices. In such case, we propose to the Elektrostal LLC to use the deep penetration strategy using this strategy, the company continues to work with existing goods in existing markets.

The essence of the strategy of penetration: as quickly as possible to expand the presence and sale of existing products of the company in the market. In implementing such a strategy, the company should gradually strengthen its position in the market by fully embracing the market [47].

When working with a target customer, it is necessary to increase its loyalty and motivate current consumers to buy the company's products more often, in order to reach the maximum 100% market reach. When promoting a product, the company should strive to invest in building a strong relationship with the target customers; in reducing the switch to competing products; in building loyalty.

These results can be achieved by developing product recommendations and reviews, by developing meaningful product-level differences. In the Elektrostal LLC case these means to increase sales to Turkey, Egypt and Algeria.

In the process of strategy development, the company should consider the

situation in a complex and objectively analyze the external environment, which in a competent approach will allow to develop the right program of actions that will meet the market requirements and meet the goals that the company wants to achieve. Conducting high-quality marketing research and a well-organized organization of marketing department in an enterprise that meets the modern requirements, are important components in the implementation of marketing strategy [48].

It is difficult to recalculate all existing sources of information on the state of foreign markets, as the experience of practical activity of employees will establish the necessary connections and relationships, will develop proven and reliable sources of information. We calculated the cost of marketing research (see table. 3.2).

Table 3.2

Estimate Costs of Conducting Marketing Research, UAH

Cost item	UAH
Project manager salary	55 000
Marketers salary (3 employees)	45 000
Cost of marketing research materials	10 000
Other expenses	3 000
Total	113 000

Source: Constructed by author.

The result of the conducted marketing analysis is the information on the basis of which the management decision is made, which is the basis for further realization and obtaining the end result. Also, we propose start using specialized software for sales management. There are specialized marketing software products which are intended for processing and analysis of information for the purpose of its further use in making strategic marketing decisions of planning and forecasting of enterprise development [49].

Popular software which suites the size of Elektrostal LLC business and steel industry are cloud solutions: Pardot on the base of Salesforce cloud and Sales Expert. These solutions are used by market leaders in the world steel products production

sector. They designed in way to collect more information on the customer base, effectively analyze such information. Thus, helps to understand clients' needs better and to increase clients' loyalty to the company.

Also, software on marketing and sales provides functionality to speed up monitoring of sales orders and execution of the deal from order to cash. The main software characteristics are presented in the table 3.3.

Table 3.3

Characteristics and Estimate Costs of Marketing Software

Parameters	Pardot	Sales Expert
Group of users	Sales department	Sales department
Characteristics	Market analysis, competitiveness, forecast and analysis of sales, risks, analysis of marketing effectiveness.	Creating an effective product marketing system, ensuring the convenience of sales managers; evaluating the effectiveness of marketing decisions; ensuring the protection of the client base of the company
Functionality	Optimal allocation of marketing budget through multi-criteria optimization procedures, customer management	Designed to maintain a client base and record the history of work with each client, as well as to analyze the accumulated information.
Estimate cost, UAH	625,000	250,000

Source: Constructed by author.

The Pardot system is primarily designed to support decision-making that comes from marketing planning and performance analysis. With this system, the following tasks of strategic marketing planning at the enterprise are solved: analysis of the external environment, evaluation of the activity of the organization and identification of future opportunities and threats; defining corporate mission, goals and strategies; setting goals and developing a strategy for each business unit that is part of the organization.

The CRM Sales Expert system enables complex solution of sales, service and

marketing tasks, implementation of the normative model of the company's activity in the field of sales and technology of close interaction of the relevant services, effectively manage the sales process and ensure that the information necessary to make decisions about adjusting the marketing activity of the company is obtained.

CRM Software has a number of advantages for the company:

- **Centralized Storage:** As mentioned earlier, one of the key benefits of the CRM software is the centralized storage. The data is accessible to any sales employee who needs of it.
- **Scalable Solution:** As a business grows, its customer database grows with it. The customer is the foundation on which the organization grows; the more customers are satisfied with the products and services, the more chances of the organization becoming a success. CRM software has an option of growing with the organization. Businesses with any budget and of varying size can use it to their advantage.
- **Mining of Data:** CRM not only stores data but uses analytical tools to arrive at some excellent findings. This can help an organization evaluate its workings and identify the segments, where there may be more scope for improvement.
- **Accessibility:** The best CRM not only allows multiple teams in the same organization to access the data but with the advent of cloud-based platforms, which most CRM software are preferring over time, it is now possible to do the same from multiple locations through mobiles or laptops, for people with authorized access.
- **Economical:** A CRM system helps bring down of running an organization manifold. It reduces labour and saves a lot of time.

The use of these programs by the enterprise will enable the analysis of the market and forecast the future development of the enterprise. Considering the functionality of both systems and estimate costs, our initiative for Elektrostal LLC is to buy and implement the Sales Expert system.

3.2. Effectiveness Evaluation of Proposed Initiatives

Interest of this work is the study of export activity of Elektrostal LLC as well as evaluation of company's competitiveness on the international steel market.

For the purposes of the analysis we conducted a high-level market research on the world steel market, evaluated place of Ukraine in the steel business. Then, we conducted analysis on Elektrostal LLC financial statements, management reports of the foreign economic activity and compared information on the enterprise and its' products characteristics with market one.

