Influence of Crisis to Activity Indexes in Chosen Industrial Companies of the Country

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Abstract – **Presently, the economic effectiveness of the company is becoming decisive alternative how to obtain competitiveness at the market. Reliable statement about financial situation can be obtained by analysis of the ability to pay the debts. Development in the industrial companies had been searched by indexes of activity, which express and quantify if the economy of the company is effective by the way of its assets. Results of the analysis show the most effective and less effective areas from the view of payment terms and assets turnover. Strengthening of the less effective areas can contribute to the whole economy of the regions and countries.**

Keywords – **economic effectiveness, turnover indexes, productivity, industries, Slovakia.**

1. Introduction

In expert and professional circles there is still actual discussion connected with management of the company performance. There is clearly existing connection between financial structure of the company and its financial performance. Presently, economic effectiveness of the company is becoming decisive alternative how to obtain competitiveness at the market. Big impact to the industrial company success has a way of its organization and production management. The ability to produce more qualitative

products and to supply more rapidly than the competition, repeatedly and in contracted terms, in demanded volume and quality, is becoming decisive factor of the clients´ satisfaction.

In business unit it is important to concentrate on the creation of database of financial indexes, as for example liquidity and activity (indexes of turnover), when mainly following and management helps managers during various important economic decisions. Reliable statement about financial situation can be obtained by analysis of the ability to pay the debts. Financially healthy company is able to cover its liabilities and debt, but the company with financial difficulties cannot make it. Financial rate index is the most used method in the practice for the evaluation of performance and effectiveness of the companies. Such rate indexes can be very useful for basic searching of company operation in time, or during comparing of the company with other subjects at the market. As a weak side of rate indexes we can consider also that only two or some indexes are included in the calculation, which have influence to total performance and effectiveness of the evaluated company. We cannot exactly evaluate what is total effectiveness of a given company, since individual inputs and outputs are evaluated individually, not as one aggregate input and one aggregate output.

2. Present state of problem solving

In the literature we can define effectiveness by various ways. Idea of „effectiveness" is considered by economy as theoretical scientific discipline and one of the main ideas of economy. It means, economy produces effectively only in case when it cannot increase wealth of individuals without causing negative change to the others. The base of the economy is to reckon reality of rarity and to solve then how it is possible to organize the business with the most effective use of sources.

The most known rate indexes, used for evaluation of performance and effectiveness of the company are various indexes of cost ratio, profitability, liquidity, activity, indebtedness, etc. Activity indexes enable to quantify if the property of the company is used effectively. To this group belong turnover of stocks,

collection of claims and payment term of liabilities, etc. [1].

Indexes of activity express and quantify if the economy of the company is effective by the way of its assets. If the company has more assets as appropriate, redundant costs are rising and by this way also is lowered the profit, and if assets are low the company losses the sales that can be obtained. Indexes of activities can be expressed as turnover, which means turnover (in days) of financial means in correspondent property characteristics. Value of such indexes should have decreasing tendency. The other possibility of construction of activity indexes is expressing of number of turnovers during chosen time interval (most often per year). Increasing of the number of turnovers during unchanged conditions means better use of property. Indexes of activity combine data in loss and profit report that present flow of the items that are accumulated during whole year with data in balance sheet that present the state of the property and the capital in the company in certain time. They do not regard fluctuation of such items during the year. There is, therefore, to consider during their construction the average state of balance sheet with the aim to regard at least to a certain level their change during the year [2].

Stocks turnover is many times used instead of stock turnover since it has the same information content but it can be interpreted easier. Stocks turnover and turnover of short term claims can be used as selection criteria during selection, which liquidity must be used for the balancing of solvency of the company. Similar rate indexes, calculated for short term liabilities of the company provide also the image of the solvency of the company but from the view of liabilities [3].

Firms in relationships are likely to affect each other's productivity. This is especially true if the supplier has a concentrated customer base, the supplier and the customer have similar operational characteristics. In this area Serpa and Krishnan (2018) found that it is more important to have a partner with high inventory turnover, financial liquidity, and asset turnover than to have a productive partner [4].

Extensive changes in retailing practices have been accompanied by equally extensive changes in financial reporting. Zeller et al. (2017) identify a shift in the retail sector taxonomy of financial ratios: capital intensiveness, cash position, inventory turnover, return on assets-return on sales, and return on equity-leverage, regarding the predictive and descriptive utility of retail financial ratios [5].

