FINANCIAL ANALYSIS OF SLOVENIAN WOOD INDUSTRY

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ABSTRACT

Financial analysis, which includes in-depth monitoring of financial indicators, is crucial for the development of companies and the economy as a whole. Knowledge of the financial indicators greatly reduces business risk. The aim of the research was to assess the state of solvency and the degree of financial risk for the entire Slovenian wood industry in the period 2007 - 2011. It was found out that the values of the studied financial indicators worsened considerably at the beginning of the economic crisis, therefore it can be deduced to decreased solvency and increased business risk. Some indicators slightly improved in the last four years, but not much. This indicates a high risk of both sectors (C16 and C31), both for creditors and owners. However, there are little differences between the two sectors, what was also statistically approved.

Key words: financial analysis, economic indicators, wood industry, Slovenia

1. INTRODUCTION

In today's rapidly evolving business environment, which has strongly changed in recent years due to the global economic crisis, the monitoring of economic and financial indicators is crucial for the maintenance and development of business for the companies and the economy as a whole. Financial analysis is an important tool for assessing the financial position and successfulness of a company because of the two main features: it reduces a large number of data in the financial statements on a few key parameters and it ensures the comparability of financial statements of different sized companies (Slapničar, 2004). Many authors (Elliot and Elliot, 1996; Rees, 1995) at this point are emphasizing the insufficiency of this analysis as an example that such an analysis multiplies the deficiency of financial statements and that the indicators are not distributed normally. That makes problems not only for the statistical analysis but also for the interpretation and comparability of indicators.

Knowledge of the selected financial indicators is very important especially in business to business operations and at searching for fresh capital on the market, as this greatly reduces business risk. Financial indicators must enable to assess past business performance to business partners and owners in order to create expectations about the future performance of the company and on this basis, formulate decisions regarding their attitude to the company. For this purpose, the companies for many years (in particular, also the banks) are using rating reports, which are generally related to the risk of non-payment (i.e. the system Basel II) (Slapničar, 2004).

On the other hand, with the analysis of financial indicators the estimation of the performance of the branch can be done, which is key information for the creation and modification of sectorial strategies. Financial analysis shows disadvantages (weaknesses) and risks, and viewed as a whole for the entire branch can greatly affect the development and performance of the sector in the future. In the implementation of financial analysis must be taken into account that there is a great variability in the data and individual indicators among companies in the sector.

The aim of the research is to assess the state of solvency and the degree of financial risk for the entire Slovenian wood industry on the basis of selected financial indicators. Indicators were analysed for the recent 5 years (from 2007-2011), and therefore the impact of the economic recession on these indicators or on the state of Slovenian wood industry was established and determined.

2. METHODS AND MATERIALS

The key issue of successful financial analysis is in the right selection of indicators (selection of key performance economic / financial indicators). It is important that indicators are adapted to the intended use, and that the number of indicators is small, since an excessive number of indicators saturate the information. Moreover, some of the indicators may be in the strong correlation with each other, which complicates the interpretation (Slapničar, 2004). In order to facilitate focused and purposeful selection of indicators some authors (for example: Rees, 1995; Higgins, 1995; Brigham, Huston, 2009; Elliot and Elliot, 1996; Pratt, 1990; Mramor, 2002) classify indicators into different groups, taking into account the content connectivity of indicators. Other authors take into account the mutual correlation of the indicators (adapted from Slapničar, 2004). The most common sets of indicators are: profitability, solvency, structure of funding, turning assets and indicators of market values. Some authors formed the sets differently: certain indicators were putted in group on the different way (Slapničar, 2004).

For the purpose of this research, the analysed indicators were selected from the group of profitability, solvency, asset turnover and structures of funding. The indicators that have been used in similar studies (Ajpes FIPO, 2013; Slapničar, 2004; Peršak, 2011; Rebernik 2008; Hornby, Gammie, Wall, 1997), are selected:

1. **'Return On Sales – ROS:** A ratio widely used to evaluate a company's operational efficiency. ROS is also known as a firm's "operating profit margin".

$$ROS = \frac{Net\ Income}{Sales}$$

2. **Return On Assets (ROA):** An indicator of how profitable a company is relative to its total assets. The higher the ROA number, the better, because the company is earning more money on less investment.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

3. **Asset Turnover Ratio (ATR):** The indicator ATR measures a firm's efficiency at using its assets in generating revenue. A high asset turnover ratio indicates greater efficiency. A low asset turnover ratio indicates inefficiency, or high capital-intensive nature of the business.

$$ATR = \frac{Revenue}{Total\ Assets}$$

4. **Receivables Turnover Ratio (RTR):** The receivables turnover ratio is an activity ratio, measuring how efficiently a firm uses its assets. A high ratio implies either that a company operates on a cash basis or that its extension of credit and collection of accounts receivable is efficient. A low ratio implies the company should re-assess its credit policies in order to ensure the timely collection of imparted credit that is not earning interest for the firm.

