



ANALYSIS OF SAFETY INDICATORS OF CROATIAN BIG SHIPYARDS

BENDEKOVIC, J[adranka] & VULETIC, D[ora]

Abstract: *The paper analyses indicators of safety, precisely liquidity and leverage ratios, of three big Croatian shipyards. Other shipyards are not included in analysis as they are not rated on Zagreb stock exchange. Based on the comparison of past performance it can be concluded that the situation has considerably improved. That is encouraging as shipyards are looking for investors who will restructure or privatize them.*

Key words: *shipbuilding, Croatia, liquidity, leverage*

1. INTRODUCTION

The modern Croatian shipbuilding has been present on the world market for almost half a century and works almost exclusively for foreign shippers; due to that it has an important role internationally. Shipbuilding is an industrial branch that operates on the global market, has recognizable and quality products and is entirely oriented towards export (Croatian Chamber of Economy- Industry and technology department, 2008). Croatian shipyards are not oriented on low-cost strategy as Asian shipbuilders, they are using methods related to requests of customers that make each ship unique. According to official data there is seven big shipyards in Croatia: Brodosplit, Brodosplit BSO, Brodotrogir, Kraljevica, 3. Maj, Viktor Lenac and Uljanik.

This analysis included three large Croatian shipyards (3. Maj, Viktor Lenac and Uljanik) on the basis of semiannual statements for 2011 year. The other large Croatian shipyards are not included because they are not rated on Zagreb stock exchange.

All big Croatian shipyards are still state-owned excluding shipyard Viktor Lenac that is only privatized shipyard, but in forthcoming time they need to be restructured or privatized (Community of European Shipyards Associations, 2010, p. 43).

Due to that the main purpose of this paper is to establish in what kind of condition are observed Croatian big shipyards; based on value of indicators of safety. Data presented in the paper is result of analysis of liquidity ratios and leverage ratios based on financial statements (balance sheet, income statement and cash flow statement) of observed shipyards.

2. LIQUIDITY RATIOS

Liquidity ratios are used to determine a company's ability to pay off its short-term liabilities (Brealey et al., 2007, p. 460). Quality managing of liquidity is important for business of each company, specially in this crisis moment.

First ratio of liquidity is current ratio which shows a company's ability to pay short-term obligations from current assets. If the value is more then 2 then the liquidity is at satisfactory level and the company is able to cover the liabilities two times larger then the one that it has (Zager et al., 2008, p. 248). In table 1 it is visible that shipyard Uljanik can cover 51,59 times its current liabilities, and shipyard Viktor Lenac can cover just 2,34 times its current liabilities.

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. It can be seen that all observed shipyards have acceptable value of quick ratio. It is evident huge progress for shipyard Uljanik because on 31.12.2009. it had value of quick ratio just 0,405. Due to that it can be defined that now it is better 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 shipyards could settle their current liabilities that run out on charge. Observed shipyards can in short period settle 14,51 times their current liabilities if it is observed average value of this coefficient. The average value in this case is not relevant as shipyard 3. Maj can cover just 3% of its current liabilities and Viktor Lenac 14,8%.

Working capital is specific ratio as it provides information in absolutely amount. Its value is not relevant if the companies that are observed have big difference in the size of business volume respectively by size of current asset and current liabilities. All observed shipyards have positive value of working capital so they are able to finance their 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. All observed shipyards have an acceptable value of it, but shipyard Uljanik is very close to critical value.

	Uljanik	3.Maj	Viktor Lenac	Average
Current ratio	51,59	65,46	2,34	39,8
Quick ratio	51,59	65,46	1,85	39,63
Coefficient of current liquidity	43,36	0,03	0,148	14,51
Working capital (bill HRK*)	19,29	2963,6	78,843	1020,58
Long term liquidity ratio	0,968	0,035	0,637	0,55

Tab. 1. Liquidity ratios of observed shipyards

Source: authors calculation based on financial statements from 30.06.2011. taken from Zagreb stock exchange (2011a, 2011b, 2011c)

*HRK – currency of Croatia (kuna). 1 EUR \approx 7.5 HRK

Coefficients of liquidity refer that the situation is very good since all observed shipyards have almost good value for each calculated coefficient. It is affirmative that in this year all observed shipyards have positive value of working capital and that shipyard Uljanik has much better coefficients then at the end of 2009.

3. LEVERAGE RATIOS

Leverage ratios relate to the structure of sources of assets and show how big amount of assets is financed from own sources and how many 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).

	Uljanik	3.Maj	Viktor Lenac	Average
Financial leverage	99,93%	98,13%	71,34%	89,80%
Coefficient of funding	0,00067	0,0191	0,4018	0,1405
Debt ratio	0,00067	0,0187	0,2866	0,1020
Times interest earned	39,74	2981,08	1,8515	1070,56
Indebtedness factor	0,2003	0,0219	10,8541	3,69
Cover rate I	1,0333	28,1736	1,4805	10,22
Cover rate II	1,0333	28,1736	1,5708	10,26

Tab. 2. Leverage ratios of observed shipyards

Source: authors calculation based on financial statements from 30.06.2011. taken from Zagreb stock exchange (2011a, 2011b, 2011c)

One of most significant leverage ratios is financial leverage that puts in relation balance capital and total asset. The financial leverage 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 pay interest on loan capital (Orsag, 2003, p. 514). Leverage effect says 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 those shipyards finance 89,80% of their assets by own capital and the rest from external sources. Shipyards Uljanik and 3. Maj are financing almost whole business activity from own sources and shipyard Viktor Lenac almost 30% finances from external sources.

