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Challenges of the Modern World - Contemporary Economy and Globalization

DEVELOPMENT OPPORTUNITIES OF PORT OF RIJEKA IN THE FUTURE

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ABSTRACT
The aim of this paper was to define the development opportunities of Port of Rijeka as the most important Croatian port. Port of Rijeka has the most convenient natural exit toward the sea and it is a center of Primorje-Gorski Kotar County through which pass branch Vb of the Pan-European Corridor V and the branch Xa of the Pan-European corridor X. One has conducted analysis of the geotraffic position of Port of Rijeka, its traffic and financial analysis (safety indicators and activity ratios). Base for the financial analysis was annual report (balance sheet, income statement and cash flow statement) for 2011 year.

Keywords: Activity ratios, Geotraffic position, Leverage, Liquidity, Port of Rijeka

1 INTRODUCTION

Port of Rijeka is the most important port in the Republic of Croatia, and also the biggest port on the Adriatic sea. Among all Croatian ports Port of Rijeka has the most convenient natural exit toward the sea. Its position on the Northern Sea route enables her role of important transit port for the Central and Middle East Europe.

Important characteristic of Port of Rijeka is its closeness to the capitals of neighbour countries (Austria, Bosnia and Herzegovina, Czech Republic, Hungary, Serbia, Slovakia,..) while most of them are from countries with the large overseas goods exchange. As Croatia is entering in the European Union on the 1 July of 2013 Port of Rijeka will finally have equal market conditions as her major concurrents and it will have possibility to enter in the new business transactions.

In aim to define development opportunities of Port of Rijeka one will conduct the analysis of the geotraffic position, analysis of traffic (dry cargo, liquid cargo, container traffic) and the financial analysis through activity ratios and safety indicators.

2 GEOTRAFFIC POSITION OF THE PORT OF RIJEKA

The role of the ports, as a hub of land and sea transportation routes as well as the transshipment places of cargo from one vehicle to another vehicle, significantly expands and diversifies. For business and development opportunities of ports are vital transverse Pan-European corridors that ensure to the ports uniform and modern way to plug in the connection between Central Europe and Middle East Europe (Kesic, Jakomin and Jugovic, 2010, pp. 94–98).

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The port of Rijeka is a port of national interest opened to national and international public traffic; it is conveniently oriented toward the world's seaborn routes. City of Rijeka provides the shortest connection either inland or sea way between Central and Middle East Europe to overseas destinations. The North Adriatic traffic direction is the shortest way by which Europe is connected with the Mediterranean, Suez Canal and the Strait of Gibraltar with the world seaports (Kos, Brcic and Karmelic, 2010, p. 190).

Figure 1: Traffic connections of Port of Rijeka
(http://www.lukarijeka.hr/en/port_handbook/traffic_connections/traffic_connections_/default.
aspx)

The essential factors of the Port of Rijeka geotraffic position are the physical characteristics of its location and its connection with the hinterland (Dundovic, Hlaca, 2007, p. 51). Unique disadvantage of its geotraffic position is that majority of road and rail connections are passing through the center of the town as Port of Rijeka is situated practically in the center of City of Rijeka. There are three Pan-European corridors passing through Croatia: the B and C branches of corridor V, corridor VII and corridor X.

The major traffic corridors for the Port of Rijeka are branch B of corridor V and corridor X (www.lukarijeka.hr). Highways connect Rijeka through Slovenia with Austria (Salzburg) and Italy (Trieste); and with Hungary through Zagreb. The route Rijeka-Zagreb represents the base for a traffic process, giving that two essential traffic directions relevant for Rijeka, both road and railway, intersect in Zagreb (Kos, Brcic and Karmelic, 2010, p. 191):
1. From Ukraine and Slovakian Republic through Budapest and Varazdin: this is the branch Vb of the Pan-European Corridor V, connecting the Baltic countries, as well as

the countries of Central and Eastern Europe with the Adriatic and the Mediterranean (Budapest-Zagreb-Karlovac-Rijeka-Trieste),
2. From Austria, the Czech Republic and Germany through Graz and Maribor (Slovenia): the branch Xa of the Pan-European corridor X, connecting South-Western and Central Europe with central Adriatic (Graz-Maribor-Zagreb). The corridor Trieste-Ljubljana-Zagreb-Belgrade-Skopje-Athens/Sofia-Istanbul connects Western and North-Western Europe with the Middle East.