$$RTR = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivable}}$$

5. **Long Term Debt to Long Term Assets Ratio (LDA):** It shows long-term financing of long-term assets and normal stocks. The indicator is a conservative indicator of payment ability, since it assumes that stocks cannot be converted into cash within a short period of time.

$$LDA = \frac{\text{Long term Debt}}{\text{Long term Assets}}$$

6. **Accounts Receivable to Current Liabilities Ratio (ARL):** It shows how many short-term accounts receivables are covered by short-term operating liabilities and/or how much short-term operating liabilities could be settled by the realization of short-term accounts receivables.

$$ARL = \frac{\text{Accounts Receivable}}{\text{Current Liabilities}}$$

7. **Current Ratio (CR):** A liquidity ratio that measures a company's ability to pay short-term obligations. Also known as "liquidity ratio", "cash asset ratio" and "cash ratio". The ratio shows the ability to pay back its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they came due at that point.

$$CR = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

8. **Quick Ratio (QR):** An indicator of a company's short-term liquidity; also known as the "acid-test ratio" or the "quick assets ratio". The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The quick ratio is more conservative than the current ratio, a more well-known liquidity measure, because it excludes inventory from current assets. The higher the quick ratio, the better the position of the company.

$$QR = \frac{\text{Current Assets - Stocks (ali inventories)}}{\text{Current Liabilities}}$$

9. **Equity-to-Fixed-Assets Ratio (EFR):** It represents the amount of assets on which shareholders have an equity claim. Empirical analyses of the indicators for Slovenian companies prove that the structure of assets and liabilities are really strongly connected: if among the assets there is a large share of long-term assets, is also among the sources of financing higher share of long-term funds. Such a ratio only ensures the solvency of the company.

$$EFR = \frac{\text{Equity Capital}}{\text{Fixed Assets}}$$

10. **Total Debt to Total Assets (TDA):** A metric used to measure a company's financial risk by determining how much of the company's assets have been financed by debt.

$$TDA = \frac{Short\ Therm\ Debt + Long\ Term\ Debt}{Total\ Assets}$$

11. **Fixed Asset Ratio (FAR):** Fixed Asset Ratio shows how much the company depend on fixed asset to run their business. But the link between the way of financing and the value of the indicator is not a direct one, though more long-term (fixed) assets in total assets requires a coordinated long-term financing.

$$FAR = \frac{Fixed\ Asset}{Total\ Assets}$$

In calculating the indicators, the data for sector C16 (wood processing – except furniture) and C31 (manufacture of furniture) were considered; according to the classification of economic activities (Ajpes, 2013). The indicators were calculated for the period 2007 to 2011 (5 years). For all indicators the mutual correlation (Pearson correlation coefficient) was calculated and on its basis the indicators that were highly correlated with each other, were eliminated and were not taken into account in the analysis. For the comparison of values of indicators for sector C16 and sector C31, the Student's T-test was used. If the calculated two-tailed p-values were smaller than 0.05, they were considered as statistically significant (Košmelj, 2001).

The sample was consisted of all companies and sole proprietors operating in sectors C16 and C31. The research was based on searching and preparing data from official statistical databases (Ajpes, 2013). The sample size differs in different years according to the various changes in the number of companies in sectors, but in every year all registered (and functioning) companies in that year were included (Table 1).

Table 1. Number of companies in sample

Sector / Year	2007	2008	2009	2010	2011
C 16	930	1.543	1.507	1.467	1.489
C 31	1.004	1.052	1.053	1.057	1.050
TOTAL	**1.934**	**2.595**	**2.560**	**2.524**	**2.539**

The majority (more than two-thirds) of companies in each sector were representing sole proprietors. Number of enterprises in sector C31 did not change over the last years, while the number of companies in the business of C16 in 2008 increased by 66% in comparison with the previous year. The increase can be related to the introduction of the new classification of economic activities in the year 2008, which especially in the sector C16 introduces some new sub-categories.

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3. RESULTS

Table 2 provides data on selected indicators for the sector C 16 and C 31. For all indicators, there is significant decline in 2008, while in some cases the situation improves in recent years.