Comparison showed the following:

- Elektrostal LLC steel square continuous casting has competitive advantage on the prices on the FOB Black Sea basis. The same conclusion was made based on the price's comparison to the leading companies on the steel market;
- Overall competitiveness position on the steel market of the enterprise is lower than average comparing to Elektrostal LLC competitors mainly because of two reasons: poor product range and slow delivery.

Management of the company put us to the limitation on the initiatives related to diversification go the product range as this requires financial resources and stopping of production activity for 3-8-month company cannot afford in the its' current financial situation [50].

Taking into account information above in the Paragraph 3.1 we worked on the initiatives related to the speed of delivery improvement and marketing initiatives.

Our main initiatives are stated below:

- 1) Conducting marketing research;
- 2) Implementation of the sales software (Sales Expert);
- 3) Purchase of railway carriages.

Elektrostal LLC is old well-known enterprise on the Ukrainian steel market and in paragraph 2.2 we have evaluated the efficiency of export operations and the marketing strategies of the enterprise.

However, we consider it necessary to evaluate the forecasted efficiency of the enterprise in case they will implement proposed initiatives in the near future. Efficiency of marketing activity of the enterprise is inextricably linked with efficiency of realization of its main activity - sales of products in the international and domestic markets.

In the conditions of development of market relations, the effectiveness of financial and economic activity of the enterprise depends on the financial planning, thus, the direct role is given to forecasting the financial results of the enterprise.

In order to counteract the risk of non-profitability and improve financial performance, the profit of the enterprise requires constant analysis and forecasting. Therefore, the issue of defining and applying an enterprise-level forecasting model is important.

In the absence of forecast data, the enterprise is prone to incorrect maneuvers, which can lead to the loss of market positions, unstable financial position or even bankruptcy. The need for financial forecasting is reflected in the definition of financial analysis, because it is a process based on the study of the financial status of the enterprise, its past performance to evaluate future conditions and performance.

In paragraph 3.1. we offered recommendations to improve the marketing support of FEA and improving terms & speed of delivery for Elektrostal LLC customers. CRM or Customer Relationship Management Software is becoming hugely popular among businesses of all sizes. It enables an organization not only to store the data they collect every day, but to systematically arrange it and make it accessible to the multiple teams in the organization. Marketing software is now necessary to forecast the performance of the enterprise, considering those proposed marketing measures. The CRM software is extremely valuable in tracking sales, identify trends, respond to consumer query and feedback, schedule meetings and achieve much, much more.

Railway carriages will speed up delivery to the port of steel square continuous casting for Elektrostal LLC clients. Calculated the estimate costs required for the proposed initiatives are provided in the table 3.4 below.

Table 3.4

Expenses on Proposed Initiatives of Elektrostal LLC

Cost item	Price, UAH
Expenses on marketing research	113 000
Expenses on implementing the sales software (Sales Expert)	250 000
Expenses on buying railway carriages	6 395 000
Total	6 758 000

Source: Constructed by author.

In the practice of strategic marketing, the expert method is widely used to forecast strategy results on marketing initiatives. The Delphi method is a forecasting process framework based on the results of multiple rounds of questionnaires sent to a panel of experts. Several rounds of questionnaires are sent out to the group of experts, and the anonymous responses are aggregated and shared with the group after each round.

The advantage of the expert method is the relative simplicity and applicability for forecasting almost any situation, including in the context of incomplete information.

The same expert method we used for the initiative to purchase railway carriages to evaluate the influence of this purchase on the delivery speed as this is connected not only to the internal factors but also to the Ukrzaliznytsya state railway company policy, cause such situation on the delivery market in Ukraine with the railway monopolist makes it impossible to forecast the results of the railway carriages purchase on the time slot delivery to the port terminal, which directly influences on both: speed of the delivery and establishment of long-term relationships with customers [51].

Forecasts of two experts in the field of strategic marketing and one expert in the railway situation on the Ukrainian market of the delivery services have made the forecast of the market share of Elektrostal LLC in the Turkey and Egypt markets for 2020-2022 years, considering the presented initiatives in the table 3.5.

Table 3.5

Forecast on Market Share of Elektrostal LLC for 2020-2022 years

Expert	2020	2021	2022
1 st	2,1	3,1	4,2
2 nd	2,0	3,4	4,5
3 rd	2,5	3,8	4,7
Average forecast value	2,2	3,4	4,5

Source: Constructed by author based on experts' responses.

Thus, according to the table 3.5 the market share of Elektrostal LLC on the Turkey and Egypt market on the average of three experts will be: in 2020 = 2.2%; in 2021 = 3.4%; in 2022 = 4.5%. Expert analysis shows the effectiveness on proposed initiatives for Elektrostal LLC.

In the same way, we forecasted the level of effectiveness of the proposed marketing penetration strategy for 2020-2022 (see Table 3.6).

Table 3.6

Forecast on Effectiveness of Elektrostal LLC of propose initiatives for improvement for 2020-2022

Expert	2020	2021	2022
1 st	1,70	2,0	3,0
2 nd	1,85	2,10	3,15
3 rd	1,95	2,25	3,30
Average forecast value	1,83	2,12	3,15

Source: Constructed by author based on experts' responses.

After forecasting the level of effectiveness of the marketing strategy of Elektrostal LLC in 2020-2022, we observe the following:

- in 2020, the effectiveness of marketing strategy is 1.83;
- in 2021, the effectiveness of the marketing strategy is 2.12;
- in 2022, the effectiveness of the marketing strategy is 3.15.