Inventory turnover can affect the profitability of the company [6]. It is confirmed also by Samson et al. (2012) on a sample of small and medium-sized Nigerian firms [7]. Managers can create value by

reducing their firm's number of day's accounts receivable and inventories. Equally, inventories turnover improves the firm's profitability.

Inventory turnover also has its importance when controlling costs due to product management [8]. Proper decision policy can reduce risks of supply disruptions at assembly line of finished goods.

Inventory turnover is part of effective demand management, presenting an essential part of operations management. It helps enterprises avoid sales losses, increase inventory turnover, and raise firm performance [9]. It also has relation to demand uncertainty. According to Hançerlioğulları et al. (2016), inventory turnover is negatively correlated with mean absolute percentage error of quarterly sales forecasts and gross margin and positively correlated with capital intensity and sales surprise [10]. Demand uncertainty may help to explain the variation in inventory performance.

Alan et al. (2014) found that inventory productivity strongly predicts future stock returns, showing that although inventory productivity is predictive of stock returns, its information dissipate about one to two years after release [11].

Vertical integration may influence inventory turnover and firm operating performance. Andreou et al. (2016) tested the interactions between inventory types and the consequences of inventory turnover performance on various aspects of firm performance including costs and profitability, and found that vertical integration has a positive effect on inventory turnover which contributes to a reduction in supporting processes costs which cause an improvement in return on sales [12].

Kesavan et al. (2016) examined the differences in the behaviors of high (HIT) and low inventory turnover (LIT) retailers in responding to demand shocks, identifying quantity and price responsiveness as two mediating mechanisms that distinguish how high and low inventory turnover retailers manage demand shocks [13]. HIT retailers are able to respond quickly by changing their purchase quantities in response to demand shocks, whereas LIT retailers primarily rely on price changes to manage demand shocks.

Firm's innovation performance is associated with its inventory turnover performance. Lee et al., (2015), indicate a positive relation between innovation performance and inventory turnover ratio, and such a relation varies across industries [14]. Also, the firms in a more innovative industry are likely to better manage their inventory performance.

Feng et al. (2015) examined the association between inventory related material weaknesses in the internal control over financial reporting and firm's inventory management [15]. Firms with inventory-related material weaknesses have systematically

lower inventory turnover ratios and are more likely to report inventory impairments relative to firms with effective internal control over financial reporting. Inventory turnover rates increase for firms that remediate material weaknesses related to inventory tracking. Remediating firms also experience increases in sales, gross profit, and operating cash flows.

3. Methodology

The goal of the contribution is to evaluate development of activity indexes in chosen Slovakian industrial companies according to chosen activity indexes with the aim to increase effectiveness of the activity management. Resulting from the mentioned goal with the aim to obtain results we used:

- Present state of problem solving,
- Determination of main indexes and method of searching,
- Calculation of indexes of activities,
- Evaluation of analysis results,
- Suggestion of solution for effectiveness of activity management,
- Limitation of possible practice using contribution results.

For evaluation of the activity area we searched the index of stocks turnover. The index belongs to the category of activity indexes. It is calculated by the following equation:

$$\text{Stock turnover} = \frac{\text{stocks}}{\text{sales} / 365 \text{ days}} \qquad (1)$$

This index is determined for double entry accounting. It is closely connected with liquidity, which means the structure of the floating assets. It is necessary to know during the analysis of the index and its influence to the solvency, the structure of input sources limited to stocks – material, unfinished production and final production [16].

The second analyzed index is turnover of assets. Its growth decreases value of cash flow and effectiveness of operation cycle. At the same time it influences negatively the turnover of assets in sales. It can be expressed by the following relation:

$$\text{Assets turnover} = \frac{\text{sales}}{\text{assets}} \qquad (2)$$

The basic index of activity is turnover of total assets. Value of assets turnover should not be less than 1 and the higher is the value, the better situation in the company. In case of index records with too low value, it means that company does not use its property effectively [16].

