Quality Festival 2019
ISSN 2620-2832

**Nastasija Mijović**[1]
**Petar Todorović**
**Ivan Mačužić**
**Marko Đapan**
**Arso Vukićević**
**Marija Savković**

# LIQUIDITY AS PERFORMANCE INDICATOR – THE IMPACT OF MARKET CHANGES AND MANAGERIAL DECISIONS

***Abstract:*** *The aim of the paper is to represent importance of analysing account indicators in every company. In the paper it is emphasized importance of traditional financial performance indicators. Financial performance indicators clearly reflect exsistence of business problems. Definition of performance and importance of reaching goals defined as performance indicators by management are given in the first section. The second section is based on liquidity as one of possibility for determination company performance. Performance analyse is based on financial indicators. Computation and purpose of analysing liquidity and turnover ratios are summarized in the third section. Fourth section is based on practical example. Liquidity and turnover ratios are analysed in two successive years. Conclusion represents fifth section.*
***Keywords:*** *Performance, Performance indicator, Liquidity, Liquidity ratio, Turnover ratio*

## 1. Introduction

Performance indicators can be defined as a measure of success in predefined criteria realization. Performance represent the way particular job is done as well as result of accomplishments (Bernardin, 2012). In one way performance is a procedure but also the result. (Pešalj, 2006) refers performance to results that have been achieved over a specific period of time. Performance of a specific organization represent result that is realized on the basis of the input that has been improved by the inter process activities. Those activities are performed in order to reach the predetermined goal. Performance indicators are defined for each company individually. The main objective of the article is, based on financial analyses, to identify factors which influence level of liquidity as well as to identify business elements that can be managed in order to enhancement the quality of financial indicators and company's performance in general. In the article, business indicators related to the liquidity and assets turnover are observed. Two consecutive years are analysed in order to monitor the trend. It is analysed if big market changes that occurred have impact on liquidity indicators. The focus in the paper is on the accounting aspect. The impacts on performance indicators as well as the way of improving indicators over a certain period of time are analyzed. Liquidity as an indicator was chosen due to the orientation to express possibility of company to perform the basic operations. If the company does not have liquid assets to settle the matured obligations, operational problems will be represented. It will be determined how the quality of the decisions made and the implementations of the selected activities in the company affect business.

[1] Corresponding author: Nastasija Mijović
Email: nastasijanatzka94@gmail.com

## 2. Performance

Performance defined within an organization should be consistent with the mission, vision and goals of the company. As a result of achieving set performance, the purpose and goals of the company will also be realized. Performance indicators are defined for each company individually.

Performance indicators can be financial and non-financial. Traditionally, financial indicators have been more prominent in analyzing the performance of an enterprise. Over time, their domination has diminished, but still financial performance indicators do not lose significance. Preferences can be on financial or non financial indicators and that will depend on the level indicators are monitored on. Performance can be defined from the aspect of different functions in the company. Performance can be defined as the part of operating system, marketing, supply chain, accounting ... Not only internal action influence performance indicator. Absence of universal definition of term performance affects the ability to define this term from different aspects of view. (Otley, 2007) defines performance from an accounting point of view. Traditionally, accounting based performance indicators have the most significant position among the indicators of company performance. As some of the most significant accounting based performances in general are considered net profit, return on investment and cash flow. Liquidity degree and some of turnover ratios will be considered as performance indicators on company example. What can be defined as the goal of each company on term of liquidity is primarily availability of short term obligation accomplishments. Liquidity is analysed in two consecutive years. Observed period is after a big crisis in company caused by market changes. It is observed improvement of liquidity and turnover ratios in line with the company recover.

## 3. Liquidity

One of the most common definitions of term “liquidity” is based on the ability of company to pay its bills on time (Van Horne & Wachowicz, 2000). In every company relation between liquidity and financial condition is very important. Stronger financial conditions will be implicated by greater liquidity (Van Horne & Wachowicz, 2000).

Liquidity is very important for continues of company’s everyday operations. This is affected by quantity of current assets. Current assets can influence liquidity on two ways. One of the possibilities is that there is fewer current assets in one company and that will result in problems with operations. Other possibility is that there is too much current assets in the company. If this is the case problem is reflected in return on investments (Van Horne & Wachowicz, 2000).