The next step is to forecast export indicators of Elektrostal LLC for 2020-2022 (see Table 3.7).

Table 3.7

Forecasted Export Efficiency Indicators on Continuous Steel Square Casting of Elektrostal LLC (FOB Mariupol) for 2020-2022, thousands UAH

Indicator	Previous data	Forecast			Absolute deviation		
	2018	2019	2020	2021	2019-2018	2020-2019	2021-2020
Net profit from export	3,765,423	3,834,331	3,915,618	4,038,960	68,907	81,287	123,341
Cost of finished products	3,523,357	3,587,835	3,663,897	3,779,309	64,477	76,062	115,412
Spending in accordance with FOB port Mariupol:							
loading	76,025	77,417	79,058	81,548	1,391	1,641	2,490
transportation to main carrier	62,812	639,621	65,318	67,375	1,149	1,355	2,057
administrative expenses	14,000	14,256	14,558	15,017	256	302	458
Financial expenses (% per loan)	82,312	83,819	85,596	88,292	1,506	1,776	2,696
Total cost of finished products	3,758,509	3,827,290	3,908,428	4,031,544	68,780	81,138	123,115
Effect from export	6,914	7,041	7,190	7,416	126	149	226
Coefficient of export efficiency	1.00	1.02	1.04	1.07	0.02	0.02	0.03

Source: Constructed by author.

Performed analysis by Delphi judgmental technique polls a panel of experts and gathers their opinions on specific topics. The forecasting unit decides the experts whose opinions it wants to know [52].

Each expert does not know who the others are. The experts make their forecasts and the coordinator summarizes their responses. Here, the experts expressed their views independently without knowledge of the responses of other experts.

On the basis of anonymous votes, a pattern of response to future events can be determined. His technique is used to reduce the “crowd effect” or “group think” in which everyone agrees with “the experts”, when all are in the same room.

By our analysis on implementing initiatives which will influence on forecasted export efficiency of the company in the table 3.7 we suggest Elektrostal LLC implements proposed initiatives in the 2020 – 2022 years period.

Concerning the export performance indicators of steel square continuous casting of Elektrostal LLC in 2020 - 2022, the export efficiency ratio will increase from 1.00 in 2018 to 1.07 in 2021. This would happen by increasing the volume of contracts which can be achieved by revitalizing marketing activities, actively implementing marketing activities.

Forecasting the export activity of Elektrostal LLC for the next 3 years, we can conclude that the export efficiency will increase, and the implementation of marketing measures is a rational and profitable management decision.

All in all, proposed initiatives for Elektrostal LLC for improvement of company’s competitive position, particularly, terms & speed of delivery by buying five railway carriages and two locomotives; improving clients’ loyalty by optimization of proceeding orders and better understanding of clients’ needs by implementation of CRM software, - will positively influence on Elektrostal LLC business activity according to the forecasted export efficiency.

Conclusions to Part 3

In this section, we have provided recommended actions that will help to market the FEA.

We proposed Elektrostal LLC to use the deep penetration marketing strategy. Using this strategy, the company continues to work with existing goods in existing markets. For the Elektrostal LLC case we proposed to use this strategy on the Turkey and Egypt markets as these are countries to where the enterprise sells half of exported products.

Also, we proposed company to improve terms & speed of the delivery by purchasing railway carriages and locomotives to reduce the state railway delivery monopolist company impact n Elektrostal LLC business activity and as result, relationships with clients.

For the Elektrostal LLC we proposed the following initiative to improve its' FEA activity:

- 1) Conduct a marketing research;
- 2) Implement the CRM system;
- 3) Purchase railway carriages and locomotives.

Developed activities will allow the company to:

- increase the number of customers and increase sales;
- strengthen the competitiveness of the enterprise;
- create tools for mass consumer involvement;
- develop effective pricing and product policies;
- to improve the quality of customer service;
- speed up the delivery time of products.

After evaluation of effectiveness on proposed initiatives we concluded that after implementation of it, the export efficiency ratio will increase from 1.00 in 2019 to 1.07 in 2022.

Forecasting the export activity of Elektrostal LLC for the next 3 years, we can conclude that the export efficiency will increase and the implementation of marketing measures is a rational and profitable management decision.

CONCLUSIONS AND PROPOSITIONS

The global steel sector is going through a period of improved growth after years of struggle in the face of enormous excess steelmaking capacity. The steel sector is a highly competitive market, but operating conditions improved in 2018.

Key trends in the steel industry are the following:

- 1) The global steel sector has returned to profitability on a convergence of positive market fundamentals
- 2) Steelmakers are focused on value creation strategies

Ukraine is in Top 20 Steel-producing countries in the world on the 13th place. Ukraine is also listed in the world major exporters of steel in the 2018 ranked 10th.

Elektrostal enterprise was established in 2004 in the city Kurakhovo, Donetsk region. The company employs about 1000 workers. The main product of Elektrostal LLC for producing and export is Square continuous casting.

The analysis of financial and economic activity of Elektrostal LLC shows that the business activity of the Elektrostal LLC is not profitable. The cost of producing goods is high which is the reason why the margin is low.

Also, the company uses long-term liabilities to finance the production of goods, spends large amount of financial resources for marketing and transporting goods to the customers but still cannot sale enough amount of goods to pay to suppliers.

