AN EMPIRICAL STUDY OF CURRENT RATIO

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Abstract: This work aims to address problems of liquidity and in particular the values and factors that influenced the values of the coefficient of total liquidity sixty Bulgarian public companies for the period 2013 - 2007 year. In the analysis it was found that some businesses fail to achieve favorable values of the ratio between current assets and current liabilities. It was found that plants have a low level of total liquidity, which can create problems in repayment of short-term liabilities. It can be seen that there are companies with very high liquidity, which is not so good phenomenon, ie the retention of a high level of resources required. Businesses should conduct a thorough analysis and implement appropriate measures to correct adverse changes. The financial management of the companies surveyed had worked towards improving the state of the enterprise, thereby seeking to reduce liquidity risk.

Key words: Liquidity, Current ratio, Current assets, Current liabilities.

1. Introduction

Liquidity is the potential opportunity for conversion of assets available to an undertaking in the tender, which depends on their value to the interested and willing to make a deal people. As far as liquidity is a complex concept, some authors consider it as an opportunity to cover the liabilities of the entity so that it can settle on time and without difficulty to continue their activities. It should be noted that all efforts to transfer rights to use and / or property shall not require the occurrence of large amounts of spending.

Liquidity is of course also as short-term solvency, as the economic literature widely used four indicators of liquidity, which depending on the features you are in the most general relation between the individual and the amount of current assets to current liabilities. Developed many indicators of liquidity enriching tools for analysis.

2. Exposition

The structure of current assets is particularly important because the cost of holding inventories include the costs of storage, the risk of deterioration or obsolescence and opportunity cost of capital, ie returns offered by other sources. Should be examined in detail the need for stocks and any costs which would be incurred in the purchase and sale of other funds, the cost of...
each order. You should look at the sectoral affiliation of the enterprise and systems used for deliveries.

When choosing between holding cash in hand, bank balances or securities held, you may encounter such questions.

From an accounting perspective, the assets and liabilities in the balance sheet are arranged according to any sign, i.e., there is a rule that specifies the sequence of their presentation in the financial statements. Assets are arranged on the principle of liquidity, while liabilities are arranged on the principle of chargeability. In Bulgaria, the slowest liquid assets are recorded in the balance sheet first. Most liquid assets are recorded in the balance sheet last. Thus, the first recorded fixed assets and current assets are recorded behind them. Subject to the principle of chargeability, assets are first recorded in equity. After equity, recorded the slowest required liabilities and finally recorded the fastest required liabilities. In other countries, the principle of liquidity and the principle of chargeability are also observed, but consistency in the recording of assets and liabilities is different.

Liquidity ratios have some undesirable characteristics. They are related to the dynamics of current assets to current liabilities, i.e., they are constantly changing, which can make the information received stale.

It should be noted that the calculation of liquidity ratios in current assets amount shall not include costs for future periods, and in short-term debt, it should not include financing and deferred income.

As a measure of liquidity, we can state the following:

- Current ratio
- Quick ratio
- Liquidity ratio
- Immediate liquidity ratio
- Liquidity cash ratio
- Working capital
- Net working capital
- Ratio of net working capital to total assets
- Others.

Current ratio can be represented by the following formula:

\[
\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
\]

Current ratio should be about two, it can be expected as a normal level of liquidity.

3. Results and Discussion

When calculating the Current ratio, sixty Bulgarian public companies receive the following values shown in Figure 1.

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4 (Note my - AtanasDelev) Systems used for procurement can be Material Requirements Planning, Just-In-Time.


Figure 1: Absolute values of the current ratio of sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Ratio values between 1.8 and 2.2 for 2013 are 5 companies or 8.33% of the examined non-financial companies. Index values between 1.8 and 2.2 for 2012 are three companies or 5% of the surveyed companies. Index values between 1.8 and 2.2 for 2011 are 4 companies or 6.67% of the examined non-financial companies. Index values between 1.8 and 2.2 for 2010 are 7 companies or 11.67% of the examined non-financial companies. Index values between 1.8 and 2.2 for 2009 are 5 companies or 8.33% of the examined non-financial companies. Index values between 1.8 and 2.2 for 2008 are 12 companies or 20% of the non-financial enterprises. Index values between 1.3 and 1.8 in 2007 are 13 companies or 21.67% of the examined non-financial companies.