Cash flow is also very important for continuous of liquidity ratios. If there is problem with process of collecting the receivables from customers then it will result in inability to pay further obligations. This problem in the cash flow importantly affects inadequate liquidity. Company liquidity in general is not reliant on the value of its assets; rather it is depended on operating cash flows (Soenen, 1993). Cash flow is not important only for company performances it reflect also satisfaction of customers. Identifying drivers of company’s future cash flow is very important for shareholders (Gruca & Rego, 2005). In relation to this it can be conclude that cash flow is important not just for financial but also for non-financial performances.

Liquidity in the term of effectiveness is in the function of cash flow and its possibility to generate into and invest out of firm in same certain period of time. When it is about generating cash the same is if it is about retail or engineering company (Fadel & Parkinson, 1978). In both case it is about

paying liabilities on defined time.

Liquidity is short term indicator which shows company's possibility of a settlement. Liquidity depends on degree to which some asset can be converted to cash. This money then can be used for paying current obligations. Important for the concept of liquidity is that large quantity of assets or commodities can be trade without changing its price (Pastor & Stambaugh, 2003).

One of liquidity measures is based on comparing current assets with current liabilities. This racio have been developed in the nineteenth century. It is believed that the ideal proportion between those measures should be three (Sorter & Becker, 1964). Those authors (Sorter & Becker, 1964) have also developed psychological model in constrain with financial ratios and made conclusion that conservative corporations are oriented on higher liquidity ratio. From one year to another, there could be increasing of liquidity ratio in one company. (Fadel & Parkinson, 1978) emphasize that cause of the liquidity ratio increasing must be considered. Only in case if it is naturally caused it can be used for comparing one company with another.

If market conditions are changing in dramatically way, it will influence liquidity of company. For example the company that is analysed had a very big problem few years ago. The problem was about main supplier of company (about 90% of total supplies), who stop further produce of elementary material.

## 3.1. Liquidity and turnover ratios

Liquidity management is one of the main functions correlated with liquidity in terms that it is very important for every organization to pay obligations. If the liquidity is not managed it could provide serious damage on company "health".

Liquidity ratios are further more used to measure ability of one company to meet its obligations. Those obligations are short term based. These obligations should be met by short term resources (Van Horne & Wachowicz, 2000). Consider to this it is important to pay attention on timing of company's cash inflows and time elements of outflows (Verlyn & Eugene, 1980).

It is always better if liquidity ratios indicate positive proportion between liquid assets and short term debt. If proportion between those elements is impropriate then company may have trouble with running its day to day operations.

Traditional financial analysts consider current ratio as a key indicator of liquidity (Verlyn & Eugene, 1980).Current ratio is ratio that compare current assets and current liabilities.

$$Current\ Ratio = \frac{Current\ \ Assets}{Current\ \ Liabilities}$$

Acid-test ratio (quick ratio) indicates clearly a pronounced change in operating cash flow. Quick ration will permit know whether current liabilities can be paid from current assets. To calculate quick ratio it is necessary to exclude inventory from current assets. It's vital for an organization because customers are those who need to buy inventory .

$$Quick\ Ratio = \frac{(Current\ \ Assets - Inventry\ )}{Current\ \ Liabilities}$$

One more short term measures that on certain way can indicate a liquidity and company performance is account payable turnover ratio. It shows rate at which suppliers have been paid. It is considered for a certain period of time and shows how much time during that period company pays off short term debts. Accounting ratios are usually used for evaluation of managerial decision and for observation of performances based on those decisions (Ortín-Ángel & Prior, 2004).

$$Account\ Payable\ Turnover = \frac{Total\ supplier\ purchases}{((Beginning\ accounts\ \text{payable} + Ending\ accounts\ payable)/2)}$$

If account payable turnover ratio is increasing that means company pays off its suppliers more often. Company should pay off suppliers often enough but also should compare this ratio with receivable turnover ratio. Receivable turnover ratio is also short term liquidity measure. It shows how often company is paid by its customers during observed period of time. It is measure that represents how effective company is collecting receivables. Important fact is that receivable turnover ratio and account payable turnover should be consistent in some proportion. The accounts receivable turnover ratio is usually computed by dividing net credit sales by average accounts receivable outstanding (Gorczyńska, 2010).