Competitiveness of enterprises is a multi-dimensional and relative notion without a universally approved definition. It is most commonly understood as the ability for rivalry against other market players. A competitive enterprise is capable of flexible and beneficial adaptation to changing operational conditions. In case of modern enterprises, competitiveness is a prerequisite for their survival and growth in the market. These requires an appropriate competitive potential, as well as formulating and implementing competitive strategies, observing the actions of competitors and forecasting their behavior.

Indicators of export efficiency of the Elektrostal LLC in 2014-2018 years of

steel square continuous casting show the following:

- Net profit from export in 2014-2017 was decreasing both in UAH and USD except of 2017.
- Spending on in accordance with FOB port Mariupol in hryvna under analyzed five-year period were rising.
- Calculated effect from export was positive only in 2014. For the next three years it was always negative, and these dynamics was increasing
- Coefficient of export efficiency dynamics was also negative.

To evaluate the Elektrostal LLC products' price competitiveness we analyzed the dynamics of price changes both for export and internal market. Then, we compared these prices to the average prices on steel continuous casting for FOB Black sea of CIS exporters. Elektrostal LLC price competitiveness analysis shows that its' products' prices were highly competitive to average prices at Ukrainian steel continuous casting market as well as on CIS and Russia steel continuous markets.

For Elektrostal LLC competitiveness position level we compared it to the key players on the international steel market. The analysis shows that that Elektrostal LLC competitiveness position balanced total score is lower than its' competitors have and is not high enough to compete with leading companies on the market. Main reasons of such low score for the Elektrostal LLC are poor product range and unfavorable terms & speed of delivery.

For modern enterprises, competitiveness is a prerequisite for their survival and growth in the market. Overall, Elektrostal LLC competitiveness analysis shows that Elektrostal LLC products' prices were highly competitive to average prices at Ukrainian steel continuous casting market as well as on CIS and Russia steel continuous markets.

After conducting the analysis on Elektrostal LLC business activity and factors of influence we proposed Elektrostal LLC to use the deep penetration marketing strategy.

Using this strategy, the company continues to work with existing goods in existing markets. For the Elektrostal LLC case we proposed to use this strategy on

the Turkey and Egypt markets as these are countries to where the enterprise sells half of exported products.

Also, we proposed company to improve terms & speed of the delivery by purchasing railway carriages and locomotives to reduce the state railway delivery monopolist company impact n Elektrostal LLC business activity and as result, relationships with clients.

For the Elektrostal LLC we proposed the following initiative to improve its' FEA activity:

- 1) Conduct a marketing research;
- 2) Implement the CRM system.

Efficiency of marketing activity of the enterprise is inextricably linked with efficiency of realization of its main activity - sales of products in the international and domestic markets. Of particular interest in this work is the study of export activity of Elektrostal LLC.

In the absence of forecast data, the enterprise is prone to incorrect maneuvers, which can lead to the loss of market positions, unstable financial position or even bankruptcy.

The need for financial forecasting is reflected in the definition of financial analysis, because it is a process based on the study of the financial status of the enterprise, its past performance to evaluate future conditions and performance. For the forecasting we have use the expert method. The next step was to forecast export indicators of Elektrostal LLC for 2020-2022.

Performed analysis has shown that after implementation of proposed marketing initiatives, the export efficiency ratio will increase from 1.00 in 2018 to 1.07 in 2021.

Forecasting the export activity of Elektrostal LLC for the next 3 years, we can conclude that the export efficiency will increase and the implementation of marketing measures is a rational and profitable management decision.

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ADDENDUMS

Addendum A

Table A 1.1

Top 20 steel-producing countries in 2018

Rank	Country	Tonnage
1	China	928.3
2	India	106.5
3	Japan	104.3
4	United States	86.6
5	South Korea	72.5
6	Russia	71.7
7	Germany	42.4
8	Turkey	37.3
9	Brazil	34.9
10	Italy	24.5
11	Iran	24.5
12	Taiwan, China	23.2
13	Ukraine	21.1
14	Mexico	20.2
15	France	15.4
16	Spain	14.3
17	Vietnam	14.1
18	Canada (e)	12.9
19	Poland	10.2
20	Belgium	8.0

Source: World Steel in Figures [1]

Note: e = estimate

Top steel-producing companies 2018

Rank	Company name	Tonnage 2018 (Mt.)
1	ArcelorMittal	96.42
2	China Baowu Group	67.43
3	Nippon Steel Corporation (1)	49.22
4	HBIS Group (2)	46.80
5	POSCO	42.86
6	Shagang Group	40.66
7	Ansteel Group	37.36
8	JFE Steel Corporation	29.15
9	Jianlong Group	27.88
10	Shougang Group	27.34
11	Tata Steel Group (3)	27.27
12	Nucor Corporation	25.49
13	Shandong Steel Group	23.21
14	Valin Group	23.01
15	Hyundai Steel Company	21.88
16	Maanshan Steel	19.64
17	Novolipetsk Steel (NLMK)	17.39
18	JSW Steel Limited	16.83
19	IMIDRO (4)	16.79
20	Steel Authority of India Ltd. (SAIL)	15.93
21	Benxi Steel	15.90
22	China Steel Corporation	15.88
23	Gerdau S.A.	15.80
24	Fangda Steel	15.51
25	Techint Group (5)	15.38
26	United States Steel Corporation	15.37
27	Baotou Steel	15.25
28	Rizhao Steel	14.95