Table 1: Distance between Port of Rijeka and selected European metropolis
(http://www.lukarijeka.hr/hr/port_handbook/polozaj/default.aspx)

CITY	ROAD DISTANCE (km)	RAIL DISTANCE (km)
Zagreb	145	228
Budapest	504	592
Bratislava	550	686
Wien	490	572
Prague	810	844
Belgrade	569	669
Sarajevo	456	490

Existing road network of Port of Rijeka is quite good, but its expansion is expected in the near future. That is specially related to the construction of the XI. Pan-European corridor Baltik-Jadran which should ensure the connection between Baltic and Adriatic by modern intermodal transportation system (Milos, 2010, p. 18).

Quality of rail network of Port of Rijeka is not at the appropriate level (bad conditions of railroads, lack of wagons). In addition to the existing inefficient railway Rijeka-Zagreb, there are no direct railway connections between Rijeka and Croatian railways in Istria and further with the ports of Koper and Trieste, as well as no direct railway connections with the port of Ploce (Dundovic, Vilke and Santic, 2010, p. 168). Railway Rijeka-Zagreb is of vital role importance for Port of Rijeka.

One more advantage of geotraffic position of Port of Rijeka is closeness to the Airport of Rijeka that is distant just 30,4 kilometers.

The strategic commitment of each port is to ensure the best possible connection with the hinterland, spreading the gravitational area and ensuring a larger amount of the cargo (Kos, Brcic and Karmelic, 2010, p. 200).

Further development of traffic routes to Rijeka is an important factor of involvment of Republic of Croatia in the European integrations. For better utilization of prosperous geotraffic position of Port of Rijeka it is necessary to modernize the railway Rijeka-Zagreb in the near future and also to build multipurpose Danube-Sava canal. Favorable geotraffic position is not sufficient to create a significant port hub. Key role in exploiting the advantages of geotraffic position have measures of traffic and economic policy. Advantage of position of Port of Rijeka is not just natural exit toward the sea, even more important is its closeness to the capitals of neighbour countries (Table 1).

3   ANALYSIS OF TRAFFIC IN THE PORT OF RIJEKA FROM 2006-2011

The majority of the freight transport refers to the Port of Rijeka and the port of Ploce that have become the main Croatian cargo ports, achieving almost 90% of total freight traffic (Hadzic, 2012, p. 126). Sufficient terminal depths (18 m) are ensuring acceptance of larger container vessels (Kos, Brcic and Karmelic, 2010, p. 190).

The transport of final products prevails for the market in Croatia, and specially it refers to the Port of Rijeka. Having observed traffic and possibility of its growth it is important to mention that 13 operators provide container service in the Port of Rijeka (Kos, Brcic and Karmelic, 2010, p. 197).

Table 2: Traffic in Port of Rijeka in 2009 and 2010 in million tons (Zelenika, R., Mrvcic, A. and Pavlic Skender, H., 2011 , p. 13; Baric, S., Devcic, I. and Valencic, M., 2008, p. 168; http://www.portauthority.hr/docs/portauthorityHR/documents/64/Original.pdf)

TYPE OF CARGO	2006	2007	2008	2009	2010	2011
General cargo	1.572	2.155	2.373	2.112	2.317	2.233
Bulk cargo	3.199	3.142	3.377	2.873	2.050	2.023
Wood	236,44	325,55	276,06	220,98	243,95	245,182
Total dry cargo	**5.010**	**5.624**	**6.027**	**5.207**	**4.559**	**4.502**
Total liquid cargo	**5.877**	**7.588**	**6.364**	**6.030**	**5.623**	**4.887**
Container traffic (TEU)	94.390	145,04	168,76	130,74	137,05	150,68
Total traffic (dry + liquid)	**10.887**	**13.212**	**12.391**	**11.238**	**10.183**	**9.390**

Significant decrease of bulk cargo traffic in 2010 is a result of lower traffic of grains that was caused by lower grain output as a consequence of bad weather conditions and often overflooding. The same trend is continued in 2011.

If it is observed container traffic it can be seen in the table 2 that its value in 2011 (150,68) is 59,63% higher than in 2006. After the crisis impact in 2009, container traffic has again raising trend. Such growth of container traffic is a result of high quality of services, feeder services, the new transshipment capacity and the introduction of direct services (Tomasevic, Jadrijevic and Dundovic, 2011, p. 474).

The major role in the further development of the Port of Rijeka has Rijeka Gateway project which aim is to expand the port capacities, specially that is refered to the container terminal. The aim is to invest in equipment at the Brajdica terminal, to achieve a full automation of unloading, storage and container shipping process and to increase the container capacity to 600 thousands of TEU (Peric Hadzic, 2012, p. 132).

A key disadvantage of Port of Rijeka are not particularly favorable topographical conditions to build a large port. Lack of flat terrain on the coast may be recovered by silting but it requires a significant investment of financial resources (Strazicic, 1993, p. 38).