$$Account\ Receivable\ Turnover = \frac{Net\ credit\ Sales}{Average\ account\ receivable}$$

The asset turnover ratio measures the value of a company's sales or revenues relative to the value of its assets. The asset turnover ratio can be used as an indicator of the efficiency of assets use for generating revenue.The higher the asset turnover ratio, the more efficient a company. Conversely, if a company has a low asset turnover ratio, it indicates low efficiently in using assets for generating sales.One more ratio that is analysed is Assets turnover ratio.“ Asset turnover measures the firm’s ability to generate revenues from its assets” (Fairfield & Lombardi, 2001). This measure implies how much revenue company is generating on every unit of money invested in assets.

$$Asset\ Turnover = \frac{Total\ sales}{((begining\ assets + ending\ asets)/2}$$

The asset turnover ratio is calculated on an annual basis. The total assets number used in the denominator can be calculated by taking the average of assets on the balance sheet at the beginning of the year and at the end of the year. The higher the asset turnover ratio, the better the company is performing. In certain sectors the asset turnover ratio tends to be higher than in others. Retail for example has the highest average asset turnover ratio. Conversely, low asset turnover is present in sectors such as real estate.

Inventory turnover ratio shows how much time during the certain period company replaces its stock of good. Inventory turnover is very important for one company because it can influence very much on total costs. Inventory turnover ratio shows if company is operating economically and if resources are effectively and efficiently used (Rao & Rao, 2009).

$$Inventory\ Turnover = \frac{Total\ sales}{Average\ Inventory}$$

## 4. Research

The aim of this section is to present liquidity ratios and other chosen performance indicators as results of problems in doing business. Those problems were influenced by big market changes. Source of date is internal financial evidence. Two successive years are analyzed. The main company activities include making, cutting, shaping, dividing and welding of products made by metal. In addition, company’s activities include services, transverse cutting, profiling and fabrication of metal structures. There are

three levels of liquidity in the observed company. Those levels are represented through the following segments:

**Table 1**Three levels of liquidity – Assets (.000 rsd)

| **Assets** | **I** | | **II** | | **III** | |
|---|---|---|---|---|---|---|
| **Year** | **1.** | **2.** | **1.** | **2.** | **1.** | **2.** |
| Cash and cash equivalents | 657 | 14.274 | | | | |
| Short term investments | | | 111 | 4.404 | | |
| Receivables | | | 538.437 | 620.530 | | |
| Inventories | | | | | 425.094 | 688.167 |
| **TOTAL** | **657** | **14.274** | **538.549** | **624.934** | **425.094** | **688.167** |

**Table 2** Three levels of liquidity – Sources (.000 rsd)

| **Sources** | **I** | | **II** | | **III** | |
|---|---|---|---|---|---|---|
| **Year** | **1.** | **2.** | **1.** | **2.** | **1.** | **2.** |
| Contribution taxes | 518 | 888 | | | | |
| Value added taxes | 725 | 918 | | | | |
| Other short term oblig. | | | 22.370 | 29.787 | | |
| Payables / Suppliers | | | 377.311 | 421.890 | | |
| Deposit | | | | | 45.067 | 35.319 |
| Short term financial oblig. | | | | | 332.082 | 425.133 |
| **TOTAL** | **1.243** | **1.806** | **399.681** | **451.677** | **377.150** | **460.452** |

**Table 3** Liquidity

| **Liquidity** | | |
|---|---|---|
| **Year** | **1.** | **2.** |
| **I** | 0,530 | 7,900 |
| **II** | 1,347 | 1,383 |
| **III** | 1,260 | 1,470 |

Based on the data, it can be concluded that the level of liquidity in the first observed year was significantly below the optimum. There is no possibility of covering debts on the basis of available liquid assets in the first year. In order to solve the problem one of the managerial decision was establishing cooperation with foreign countries. In the second year amount of liquid assets is over needed for first level liabilities. This sum of money implicates that managerial decision was oriented on short term liabilities. Employees also reorganized importance of foreign suppliers in order to restore safe delivery of existing demand. After taking corrective measures liquidity indicators on all three observed levels has been significantly improved. The biggest improvement was on the first observed level because it was necessary to provide sufficient quantity of cash and cash equivalents.