Continued Table B 2.1

29	Liuzhou Steel	13.53
30	EVRAZ	13.02
31	Magnitogorsk Iron & Steel Works (MMK)	12.66
32	thyssenkrupp	12.58
33	CITIC Pacific	12.55
34	Severstal	12.04
35	Sanming Steel	11.68
36	Shaanxi Steel	11.38
37	Jingye Steel	11.25
38	Anyang Steel	10.97
39	Taiyuan Steel	10.70
40	Jinxi Steel * (also known as China Oriental, partly owned by ArcelorMittal)	10.33
41	Nanjing Steel	10.05
42	Metinvest Holding	9.37
43	Xinyu Steel	9.36
44	Tsingshan Stainless Steel	9.29
45	ERDEMIR Group	9.14
46	Steel Dynamics, Inc.	8.92
47	Zenith Steel	8.70
48	SSAB	8.03
49	Tianjin Steel	7.77
50	Donghai Special Steel	7.61

Source: World Steel in Figures [1]

For worldsteel members, the data was sourced from the official tonnage declaration. For Chinese companies, the official CISA tonnage publication was used. In cases of more than 50% ownership, 100% of the subsidiary's tonnage is included. In cases of 30% to 50% ownership, pro-rata tonnage is included. Unless otherwise specified, less than 30% ownership is considered a minority interest and therefore not included.

Table C 3.1

Elektrostal LLC balance sheets cumulative 2014-2018, thousands UAH

Balance sheet article	2014	2015	2016	2017	2018
I. Non-current assets					
Intangible assets	-	-	-	-	-
Historical cost	53	53	53	50	-
Accumulated amortisation	(53)	(53)	(53)	(50)	-
Incomplete capital investment	3,857	6,103	5,067	670	341
Property, plant and equipment	218,350	179,751	163,474	133,047	185,342
Historical cost	520,633	521,529	525,304	412,862	436,987
Accumulated depreciation	302,283	341,778	361,830	279,815	251,645
Long-term financial investments	-	5	11	17	17
Long-term account receivables	25,269	23,200	23,000	23,000	23,000
Deferred tax assets	-	-	-	-	-
Total non-current assets	247,476	209,059	191,552	156,734	208,700
II. Current assets					
Inventories	193,161	223,975	272,615	371,227	178,769
Account receivables for goods	204,053	801,604	170,630	268,398	123,403
Account receivables for:	414,114	58,916	93,773	52,338	31,107
advances	329,227	24,938	35,910	31,162	18,054
with budget	83,443	33,978	57,863	21,176	13,053
Prepaid income tax	4	4	4	4	4

Source: Constructed by author based on the Elektrostal LLC balance sheet reports 2014-2018 years, thousands UAH.

Balance sheet article	2014	2015	2016	2017	2018
by calculations from accrued income	1,444	-	-	-	-
according to calculations from internal calculations	-	-	-	-	-
Promissory notes received	-	-	-	3,593	69,562
Other account receivables	22,640	387,231	390,427	1,654,256	1,341,529
Cash and equivalents	214,348	277,882	363,105	85	64
Prepayments	20	22	30	29	-
Other current assets	1,085	1,583	10,826	17,245	11,271
Total current assets	1,049,421	1,751,213	1,301,406	2,367,171	1,755,705
III. Non-current assets held for sale and disposal groups					
Balance	1,296,897	1,960,272	1,492,958	2,523,905	1,964,405
I. Equity					
Share capital	35,000	35,000	35,000	35,000	35,000
Reserved capital	-	-	-	-	-
Retained earnings	(638,700)	(1,280,865)	(1,590,889)	(1,446,778)	(1,302,667)
Total equity	(603,700)	(1,245,865)	(1,555,889)	(1,411,778)	(1,267,667)
II. Long-term commitments and collateral					
Long-term bank credits	1,092,006	1,614,322	1,808,756	1,932,154	1,835,251
Other long-term liabilities	62,679	264,995	264,995	264,995	264,995
Total long-term commitments and collateral	1,154,685	1,879,317	2,073,751	2,197,149	2,100,246

Source: Constructed by author based on the Elektrostal LLC balance sheet reports 2014-2018 years, thousands UAH.

Continuing - Addendum C

Continued Table C 3.1

Balance sheet article	2014	2015	2016	2017	2018
III. Current liabilities and collateral					
Short-term bank credits	124,130	179,729	203,619	210,181	207,344
Promissory notes issued	-	-	-	1,128	-
Account payables for:	559,055	967,496	467,471	1,124,963	411,537
long-term liabilities	-	-	-	-	-
goods and services	463,431	960,462	452,879	722,315	387,374
tax liabilities	837	206	925	572	-
incl. income tax	-	-	-	-	-
insurance calculations	1,393	597	527	-	-
payroll calculations	2,007	1,182	1,799	4,412	5,178
Account payables for advances received	91,387	5,049	11,341	397,664	18,985
Current accounts payable on accounts with participants	-	-	-	-	-
urrent accounts payable from internal payments	-	-	-	-	-
Provisions	-	-	54,232	-	-
Deffered income	-	-	-	-	-
Other current liabilities	62,727	179,595	304,006	402,262	512,945
Total current liabilities and collateral	745,912	1,326,820	975,096	1,738,534	1,131,826
Balance	1,296,897	1,960,272	1,492,958	2,523,905	1,964,405

Source: Constructed by author based on the Elektrostal LLC balance sheet reports 2014-2018 years, thousands UAH.