Ratio values between 1.3 and 1.79 for 2012 are 6 companies or 10% of the non-financial enterprises. Index values between 1.3 and 1.79 for 2011 are 10 companies or 16.67% of the examined non-financial companies. Index values between 1.3 and 1.79 for 2010 are 11 companies or 18.33% of the examined non-financial companies. Index values between 1.3 and 1.79 for 2009 are 9 companies or 15% of the non-financial enterprises. Index values between 1.3 and 1.79 for 2008 are 12 companies or 20% of the non-financial enterprises. Index values between 1.3 and 1.8 in 2007 are 13 companies or 21.67% of the examined non-financial companies.

Ratio values between 0.8 and 1.29 for 2013 are 5 companies or 8.33% of the examined non-financial companies. Index values between 0.8 and 1.2999 for 2012 are 10 companies or 16.67% of the examined non-financial companies. Index values
between 0.8 and 1.29 for 2011 are 8 companies or 13.33% of the examined non-financial companies. Index values between 0.8 and 1.29 for 2010 are 8 companies or 13.33% of the examined non-financial companies. Index values between 0.8 and 1.29 for 2009 are 9 companies or 15% of the non-financial enterprises. Index values between 0.8 and 1.29 for 2008 are 5 companies or 8.33% of the examined non-financial companies. Index values between 0.8 and 1.2999 for 2007 are 7 companies or 11.67% of the examined non-financial companies.

Current ratio values below 0.8 for 2013 are 13 companies or 21.67% of the examined non-financial companies. Ratio values below 0.8 for 2012 are 12 companies or 20% of the non-financial enterprises. Ratio values below 0.8 for 2011 are 12 companies or 20% of the non-financial enterprises. Ratio values below 0.8 for 2010 are 9 companies or 15% of the non-financial enterprises. Ratio values below 0.8 for 2009 are 10 companies or 16.67% of the examined non-financial companies. Index values below 0.8 for 2008 are 10 companies or 16.67% of the examined non-financial companies. Index values below 0.8 for 2007 are 6 companies or 10% of the non-financial enterprises.

Values of the current ratio above 2.2 and below 3.0 for 2013 are 4 companies or 6.67% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2012 are 5 companies or 8.33% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2011 are 5 companies or 8.33% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2010 are 7 companies or 11.67% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2009 are 10 companies or 16.67% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2008 are two companies or 3.33% of the examined non-financial companies. Values of the index above 2.2 and below 3.0 for 2007 are 8 companies or 13.33% of the examined non-financial companies.

Values of the index above 2.2 and below 3.0 for 2008 are two companies or 3.33% of the surveyed non-financial companies. Index values of 3.0 and below 4.0 for 2013 are 7 companies or 11.67% of the surveyed non-financial companies. Index values of 3.0 and below 4.0 for 2012 are 5 companies or 8.33% of the examined non-financial companies. Index values of 3.0 and below 4.0 for 2011 are 4 companies or 6.67% of the examined non-financial companies. Index values of 3.0 and below 4.0 for 2010 are three companies or 5% of the non-financial enterprises. Index values of 3.0 and below 4.0 for 2009 are 5 companies or 8.33% of the examined non-financial companies. Index values of 3.0 and below 4.0 for 2008 are 8 companies or 13.33% of the surveyed non-financial companies. Index values of 3.0 and below 4.0 for 2007 are two companies or 3.33% of the examined non-financial companies.

Index values of 4.0 and 10.0 in 2013 are 9 companies or 15% of the non-financial enterprises. Index values of 4.0 and below 10.0 for 2012 are 9 companies or 15% of the non-financial enterprises. Index values of 4.0 and 10.0 in 2011 are 13 companies or 21.67% of the surveyed non-financial companies.
companies. Index values of 4.0 and 10.0 in 2010 are 10 companies or 16.67% of the surveyed non-financial companies. Index values of 4.0 and 10.0 in 2009 are 10 companies or 16.67% of the examined non-financial companies. Index values of 4.0 and 10.0 in 2008 are 6 companies or 10% of the non-financial enterprises. Index values of 4.0 and 10.0 in 2007 are 11 companies or 18.33% of the surveyed non-financial companies.