4. Results

Turnover of assets gives rate of sales to total assets. Such index reflects how many times the total assets are returning by the way of sales per year [17].
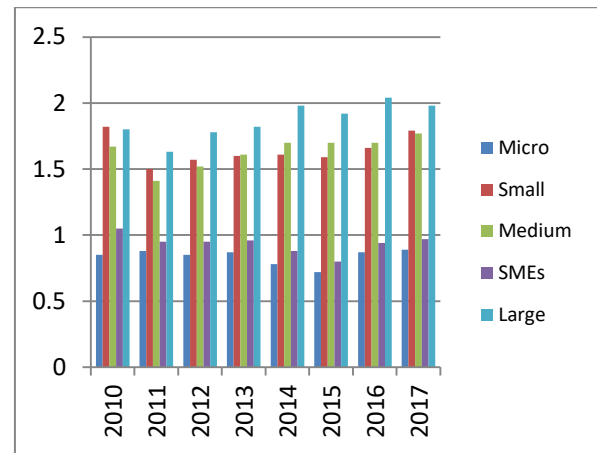

Figure 1. Turnover of assets according to the volume of the company

According to Figure 1., we can see that the highest measure of property using is achieved in small companies (1,79 point) and in middle companies (1,77 point). The lowest measure of effectiveness of property use is in micro companies (0,89 point). In annual comparison, the most considerable value of assets turnover increased in the frame of small companies (by 0,13 point) and middle companies (by 0,07 point). Also in the frame of micro companies there was recorded only smooth growth by 0.02 point [18].
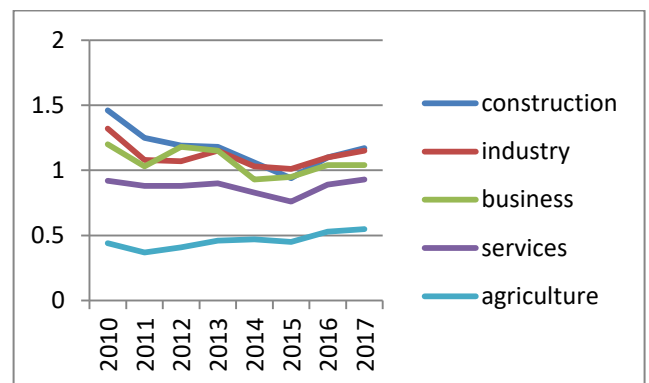

Figure 2. Turnover of assets according to individual sectors

From Figure 2., we can see that turnover of assets in SMEs in all the sectors increased, except of business, when the situation from 2014 almost remained the same. The highest values are in construction (1,17 point) and in industry (1,15 point). The value in agriculture achieves the lowest level among the evaluated sectors - 0,55 point [18].
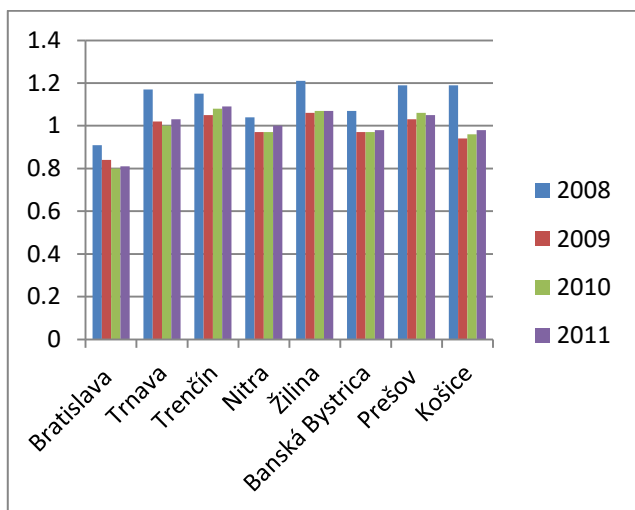
Figure 3. Turnover of assets according to individual Slovakian counties during the crisis

The illustrated graph at Figure 3. shows that in all Slovakian counties the value increased while the most considerable increase was in county Prešov and Trenčín. In 2011 the values in the counties Trenčín (1,09 point) and Žilina (1,07 point) had been characterized with the highest value of turnover assets in SMEs. In the Bratislava county (0,81 point) the index value was the lowest [18].
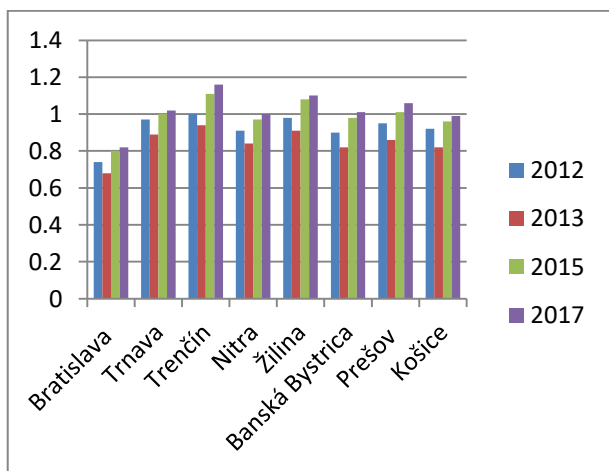

Figure 4. Turnover of assets according to Slovakian counties after crisis

When looking at the development at Figure 4., we see that the turnover in individual years in Slovakia increased in all the counties. In 2017, counties Trenčín and Žilina achieved the highest values. The lowest index value was recorded in Bratislava county (0,82point), which speaks about the same trend than in time of crisis [18].