**Elektrostal LLC Reports on Financial results cumulative 2014-2018,
thousands UAH**

Financial results article	2014	2015	2016	2017	2018
Revenue	2,360,176	2,373,740	2,402,003	4,260,813	2,789,543
Cost of sales	(1,816,034)	(2,184,004)	(2,334,973)	(3,954,869)	(2,533,410)
Gross profit	544,142	189,736	67,030	305,944	256,133
Other operating income	61,501	223,130	140,795	601,660	211,893
Administrative expnces	(4,332)	(5,227)	(11,545)	(16,071)	(14,070)
Selling expences	(82,576)	(106,973)	(124,486)	(168,717)	(87,827)
Other operating income	(65,116)	(314,365)	(70,543)	(346,390)	(267,207)
Operating income	453,619	(13,699)	1,251	376,426	98,922
Other income	83,191	291,936	181,996	83,592	255,304
Financial expenses	(67,027)	(86,810)	(95,670)	(92,525)	(93,546)
Other expenses	(594,675)	(833,935)	(397,601)	(223,382)	(201,480)
Financial result before tax	(124,892)	(642,165)	(310,024)	144,111	59,200
Net income	(124,892)	(642,165)	(310,024)	144,111	59,200
Elements of operational expenses					
Material expences	1,782,140	1,989,907	2,261,708	4,412,315	2,320,753
Salary expences	38,981	34,928	39,823	75,344	93,267
Social insurance expences	15,248	13,900	9,260	16,971	1,338
Amortization and deprecialtion	39,584	39,495	20,052	14,234	29,943
Other operationf expences	353,605	449,301	473,958	632,438	457,213
Total	2,229,558	2,527,531	2,804,801	5,151,302	2,902,514

Source: Constructed by author based on the Elektrostal LLC financial results reports 2014-2018 years, thousands UAH.

Crude steel production in the World in 1950-2018 years, Mt

Years	World (Mt.)
1950	189
1960	347
1965	456
1970	595
1975	644
1980	717
1985	719
1990	770
1995	753
2000	850
2001	852
2002	905
2003	971
2004	1063
2005	1148
2006	1259
2007	1348
2008	1343
2009	1239
2010	1433
2011	1538
2012	1560
2013	1650
2014	1669
2015	1620
2016	1627
2017	1730
2018	1808

Source: World Steel in Figures [1]

Results of financial analysis of Elektrostal LLC: Profitability indicators

1		Profitability indicators								
Type of indicators/ ratios		Value					Relative deviation			
		2014	2015	2016	2017	2018	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
1	Return on Assets (ROA)	-1.92	-9.30	-3.86	1.61	1.51	240.19	-36.60	-127.49	-48.16
2	Return on Equity (ROE)	-	-	-	-2.69	-2.33	149.11	-61.33	-151.23	-58.86
3	Return on Sales (ROS)	-5.29	-27.05	-12.91	3.38	2.12	411.34	-52.27	-125.56	348.79
4	Operating Profit (EBIT)						-103.02	-108.62	17560.00	155.38
	Margin (OPM)	19.22	-0.58	0.05	8.83	3.55				
5	Operating ROA	34.98	-0.70	0.08	14.91	5.04	-102.00	-111.43	18537.50	-69.75
6	Net Profit Margin (NPM)	-5.29	-27.05	-12.91	3.3	2.12	411.34	-52.27	-126.18	338.17

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table F 6.2

Results of financial analysis of Elektrostal LLC: Efficiency ratios

2		Efficiency ratios								
Type of indicators/ ratios		Value					Relative deviation			
		2014	2015	2016	2017	2018	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
1	Inventory Turnover Ratio	x	11.38	9.67	13.24	10.14	x	-15.03	36.92	-84.37
2	Accounts Receivable Turnover	x	4.72	4.94	19.41	14.24	x	4.66	292.91	-86.40
3	Current Asset Turnover	x	1.70	1.57	2.32	1.35	x	-7.65	47.77	-91.81
4	Non-current Asset Turnover	x	10.40	11.99	24.47	15.27	x	15.29	104.09	-89.37
5	Asset Turnover Ratio	x	1.46	1.39	2.12	1.24	x	-4.79	52.52	-91.98
6	Accounts Payable Turnover	x	3.11	3.35	5.35	3.63	x	7.72	59.70	-90.65
7	Working Capital Turnover	x	6.52	6.40	8.92	4.45	x	-1.84	39.38	-93.27

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table F 6.3

Results of financial analysis of Elektrostal LLC: Cost estimates

3		Cost estimates												
Type of indicators/ratios		Value, ten thousands UAH					Absolute deviation (+/-)				Relative deviation			
		2014	2015	2016	2017	2018	2015-2014	2016-2015	2017-2016	2018-2017	2015/2014	2016/2015	2017/2016	2018/2017
1	Balance Value (BV)	550	633	517	785	832	83	-115	267	9	14.97	-18.25	51.66	1.27
2	Net Cash	(531)	(1,048)	(611)	(1,738)	(1,131)	-517	436	-1,126	611	97.33	-41.66	184.06	-35.19
4	Working Capital (WC)	303	424	326	628	623	120	-98	302	27	39.83	-23.11	92.65	4.38
5	Market Capitalization (MC)	0.06	0.06	0.07	0.04	0.04	0	0.01	-0.03	0.00	0.00	16.67	-42.86	0.00