Values of the index above 10.0 for 2013 are 7 companies or 11.67% of the examined non-financial enterprises. Values of the index above 10.0 for 2012 are 6 companies or 10% of the non-financial enterprises. Values of the index above 10.0 for 2011 are 4 companies or 6.67% of the examined non-financial companies. Values of the index above 10.0 for 2010 are 15 companies or 25% of the non-financial enterprises. Values of the index above 10.0 for 2009 are two companies or 3.33% of the examined non-financial companies. Values of the index above 10.0 for 2008 are 5 companies or 8.33% of the examined non-financial companies. Values of the index above 10.0 for 2007 are 5 companies or 8.33% of the examined non-financial companies.

This indicates that a small proportion of firms reached such proportions between the different types of current assets that is most favorable to them. Low levels of liquidity are not appreciated because now may experience difficulties in repayment. However, it should be noted that any company needs a different amount of current assets. Financial managers are aware that excessive liquidity company is not a good testimonial for their work as there is excessive retention of funds that can and should be invested in the business, which brings higher returns. Interest is how the surveyed enterprises have higher values of the Current ratio. In the analysis reveals, that the amount of companies that fall into different groups, is close in value. This indicates that overall policy on liquidity management in most cases, does not give the expected results, i.e. deviation from the targets. This can be seen from the highest and lowest values of the Current ratio. The arithmetic mean shows liquidity of enterprises around twice the required, favorable level. It would seem optimistic median coefficient of total liquidity, if the variance was not so great. Given that the median is a positional average that takes the numerical value of the unit, which is located in the middle of a ranked order statistics, it can be argued that its values would be useful in low dispersion. At high levels of dispersion, the median is not the same utility, which is for small values of dispersion.

In Figure 2 are the selected statistical values of the current ratio of 60 public companies traded on the Bulgarian Stock Exchange.
Figure 2: Values of selected statistical values of the coefficient of total liquidity sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Figure 3 presents the values of selected statistical parameters calculated on the basis of changes in the absolute values of the current ratio of sixty Bulgarian public companies for the study period.

Figure 3: Selected statistical parameters calculated based on absolute change of coefficient of total liquidity sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.
Figure 4 presents selected statistical values calculated based on the percentage change of the coefficient of total liquidity sixty Bulgarian public companies for the study period.

Crucially, what is noticeable is the value of the largest percentage reduction in years. Impressed change obtained by comparison of 2008 and 2007, reaching -98.27037527%. Such a reduction can see the comparison of 2012 and 2011, which amounts to -94.18574603%.

Noteworthy comparisons between the remaining years of the reduction exceeds 83%. At least reduction in the coefficient of total liquidity notice when comparing the values of 2009 and 2008 median percentage changes in current ratio in recent years varies around values close to zero, but we see a number of its variations in the period from 2007 to 2009 averages of the percentage changes in current ratio throughout the studied period is positive. Impressed by the high values obtained when comparing 2011 and 2010.

Figure 4: Selected statistical parameters calculated based on the percentage change of the coefficient of total liquidity sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Large fluctuations in the values of the current ratio can be seen Figure 5. I cannot notice the increase in the percentage ratio of total liquidity as compared to the values of 2011 and 2010 values This is an increase of 5811.111111%. Such fluctuations in current ratio can not but arouse thoughts of management. Moreover notice that amendments to current ratio of over 1000%, a total of three - 5811.111111% respectively, and 2868.703704% 1578.571429%. Other periods are characterized by increases in the maximum current ratio of 628% 230.7744011% and 219.3576507%. Should be carefully monitored performance of the enterprise to be adjusted when necessary and for a purposeful policy on liquidity management.
It is crucial to determine the impact of factors that affect the current ratio. In general, these factors are current assets and current liabilities. The analysis of the influence of factors on the current ratio can be enhanced by examining the influence of each type of current asset or any kind of liabilities on climate current ratio. Thus it can be established for each factor separately how influential, i.e. to see if the factor is impacting upwards or downwards the value of the current ratio. Often one factor to influence upwards the current ratio, but another factor to impact more strongly on the ratio of total liquidity but downwards. In this situation, the financial manager must decide what to do to correct the current ratio. Often expectations may be that the factors which affect in the same direction, which is very wrong. In optimizing the values of the factors financial manager may take the wrong decision, if not well-known effect of individual factors on the overall change in current ratio. This could exacerbate the problems, but when it becomes a continuous process can seriously harm the company.