Coefficient of funding puts in relation total liabilities and owners capital, due to that total liabilities of Viktor Lenac constitute 40,18% of its capital.

Time interest earned define how many times it can cover interest expense from gross income. If it is observed value of time interest earned it can be seen big difference on individually level. While shipyard 3. Maj can settle 2981,08 times its liabilities based on interest expense; shipyard Viktor Lenac can settle just 1,85 times. Value of this ratio implicate a huge rise for shipyard 3. Maj which could not settled its interest expense because of very low earnings before income and taxes on 31.12.2009.

Indebtedness factor (total liabilities against net income plus amortization) reflects how many periods is necessary to each shipyard to settle their liabilities. It is evident big deviation as shipyard Viktor Lenac need almost 11 year to pay all liabilities if the level of income is equal to this from 30.06.2011. It is encouraging that other observed shipyards have very low value of indebtedness factor.

Debt ratio displays how many times are total liabilities bigger than total assets which means that it is desirable for company and specially for investors that its value is lower. Because of best coverage with capital shipyard Uljanik has the lowest value of it. If it is observed the average value of debt ratio (0,102) it can be concluded that those shipyards do not have large debts. But the main reason why this value is so low is because Croatian shipyards are getting big subsidies and guarantees from state. So this situation apparently indicates good shipyards' managing with their liabilities.

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. For each company and for existing and for potential investor it is important that value of cover rate 1 and cover rate 2 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. Because of it they are not just the leverage ratios they are also the liquidity ratios (Zager K., 2007, p. 251). It can be seen that the shipyard 3. Maj has the biggest value (28,17) of this coefficients and that its value is almost three time bigger than average value. If it is compared average value of the cover rate I and cover rate II to value of this ratios on 31.12.2009. it can be seen that it is eight time higher. That implies increasing of liquidity for observed shipyards while its indebtedness is decreasing.

4. CONCLUSION

Analysis of liquidity ratios and leverage ratios implies that the situation for observed shipyards is very good since all observed shipyards have almost good value for each calculated coefficient. The values of leverage ratios indicate that liquidity of observed shipyards is increasing while its indebtedness is decreasing.

Based on the comparison of past performance it can be concluded that the situation has considerably improved as the value of calculated coefficients is significantly better. That is encouraging as the big Croatian shipbuilders (except Viktor Lenac) are at these moments looking for investors who will restructure or privatize them.

Limitation of this research is that only the analysis of indicators of safety has been done, so the conclusion that the observed shipyards are in good condition can not be taken unconditional.

Further research should focus on analysis of other ratios as performance indicators and activity ratios so it could be given general overview of financial coefficients of Croatian big shipbuilders. This kind of research could be valuable for all those who are interested in Croatian shipbuilding as a vital part of Croatian economy.

5. REFERENCES

- Brealey R. A., Myers S. C. & Marcus A. J. (2007). *Osnove korporativnih financija*, Mate d.o.o., ISBN: 978-953-246-039-1, Zagreb
- Community of European Shipyards Associations (september 2010), Annual report 2009-2010, Brussels, *Available from:* http://www.shipbuilders.dk/filer/cesa_ar_20092010_final.pdf, *Accessed:* 2011-09-10
- Croatian Chamber of Economy- Industry and technology department (2008). *Shipbuilding*, Zagreb, *Available from:* <http://www2.hgk.hr/en/depts/industry/brodogradnja2008.pdf>, *Accessed:* 2011-09-12
- Orsag S. (2003). *Vrijednosni papiri*, Revicon, ISBN: 978-995-875-715-0, Sarajevo
- *** Zager K., Mamic Sacer I., Sever S. & Zager L. (2008). *Analiza financijskih izvjestaja*, Masmedia, ISBN: 978-953-157-518-8, Zagreb
- *** Zagreb stock exchange (2011a), *Izvjescja- vrijednosnica VLEN-R-B*, *Available from:* <http://www.zse.hr/userdocsimages/financ/VLEN-fin2011-2Q-NotREV-N-HR.pdf>, *Accessed:* 2011-09-03
- *** Zagreb stock exchange (2011b), *Izvjescja- vrijednosnica 3MAJ-R-A*, *Available from:* <http://www.zse.hr/default.aspx?id=10006&dionica=3MAJ-R-A> *Accessed:* 2011-09-03
- *** Zagreb stock exchange (2011c), *Izvjescja- vrijednosnica ULJN-R-A*, *Available from:* <http://www.zse.hr/userdocsimages/financ/ULJN-fin2011-1H-NotREV-N-HR.pdf>, *Accessed:* 2011-09-03