It is important to mention that major concurrents of Port of Rijeka are coming from European Union and that 'Schengen Regime' had negative effect on the port of Rijeka. The entry of Croatia into the European Union will certainly result in the container traffic increase in the port of Rijeka, which is evident in the port of Koper, since it has been increasing each year, specially after the entry of Slovenia in the European Union. Due to that it can be expected that

container traffic will grow at the Port of Rijeka due to its friendly relations to Bosnia and Herzegovina, Hungary and Serbia. After the entry of Croatia in the European Union Port of Rijeka will finally have equal market conditions as well as the major concurrents and that is opening new business opportunities.

4   FINANCIAL ANALYSIS OF PORT OF RIJEKA

Financial analysis was conducted on base of two groups of indicators: safety indicators (liquidity and leverage) and activity ratios. The base for analysis of safety indicators and activity ratios for Port of Rijeka was annual report (balance sheet, income statement and cash flow statement) for 2011 year. In 2011 Port of Rijeka had achieved high net income as a result of sale of proprietary share to the strategic partner on Container terminal of Port of Rijeka.

4.1   Safety indicators

Liquidity ratios are used to determine a company's ability to pay off its short-term liabilities (Brealey et al., 2007, p. 460).

Table 3: Liquidity ratios of Port of Rijeka (authors calculation based on financial statements from 31.12.2011. taken from Zagreb stock exchange)

COEFFICIENT	VALUE
Current ratio	1,36
Quick ratio	1,33
Coefficient of current liquidity	0,0053
Working capital (bill HRK)	33,98
Long term liquidity ratio	0,9153

Note: HRK – currency of Croatia (kuna). 1 EUR ≈ 7.55 HRK

Current ratio shows a company's ability to pay short-term obligations from current assets (Zager et al., 2008, p. 248). As its value is 1,36 it can be concluded that Port of Rijeka is able to cover the liabilities just 1,36 times larger than the one that it has.

Quick ratio measures a company's ability to ensure certain amount of money in short period, and it is calculated from relation of current assets minus inventories divided by current liabilities. Its value (1,33) is acceptable and it indicates that Port of Rijeka is well managing its inventories.

Coefficient of current liquidity that is calculated from relation money equivalents and current liabilities is more required than the quick ratio. It value should be more than 1 as company could settle its current liabilities that run out on charge. The value in this case of 0,0053 represents that Port of Rijeka can cover just 0,53% of its current liabilities.

Working capital is specific ratio as it provides information in absolutely amount. As Port of Rijeka has positive value of working capital it is able to finance current business activities.

Long term liquidity ratio that is calculated as relation of long term assets to capital plus long term liabilities should be less then 1. In table 3 it can be seen that its value (0,91) is very close to critical value.

Leverage ratios relate to the structure of sources of assets and show how big amount of assets is financed from own sources and how much from external sources. Based on them it can be defined how much company is in charge and if there is possibility for new debt and shows whether the company is able to manage its current liabilities (Brealey et al., 2007, p. 459).

Table 4: Leverage ratios of Port of Rijeka (authors calculation based on financial statements from 31.12.2011. taken from Zagreb stock exchange)

COEFFICIENT	VALUE
Financial leverage	71,42%
Coefficient of funding	0,40
Debt ratio	0,29
Times interest earned	11,54
Indebtedness factor	1,41
Cover rate I	0,96
Cover rate II	1,09

One of major leverage ratios is financial leverage that puts in relation balance capital and total asset. It defines if it is worth to use external sources of funding until business activity realizes the rate of return higher then the weighted average interest rate at which it pays interest on loan capital (Orsag, 2003, p. 514). Leverage effect defines that the rise of another's funding increases profitability of investment is greater than the interest rate on the borrowed capital. Average value of financial leverage shows that Port of Rijeka can finance 89,80% of its assets by own capital and the rest from external sources.

Coefficient of funding puts in relation total liabilities and owner's capital, due to that, total liabilities of Port of Rijeka constitute 40% of its capital.

Time interest earned defines how many times company can cover interest expense from gross income. Observing value of time interest earned it can be seen big difference on individually level that observed company can settle 11,54 times its liabilities based on interest expense.

Indebtedness factor (total liabilities against net income plus amortization) reflects how many periods necessary to company to settle its liabilities. Due to data presented in table 4 it can be defined that Port of Rijeka needs 1,41 year to pay all liabilities if the level of income is equal to this from 31.12.2011.

Debt ratio reflects how many times total liabilities are bigger than total assets. It is desirable for company and especially for investors that its value is lower. As its value is 0,29 for observed company it can be concluded that Port of Rijeka does not have large debts.