Table. 1 Payment term of total debts according to the volume of Slovakian companies (in days)

	2008	2009	2010	2013	2015	2017	Difference 2017-2015
Micro	136,4	152,4	153,9	132,7	161,3	152,8	-8,5
Small	104,2	116,3	116,9	114,2	109,0	96,3	-12,7
Medium	87,9	101,8	95,3	86,0	84,3	81,1	-3,2
Sum SMEs	**123,4**	**144,7**	**143,9**	**128,0**	**150,7**	**141,1**	**-9,6**
Big	78,5	79,7	77,5	68,2	67,8	68,7	0,9

In Table 1. we see that micro companies achieve the highest payment term of total debts. In 2017 the value in micro companies presented 152,8 days, which is annual decrease by 8,5 days. In small companies the index presented the value of 96,3 days and in medium enterprises - 81,1 days [18].
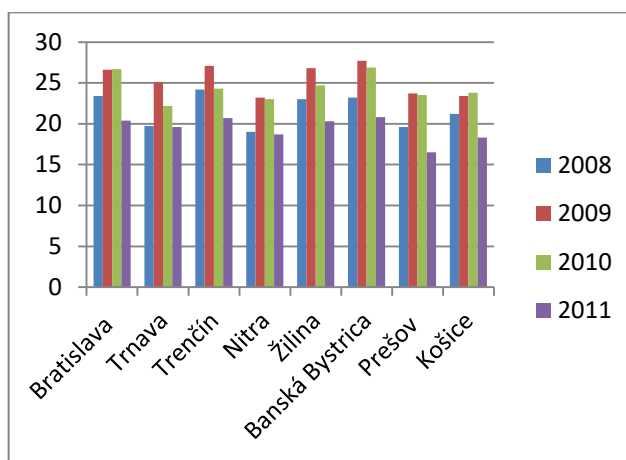

Figure 5. Payment term of short term liabilities from business activity according to individual Slovakian counties in SMEs (in days) during the crisis

Decrease of value in SMEs is also obvious in the frame of the individual regions in Slovakia, while the value decreased most considerably in Bratislava county (by 6,1 days). In 2011, Nitra county (18,7 days) and Prešov county (16,5 days) recorded the lowest value. The highest value was in Banská Bystrica county - 20,8 days [18].
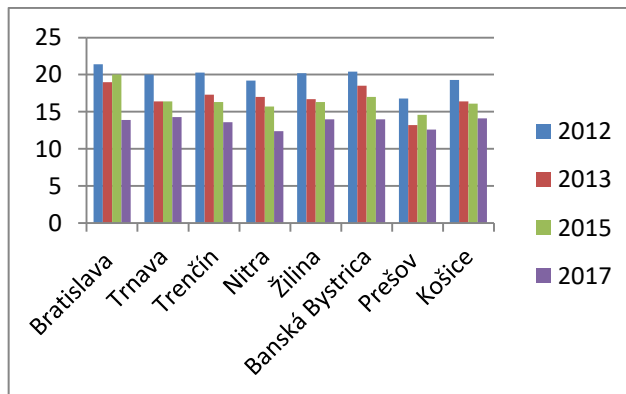

Figure 6. Payment term of short term liabilities from business activity in SMEs according to individual counties after crisis (days)

In 2017 the index decreased in all the counties. The lowest value was in Nitra county (12,4 days). In Trnava the value was the highest, mainly 14,3 days [18].
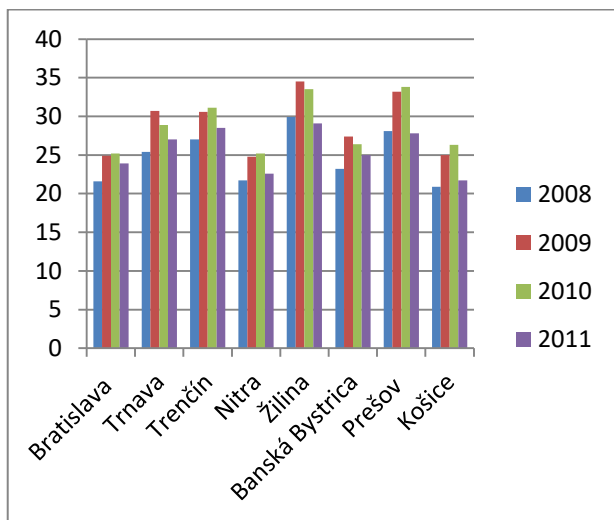