Table 2. Values of the calculated indicators for both sectors: C16 and C31 (2007 to 2011)

indicators \ year	C 16					C 31				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
ROS	5,63%	0,14%	-0,55%	-0,76%	-0,62%	1,12%	0,09%	-3,87%	-4,82%	-4,48%
ROA	6,45%	0,14%	-0,48%	-0,69%	-0,59%	1,27%	0,10%	-3,36%	-4,49%	-4,15%
ATR	1,065	1,006	0,831	0,872	0,925	1,094	1,026	0,837	0,884	0,886
RTR	5,392	5,222	4,266	4,539	5,127	5,260	5,199	4,274	4,493	4,667
LDA	0,985	1,004	1,043	1,038	1,025	1,036	1,062	1,082	1,002	1,014
ARL	0,512	0,504	0,578	0,552	0,493	0,494	0,490	0,517	0,468	0,495
CR	0,976	0,991	1,067	1,051	1,029	1,034	1,070	1,090	0,989	1,010
QR	0,631	0,626	0,716	0,713	0,653	0,644	0,663	0,654	0,607	0,630
EFR	0,648	0,634	0,706	0,700	0,714	0,826	0,797	0,778	0,687	0,681
TDA	63,1%	63,6%	60,6%	60,9%	60,4%	58,6%	58,8%	59,4%	63,4%	62,0%
FAR	54,6%	55,4%	54,2%	54,3%	53,8%	47,8%	49,3%	50,1%	50,8%	53,7%

Note: for the interpretation and meaning of abbreviations see chapter Methods

Calculation of Pearson correlation coefficients between the individual indicators showed that there was very strong correlation among some indicators. Therefore, for a more detailed analysis the following indicators were used:
- Return On Sales (ROS)
- Long Term Debt to Long Term Assets Ratio (LDA)
- Current Ratio (CR)
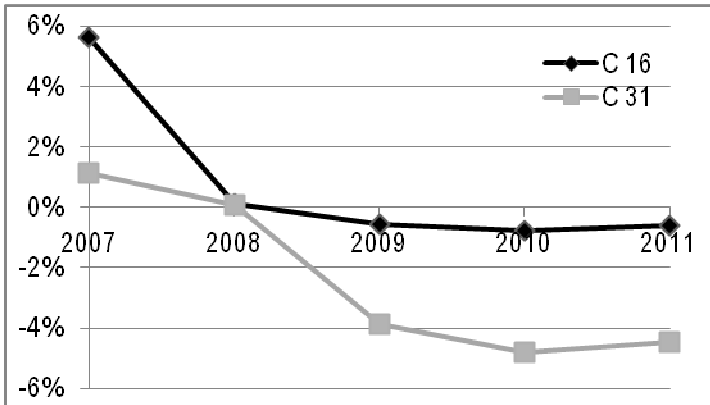- Total Debt to Total Assets (TDA)

Figure 1. Return On Sales (ROS) for C 16 and C 31 (2007-2011)

Over the last three years both sectors exhibit a real loss, so the indicator "Return On Sales (ROS)" was negative for both (Figure 1). The drop was greater in sector C31 , while a minimum in the both sectors appeared in 2010. In the last year the indicator in the both sectors improved slightly, but they still stays

on the negative side. This indicator also affects the "Return On Assets (ROA)" and "Return On Equity (ROE)", their close relationship with ROS is also evident from Table 2.
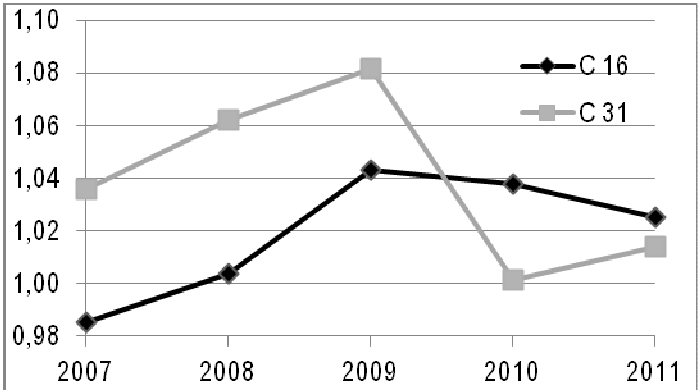

Figure 2. Long Term Debt to Long Term Assets Ratio (LDA) for C 16 and C 31 (2007-2011)

The indicator "Long Term Long Term Debt to Assets Ratio (LDA)" was mainly only a little more than 1 (Figure 2). This indicates a slight threat to long-term solvency which is problematic both sectors. At C31 the value of the indicator in 2011 slightly improved, while the C16 is in declined for last two years.
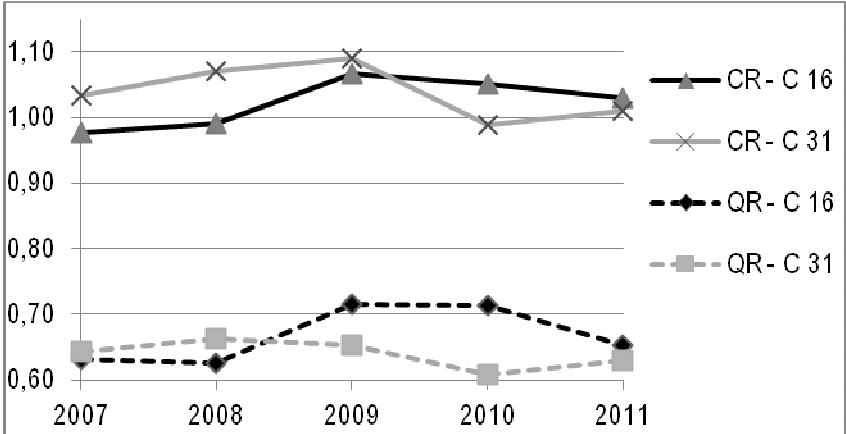