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table F 6.4

Results of financial analysis of Elektrostal LLC: Liquidity ratios

4		Liquidity ratios								
Type of indicators/ ratios		Value					Relative deviation			
		2014	2015	2016	2017	2018	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
1	Current Ratio	1.41	1.32	1.33	1.36	1.55	-6.38	0.76	2.26	16.18
2	Quick Ratio	1.15	1.15	1.06	1.15	1.39	0.00	-7.83	8.49	37.39
3	Cash Ratio	0.29	0.21	0.37	0.00	0.00	-27.59	76.19	-100.00	x
4	Inventory Turnover Period	31.81	37.66	48.25	23.23	11.54	15.31	20.28	-23.23	-99.90
5	Accounts Receivable Turnover Period	76.70	73.72	32.90	16.55	7.96	290.65	-78.97	-11.30	-7.67
6	Working Capital	303,509	424,393	326,310	628,637	623,879	39.82	-23.11	92.65	-0.75

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table F 6.5

Results of financial analysis of Elektrostal LLC: Financial strength ratios

5		Financial strength ratios								
Type of indicators/ ratios		Value					Relative deviation			
		2014	2015	2016	2017	2018	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
1	Debt to Total Assets	745,912	1,326,820	975,097	1,738,534	1,131,827	17.24	-4.41	6.15	-14.49
2	Financial Leverage (DSE)	745,910	1,326,818	975,094	1,738,532	1,131,824	-14.52	-40.57	95.24	-32.52
3	Capital Multiplier (EM/ATSE)	(2.15)	(1.57)	(0.96)	(1.79)	(1.55)	-26.98	-38.85	86.46	-20.67

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table F 6.6

Financial results dynamics on Elektrostal LLC

6		Growth ratios												
Type of indicators/ ratios		Value, ten thousands UAH					Absolute deviation (+/-)				Relative Deviation			
		2014	2015	2016	2017	2018	2015- 2014	2016- 2015	2017- 2016	2018- 2017	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
1	Revenue	2,360	2,373	2,402	4,260	384	13	29	1,858	(3,876)	1.01	1.01	1.77	0.09
2	Total Operational Revenue	2,421	2,596	2,542	4,862	696	175	(54)	2,320	(4,166)	1.07	0.98	1.91	0.14
3	Gross Profit	544	189	67	305	50	(355)	(122)	238	(255)	0.35	0.35	4.56	0.17
4	Operational Income	4,781	4,970	4,944	9,123	1,080	189	(26)	4,179	(8,043)	1.04	0.99	1.85	0.12
5	Net Income	5,325	5,160	5,011	9,429	1,131	(165)	(149)	4,418	(8,298)	0.97	0.97	1.88	0.12

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F

6		Growth ratios												
Type of indicators/ ratios		Value					Absolute deviation (+/-)				Relative Deviation			
		2014	2015	2016	2017	2018	2015-2014	2016-2015	2017-2016	2018-2017	2015/2014	2016/2015	2017/2016	2018/2017
6	Accounts Payable	559,055	967,496	467,471	1,124,963	406,367	408,441	(500,025)	657,492	(718,596)	1.73	0.48	2.41	0.36
7	Inventory	193,161	223,975	272,615	371,227	34	30,814	48,640	98,612	(371,193)	1.16	1.22	1.36	0.00
8	Property, Plant and Equipment	218,350	179,751	163,474	133,047	115,549	(38,599)	(16,277)	(30,427)	(17,498)	0.82	0.91	0.81	0.87
9	Total Assets	1,296,897	1,960,272	1,492,958	2,523,905	1,922,025	663,375	(467,314)	1,030,947	(601,880)	1.51	0.76	1.69	0.76
10	Balance Value	550,985	633,452	517,862	785,371	795,369	82,467	(115,590)	267,509	9,998	1.15	0.82	1.52	1.01

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum F
Table G 7.1

Export of steel square continuous casting of Elektrostal LLC by countries, 2014-2018, UAH and USD

Country	2014			2015			2016			2017			2018		
	tonnes	UAH	\$	tonnes	UAH	\$	tonnes	UAH	\$	tonnes	UAH	\$	tonnes	UAH	\$
Algeria	4,787	25,113	2,307	14,786	128,861	5,325	9,970	68,635	2,692	69,238	720,515	27,224	70,556	703,432	26,740
Bulgaria	21,833	141,903	10,180	20,881	176,634	7,746	20,63	149,621	5,79	20,642	193,68	7,172	20,643	205,807	7,823
Egypt	174,924	1,102,666	84,362	116,641	774,725	37,914	52,062	335,116	13,08	98,191	967,679	36,431	102,004	1,016,960	38,659
Italy	7,008	40,269	3,427	9,650	68,516	3,194	10,000	67,103	2,700	31,607	347,136	13,122	32,221	321,237	12,211
Turkey	56,685	344,471	26,268	98,890	745,644	35,653	191,485	1,375,411	53,963	150,592	1,437,714	54,525	145,679	1,452,389	55,211
Jordan	68,097	354,624	33,071	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	9,560	56,204	4,646	31,623	244,388	10,600	-	-	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	19,869	149,682	5,857	-	-	-	-	-	-
Romania	-	-	-	-	-	-	138	1,352	52	-	-	-	-	-	-
Total	342,896	2,065,252	164,263	292,474	2,138,770	100,435	304,159	2,146,924	84,151	370,272	3,666,733	138,476	371,103	3,699,82	140,644