Figure 7. Payment term of short term claims from business activity according to individual counties (in days) during crisis

In the mentioned graph in Figure 7., we see that within the frame of all the Slovakian counties there was recorded decrease of the index. The lowest value was in 2012 in Košice county (21,7 days) and on the other hand the highest value was in Žilina county (29,1 days) and in Trenčín (28,5 days) [18].
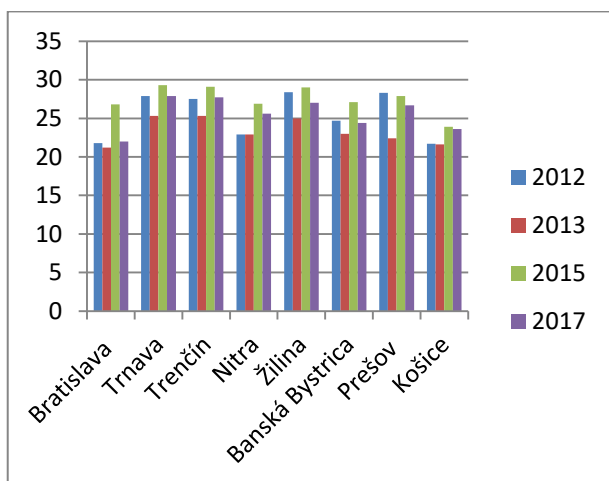

Figure 8. Payment term of short term claims from business activity in SMEs after crisis (in days)

Figure 8. illustrated that the lowest value was in 2013 in the Bratislava county (21,7,0 days), and on the other hand the highest value was in Trnava county (27,9 days) and Trenčín (27,7 days) [18].

5. Discussion

Influence of stocks development during stocks turnover is clear. In stocks the fixed costs are concluded. Depreciation, which is included to the calculation, does not present real source of cash flow. It is necessary to discuss that the index value is individual. Mainly it applies according to the sectors in which companies realize their activities. Sector turnover indexes are logically different. It is necessary that the company according to long term financial analysis could find marginal index value.

Further discussion is about the time when the index will reflect by increasing of the value of short term liabilities after payment period on total short term liabilities. Therefore, we speak about important factor that characterizes the level of liquidity. Development of stocks turnover is very closely influencing the total liquidity [19].

Development of working capital of the company significantly influences protraction of stocks turnover. Basically it means the second period of potential risks, characterizing financial problems. Increasing of stocks value increases the short term financial dependence when result is growth of stocks turnover [20]. On the one hand, the value of floating assets that are not evaluated in sales is increasing. Moreover, value of short term liabilities is increasing as well. This state of the company consequently results from the partial or even complete absence or improper organizational performance management. It means the next relation that is necessary to make is elaboration of the financial plan, when there is necessary to determine the marginal values [19].

Optimal level of stocks does not mean always the lowest possible level of stocks. Low stocks enable produce cash flow and decrease of storage costs, but at the same time they are increasing logistics and production costs (more often material supply, shorter production cycles), they withdraw the possibility of the company to use rebates, and they can lead to the worsening of supplier service. During stocks optimizing, the goal is therefore to find compromise between three opposed goals:

1. Liquidity – to release financial means, invested in stock and to decrease storage costs
2. Costs – to decrease costs, often connected with material supplies and small production dosages
3. Supply service – to provide timely and full supplies to consumers [1].

6. Conclusion

Financial analysis is inseparable part of financial management of the enterprise, since it acts as backward information about situation in individual areas of financial management, in which areas enterprises succeeded to achieve the goals and on the other hand in which areas the company lags behind the expectations. It also presents the main source for evaluation of economic processes in the organization, creating assumption for proper financial decision to the future.

Indexes for evaluation of company performance result from financial analysis, giving information about solvency and readiness to pay the debts. It can be solved also by turnover indexes. Analysis of the industrial companies recorded similarly the same values; in some cases values were under the recommended level, which means some companies are dependent on debts.

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