Figure 3. Current Ratio (CR) and Quick Ratio (QR) for C 16 and C 31 (2007-2011)

The "Current Ratio (CR)" has the values a little above 1 for both sectors (Figure 3). It means that on average in the companies there were more current assets than current liabilities. However, when compared CR with the "Quick Ratio (QR)" (the values of QR were much smaller than 1), it can be assumed the significant risk of short-term liquidity. Situation in the C31 was much worse than in the sector the C16, although in the C31 the situation was slightly better in the last year.
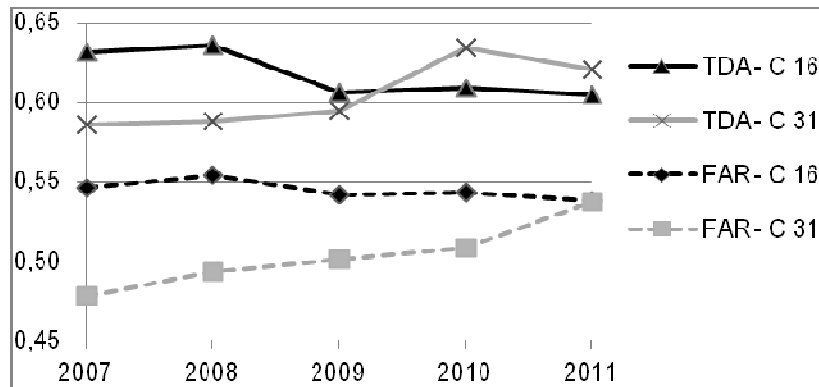
Figure 4. Total Debt to Total Assets (TDA) and Fixed Asset Ratio (FAR) for C 16 and C 31 (2007-2011)

Indicator "Debt to Total Assets (TDA)" showed that in most cases more than half of the assets in the financing structure of funding were in debts (Figure 4). This is relatively unfavourable in terms of both risk investment and long-term solvency. Similarly the indicator "Fixed Asset Ratio (FAR)" also shows unfavourable picture. It indicates a relatively low coverage of current liabilities with current assets (values around 0.5 - ideally more than one). At the same time, the indicator "Long Term Long Term Debt to Assets Ratio (LDA)" shows the problem of covering stocks with long-term sources. According to all three indicators it can be concluded that the short-term liquidity of companies was poor, which may be the result of excessive receivables and / or stocks and inadequate funding of operations. Similarly unfavourable picture shows also the indicator "Equity to Fixed Assets Ratio (EFR)" which values specifically in C31 strongly decrease, was also in the C16 somewhere around 0.7. This means that a substantial part of fixed assets are financed by debt capital, what may the creditors pose a greater risk.

By calculating the t-test, which was used to determine statistical differences of the time series of each indicator, it was proven that for the observed period of time the differences among the values of all the individual indicators were not statistically significant.

4. CONCLUSION

Based on the analysis of financial indicators it can be found out that the values of the studied indicators worsened considerably at the beginning of the economic crisis, therefore it can be deduced to decreased solvency and increased business risk. In the sector of C16 some of the indicators improved in the last four years, what is indicating a recovery, although the sector is still showing an increased risk for certain creditors, as well as for owners, especially in terms of the coverage of assets with appropriate funds, as well as short-term liquidity. These are the main threats to this sector. In the sector of C31 the situation is not (much) better from the beginning of the crisis. This indicates a high risk of this sector, both for creditors and owners. However, there are little differences between the two sectors, what was also statistically approved.

In this context, the radical measures are necessary for the improvement of the situation and development potential of Slovenian wood industry. Some of them are written in a Platform for the restructuring of Slovenian wood industry (Humar et al., 2012). Besides the urgent providing of higher added value, which would increase the Return on Sales, there is particularly urgent to improve the capital structure, in particular by seeking foreign direct investments in the wood industry companies. In this way the companies would acquire fresh capital for the development and modernization of fixed assets and reduce dependence on long-term debt financing, which would guarantee them a smaller long-term risk. In the economy in general there is a need for improvement of payment discipline, which would reduce the share of accounts receivables in total assets and subsequently improve the short-term liquidity of the companies.

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