Cover rate 1 shows rate between capital and long term assets, while cover rate 2 puts in relation capital enlarged for long term liabilities to long term assets. Value of cover rate 1 and cover rate 2 is acceptable if it is above of value of industrial average or that is higher in relation to other companies from same services. When its value is growing then company's liquidity is increasing while indebtedness is decreasing.

4.2   Activity ratios

Each company tend to use its asset more effectively and financial analysts measure that through activity ratios. Based on them it can be concluded how many units of revenue are produced from each unit of total or part of asset. Those ratios are informing us about the rapidity of asset circulation during the business activities (Brealey et al., 2007, p. 462).

Crucial activity ratio is total asset turnover ratio that is calculated as a relation of total revenues and total asset. As its value is 0,52 it can be defined that Port of Rijeka through one year inverts its total asset 0,52 times through total revenues. Current asset turnover ratio reflects that Port of Rijeka through one year inverts its current assets 2,55 times through total revenues.

Table 5: Activity ratios Port of Rijeka (authors calculation based on financial statements from 31.12.2011 taken from Zagreb stock exchange)

COEFFICIENT	VALUE
Total asset turnover ratio	0,52
Current asset turnover ratio	2,55
Receivables turnover ratio	5,90
Inventory turnover ratio	24,48
Accounts receivable collection period	61,8

It is preferable that value of receivables turnover ratio is higher than value of concurrents. If company can charge its receivables it has enough money for launching new businesses, that final influence on increase of value of total asset turnover ratio and current asset turnover ratio. Its value for observed company is more than satisfactory.

Inventory turnover ratio represents how many times has company ordered inventories from its suppliers. If its value is much higher than the value of industry average it can be concluded that company has certain problems during the purchase of inventories. Opposite that, if the value of inventory turnover ratio is lower than the value of industry average it is possible to have problems in business transactios with the clients.

Value of accounts receivable collection period (61,8) shows that Port of Rijeka needs 61,8 days to charge its receivables.

5   CONCLUSION

The port of Rijeka is a port of national interest opened to national and international public traffic; it is conveniently oriented toward the world's seaborn routes.

Advantage of position of Port of Rijeka is not just natural exit toward the sea, even more important is its closeness to the capitals of neighbour countries. For better utilization of prosperous geotraffic position of Port of Rijeka it is necessary to modernize the railway Rijeka-Zagreb in the near future and also to build multipurpose Danube-Sava canal. Favorable geotraffic position is not sufficient to create a significant port hub.

Financial analysis was carried out through analysis of safety indicators and activity ratios. Values of all observed coefficients, except the value of long term liquidity ratio which is very close to the critical value and the value of coefficient of current liquidity that defines that Port

of Rijeka can cover just 0,53% of its current liabilities, are at the satisfactory level. But it is important to mention that Port of Rijeka achieved high net income in 2011 as a result of sale of proprietary share to the strategic partner on Container terminal of Port of Rijeka and that might influenced values of some observed coefficients.

Port of Rijeka has great potential to generate traffic with the shippers from the Far East who are interested that shipments to Eastern and Central Europe go without transshipment in the Mediterranean as it would result with lower transportation costs. When shipment is going across the Mediterranean then it is the longest maritime route which causes realization of lower transportation impact per unit of cargo, and that reflects in the final price of the product at the European market.

Port of Rijeka has great potentional for growth in the upcoming years due to possibilities of improvement of traffic connections and to fact that Republic of Croatia is entering in the European Union on July of 2013. After the entry of Republic of Croatia in the European Union, Port of Rijeka will finally have equal market conditions as well as the major concurrents and that is opening new business opportunities. Also, it is expected the container traffic increase as other neighbour ports have achieved increase in container traffic after the entrance in the European Union.

The comparative advantages Port of Rijeka related to the other North Adriatic ports are following:
- depth of terminals is going up to 18 meters, which enable acceptance of largest container ships (mother vessels),
- very good existing road connections to the rest of Europe (V. and X. Pan-European corridor) and in the near future it is expected connection to the XI. Pan-European corridor (Baltic-Adriatic) and
- distance from Rijeka airport is only 30.4 kilometers.

The main disadvantages of Port of Rijeka are related to its location in the main center of Rijeka and unsatisfactory road network (bad conditions of railroads, lack of wagons, no direct railway connections between Rijeka and Croatian railways in Istria and further with the ports of Koper and Trieste, as well as no direct railway connections with the port of Ploce).

The future of Port of Rijeka is to develop its role as a transit port for Central and Eastern Europe.

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