Cumulative effect of change of climate factors on the current ratio represents the change in the rate, which can be represented by Figure 6.
From Figure 6 we see that there are companies in which changes in the current ratio are small in size, but there are those in which changes in the current ratio are large in size. Deviations from the coefficient of the current year compared to the previous year as upwards and downwards on the current ratio.

From Figure 7 reveals that the average of the climate's current ratio has values close to zero, whereas positive and negative values of the average of the current ratio. The greatest variation is seen in 2010, when the average of the coefficients of sixty Bulgarian public companies is 0.600816864. The median change current ratio has values that are close to zero, i.e., show less deviation. Can not help but notice the biggest increase in the values of the current ratio and the largest decrease in the values of the current ratio for 2012, which amounted to 45.43976713 and -53.53786487.
Figure 7 Values of selected statistical variables summarizing the absolute values of the impact of climate change on the current ratio of sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

The influence of the absolute change in current assets on the absolute change in current ratio is presented in Figure 8. In some companies in a given period the impact of current assets is zero, i.e. they are not influenced climate current ratio. In other companies the impact of current ratio is essential. It can be seen when comparing the values of current assets in 2013 and 2012 for enterprise K11, establish the influence of current assets in the direction of increase in current ratio of 23.5. Comparison of the values of current assets in 2012 and 2011 for enterprise K40, establish the influence of current assets in the direction of a reduction in current ratio with -53.66197183.
Figure 8: Absolute values of the impact of changes in the stock of short-term assets on the change of the coefficient of total liquidity sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Figure 9 presents the median and arithmetic mean summarizing the absolute impact of changes in the stock of short-term assets on the change in current ratio sixty Bulgarian public companies for the study period. From Figure 9 it can be seen that the median values is close to zero, i.e. shows less influence of the change in the stock of short-term assets over current ratio. The arithmetic mean indicates greater volatility than the median. Average of the impact of changes in the stock of current assets value changes from -0.799316515 of 0.641853004 two consecutive comparisons.
Figure 9 Values of the median and arithmetic mean summarizing the absolute impact of changes in the stock of short-term assets on the change in current ratio sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Figure 10 presents the values of the largest positive and the largest negative impact of changes in the stock of short-term assets on the change in current ratio sixty Bulgarian public companies for the study period.

Figure 10 Values of selected statistical variables summarizing the absolute impact of changes in the stock of short-term assets on the change in current ratio sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

The influence of the absolute change in current liabilities on the absolute change in current ratio is presented in Figure 11 can be seen that the greatest positive impact of

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changes in current liabilities on the current ratio has an establishment K39 when comparing 2012 and 2011 with a value of 44.97872817. The biggest negative impact of changes in current liabilities on the current ratio has an establishment K11 when comparing 2013 and 2012 with a value of -44.1. There is a very large dispersion and standard deviation of the impact of changes in current liabilities on the current ratio.

Figure 11 Absolute values of the impact of changes in the stock of short-term liabilities on the change in current ratio sixty Bulgarian public companies for the study period.

Source: own calculations from the annual financial statements of companies.

Figure 12 presents the values of the median and arithmetic mean summarizing the absolute impact of changes in the stock of short-term liabilities on the change in current ratio sixty Bulgarian public companies for the study period. The median values is gushing to zero, indicating little impact on short-term liabilities Current ratio. The arithmetic mean indicates more serious changes, i.e. greater influence on short-term liabilities Current ratio. Impact of changes in the stock of short-term obligations on climate current ratio is entirely due to the impact of trade and other payables on the absolute change in current ratio, i.e.absent the influence of other current liabilities on the change in current ratio.
4. Conclusion

Small fraction of enterprises achieve this balance between different types of current assets that is most favorable to them. Low levels of liquidity are not appreciated because now may experience difficulties in repayment. However, it should be noted that any company needs a different amount of current assets. Financial managers are aware that excessive liquidity company is not a good testimonial for their work as there is excessive retention of funds that can and should be invested in the business, which brings higher returns. In the analysis reveals that the amount of companies that fall into different groups, is close in value. This indicates that overall policy on liquidity management in most cases, does not give the expected results, i.e. deviation from the targets. This can be seen from the highest and lowest values of the current ratio. The arithmetic mean shows liquidity of enterprises around twice the required, favorable level. Optimistic would look the median values of the total liquidity if the variance was not so great. The financial management of the companies surveyed had worked towards improving the state of the enterprise, thereby seeking to reduce liquidity risk.

5. Literature