**Table 4** Liquidity ratios

| | | |
|---|---|---|
| **I** | 1,26 | 1,47 |
| **II** | 0,71 | 0,72 |
| **III** | 222.313 | 481.731 |

Performances in general at the end of the observed period are not satisfying. Problems are reflecting on every aspect of work. Related to this, both current and quick ratio are above set goals. Goals are set based on standard. It implies that target for current ratio is 2 and for quick ratio is 1. Every indicator reflects company inappropriate position. Management must keep doing activities that are oriented on business improvement. From given data it can be noticed that the account receivable turnover in second observed year increased significantly comparing to first observed year. That implicates the fact that the average payback period has decreased. But still company have the biggest problem with

domestic customer whose obligations haven't been paid since more than 250 days ago. Management should find the way to encourage customers to settle their obligations more often. These further led to a faster turnover of funds, and consequently influence the increase in liquidity. It is also in correlation with average payable turnover. For company it is very important in term of liquidity to manage average payout period and average payback period. The inventory turnover ratio decreased, which means that the time needed for inventory turnover was extended. It does not necessary mean that reduction in the inventory turnover ratio will affect liquidity. Decreasing of inventory ratio turnover is implicated by increasing of stock of goods. Consequence can be defined as the part of purchase of new construction facilities for the purpose of expanding portfolio and providing additional services.

All three indicators therefore influence the cash cycle.

**Table 5** Turnover ratios

| Year | 1. | 2. |
|---|---|---|
| Account Receivable Turnover | 2,69 | 4,59 |
| Average payback period | 133,92 | 78,46 |
| Average daily sales | 5.381,90 | 8.094,38 |
| Inventory Turnover | 5,43 | 4,88 |
| Average inventory turnover period | 66,32 | 73,77 |
| Account Payable Turnover | 7,01 | 7,12 |
| Average payout period | 51,37 | 50,53 |
| Asset turnover | 2,07 | 3,10 |
| Cash cycle | 148,88 | 101,69 |

From the profit and loss account, it has been noted that there was an increase in net sales revenue in second year compared to first year. This fact can be the cause of assets turnover ratio increasing. In order to reach performances some of the actions in the future are based on:

- Inventory turnover increase
- Inventory reduce
- Receivable turnover increase
- Payable turnover reduce
- Investing of free cash related assets
- Redistribution of previous years reserves
- Maintain stable relationship with suppliers and customers

## 5. Conclusion

Based on the foregoing, as well as from the theoretical point of view, it is possible to define financial indicators as extremely promising performance indicators of the company's operations. It can be noticed that apart from internal decisions, external developments on the market also significantly influence the performance indicators of a company. Liquidity should be continuously analyzed as a measure of business success as the problem of paying off due liabilities affects the inability to conduct day-to-day operations. If the company does not take corrective measures on time, it can have consequences in the form of a complete shutdown. Managers' decisions must be in line with the indicators and trends in the market. If at any time there is illiquidity or imbalance with the turnover coefficients, management must take corrective measures. Each problem will affect the ability to execute obligations. On the other side any good decision will reflect in the increase in performance results. Low performance indicators at the level of liquidity cannot always be resolved in a short

period of time. For the quality of performance of the business it is necessary that the management of the company takes these indicators into account when making important decisions.

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**Nastasija Mijović**
Faculty of engineering
Kragujevac,
Serbia
nastasijanatzka94@gmail.com

**Petar Todorović**
Faculty of engineering
Kragujevac,
Serbia
petar@kg.ac.rs

**Ivan Mačužić**
Faculty of engineering
Kragujevac,
Serbia
ivanm@kg.ac.rs

**Marko Đapan**
Faculty of engineering
Kragujevac,
Serbia
djapan@kg.ac.rs

**Arso Vukićević**
Faculty of engineering
Kragujevac,
Serbia
arso_kg@yahoo.com

**Marija Savković**
Faculty of engineering
Kragujevac,
Serbia
marijasavkovickg@gmail.com