Source: Developed by author using financial reports of Elektrostal LLC

Addendum H

Table H 8.1

Elektrostal LLC steel square continuous casting export and internal market sales in 2014-2018

Total Sales	2014			2015			2016			2017			2018		
	tonnes	UAH/ tonnes	th UAH	tonnes	UAH/ tonnes	th UAH	tonnes	UAH/ tonnes	th UAH	tonnes	UAH/ tonnes	th UAH	tonnes	UAH/ tonnes	th UAH
Total steel square continuous casting	397,310	11,367	2,356,048	311,836	14,028	2,268,802	316,409	15,637	2,252,026	417,614	21,830	4,231,426	418,462	22,519	4,294,200
Export	342,896	6,022	2,065,252	292,474	7,312	2,138,770	304,159	7,058	2,146,924	370,272	9,902	3,666,733	371,098	9,969	3,699,778
Internal market	54,414	5,344	290,795	19,362	6,715	130,032	12,250	8,579	105,101	47,342	11,927	564,692	47,364	12,550	594,422
Export % in total sales	86%	53%	88%	94%	52%	94%	96%	45%	95%	89%	45%	87%	89%	44%	86%

Source: Developed by author using financial reports of Elektrostal LLC

Table H 8.2

Dynamics on Elektrostal LLC steel continuous casting sales at export and internal market in 2014-2018, tonnes

Total Sales	Absolute deviation (+/-)				Relative deviation			
	2015- 2014	2016-2015	2017-2016	2018-2017	2015/2014	2016/2015	2017/2016	2018/2017
Total steel square continuous casting	-85,473.50	4,572.82	101,205.30	847.65	2,643.33	1.47	-31,223,442.13	0.20
export	-50,422.09	11,685.07	66,113.43	825.72	4,755.98	4.00	-30,045,736.49	0.22
internal market	-35,051.41	-7,112.26	35,091.88	21.92	262.32	-36.73	-1,177,805.64	0.05

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum H

Table H 8.3

Dynamics on Elektrostal LLC steel square continuous casting sales at export and internal market in 2014-2018,**UAH/tonnes**

Total Sales	Absolute deviation (+/-)				Relative deviation			
	2015- 2014	2016-2015	2017-2016	2018-2017	2015/2014	2016/2015	2017/2016	2018/2017
Total steel square continuous casting	2,661.20	1,609.68	6,192.68	689.18	23.41	11.47	39.60	3.16
export	1,289.71	-254.13	2,844.24	67.01	21.41	-3.48	40.29	0.68
internal market	1,371.48	1,863.81	3,348.43	622.17	25.66	27.75	39.03	5.22

Source: Developed by author using financial reports of Elektrostal LLC

Table H 8.4

Dynamics on Elektrostal LLC steel square continuous casting sales at export and internal market in 2014-2018,**UAH**

Total Sales	Absolute deviation (+/-)				Relative deviation			
	2015- 2014	2016-2015	2017-2016	2018-2017	2015/2014	2016/2015	2017/2016	2018/2017
Total steel square continuous casting	-87,245,952.58	-16,776,544.80	1,979,400,186.04	62,774,580.76	-3.70	-0.74	87.89	1.48
export	73,517,348.57	8,153,928.85	1,519,809,631.67	33,044,280.87	3.56	0.38	70.79	0.90
internal market	-160,763,301.15	-24,930,473.65	459,590,554.37	29,730,299.89	-55.28	-19.17	437.28	5.26

Source: Developed by author using financial reports of Elektrostal LLC

Addendum I
Table I 9.1

Expenses on export business activity of Elektrostal LLC, 2014-2018, thousands UAH/USD

Indicator	2014		2015		2016		2017		2018	
	UAH	\$	UAH	\$	UAH	\$	UAH	\$	UAH	\$
Net profit from export	2,065,252	164,263	2,138,770	100,435	2,146,924	84,151	3,666,733	138,476	3,765,423	136,626
Cost of finished products	1,557,050	123,842	1,980,78	93,016	2,114,127	82,86	3,431,37	129,587	3,523,357	127,843
Spending in accordance with FOB port Mariupol:										
loading	80,549	6,406	103,51	4,860	122,270	4,792	165,536	6,251	138,838	5,037
transport to main carrier	34,489	2,743	51,382	2,412	63,242	2,478	77,945	2,943	76,025	2,758
Administrative expenses	31,433	2,50	37,778	1,774	45,623	1,788	61,709	2,330	62,812	2,279
Financial expenses (% per loan)	3,526	280	3,836	180	9,708	380	13,990	528	14,000	507
Total cost of finished products	46,845	3,725	67,947	3,190	74,308	2,912	81,642	3,083	82,312	2,98
	1,687,972	134,255	2,156,084	101,248	2,320,415	90,95	3,692,547	139,451	3,758,509	136,375

Source: Developed by author using financial reports of Elektrostal LLC

Continuing - Addendum I
Table I 9.2

Average UAH/USD currency exchange rates in 2014-2018

Year	2014	2015	2016	2017	2018
UAH/USD	12.57	21.29	25.51	26.48	27.56

Source: National Bank of Ukraine average rate

