ANALYSIS OF A COMPANY'S LIQUIDITY BASED ON ITS FINANCIAL STATEMENTS

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Abstract: The liquidity characterise the financial situation of the company, its ability to convert assets into cash or to obtain cash to meet short-term obligations. Lack of liquidity may affect seriously the continuity of the company activities. Computation and analysis of the liquidity are made by a system of ratios based on the data within the financial statements. An absolute value of a liquidity ratio is not relevant. For a correct analysis of the company's financial situation more liquidity ratios have to be considered and their trend also.

Key-words: liquidity, ratio, analysis, financial statements

Introduction

The fundamental source of the bankruptcy risk consists in the insolvency of the company. Solvency is represented by the capacity of the company to cover all its obligations that result either from previous contracts or from current operations. Solvency must be analysed on short-term (liquidity), as well as on long-term. Thus, liquidity expresses the capacity of the company to meet its short term obligations, that is, to cover its cash outflows with adequate cash inflows and, moreover, to ensure a security reserve for unpredicted events such as the decrease of the cash inflows or increase of payments. Consequently, liquidity may be defined as the capacity of the company to rapidly transform the current assets in cash or to obtain cash to meet its short term obligations. By „short term" we usually understand a period of at most 12 months but, in fact, it is identified with the duration of the normal operating cycle of the company (the period of time that starts with the acquisition of the raw materials and ends with the change of the end-products into cash or equivalent).

According to their gravity, the liquidity problems may determine:

- to lose some opportunities or some lower purchase prices;
- deteriorating of the relationships with business partners, due to the non-observance of the contracts involved;
- delays in the payments of the falling due rates and interests related to the loans;
- difficulties in obtaining of new credits;
- necessity to sell at a loss a part of the assets in order to be able to pay the current obligations.

If a company fails to meet its current obligations, its continued existence is doubtful. That is why measures of liquidity are very important in financial analysis. In our material, we present the liquidity measures based on data from financial statements. We have in view to raise the advantages of using of these measures in a company's liquidity analysis, also their limits and the potential adjustments to these analysis tools.

Liquidity measures

Computation and analysis of the liquidity are made by a system of ratios. These liquidity ratios characterise the financial situation of the company, its capacity to generate adequate cash for payments. The data on which the liquidity ratios are computed can be found within the components of financial statements: balance-sheet, profit and loss account, cash flow statement and notes.

Usually, the company's liquidity is measured by comparing the value of the current assets with the value of the current liabilities (on short-term). The current assets is represented by the cash and other assets that are expected to be realised in cash or sold or consumed within one year (or the normal operating cycle of the company if greater than one year). Current assets category includes: inventories, accounts receivable, short-term investments, cash and cash equivalents, as well as prepaid expenses. If current assets include items that have a life cycle that is longer than twelve months, the sums that are assigned to the next financial year must be disclosed into the notes. Short-term investments must be presented as current assets only if they are expected to be sold in less than twelve months (even these titles have a higher liquidity, the intention of the management is prior to their liquidity potential). Current liabilities are obligations expected to be satisfied within a relatively short period of time, usually one year. Typically, these include: accounts payable, short-term loans (includes bank overdrafts and all other interest-bearing short-term debts), accrued payments, interest, current tax and dividends due.

Liquidity ratios, as any other ratios that are use in financial analysis, are not relevant as absolute values. They must be computed and interpreted for a longer period of time (that must allow to observe the trend over time for the analysed entity) or by comparisons through different entities. Analyzing the trend over time for a certain company or the comparison among different companies is often enlightening.

a) Current ratio

The most often used liquidity measure is the current ratio, that is computed by:

$$Current\ ratio = Current\ assets / Current\ liabilities$$

This allows to measure [1]:

- current liability coverage. The higher the amount of current assets to current liabilities, the greater assurance we have that current liabilities will be paid;
- buffer against losses. The larger the buffer, the lower the risk. The current ratio shows the margin of safety available to cover shrinkage in noncash current asset values when ultimately disposing of or liquidating them.
- reserve of liquid funds. The current ratio is relevant as a measure of the margin of safety against uncertainties and random shocks to a company's cash flows. Uncertainties and shocks, such as strikes and extraordinary losses, can temporarily and unexpectedly impair cash flows.

The current ratio is appreciated as favourable if it has a value over the unit, lying between 2 and 2.5 [2]. The higher the ratio, the greater protection against lack of liquidity that could be generated by dues repayments. But a current ratio much higher than 2 can signal an inefficient use of the resources.

The advantages of the current ratio are: simplicity of its computation, availability of its data, its understandability. But current ratio also has some important disadvantages that are going to be presented in what follows. Even these disadvantages have not restricted the application area of this ratio, it is useful to be known and used when interpreting the value of the current ratio. These disadvantages are:

- it has a static character, measuring the resources available at a point in time to meet the current obligations;
- its data also contain non-monetary items or items that do not suppose input or output cash flows;
- does not distinguishes between various types of current assets, some of them being less liquid than others;
- does not measure the adequacy of the input cash flows (determined by the liquidity of the current assets and by the credit politics of the company) to the necessary output cash flows (determined by the liabilities exigibility). As a consequence, the ratio can have a "good" value and the company can have a lack of liquidity.

Moreover, when estimating the value of the current ratio we have to take into consideration the field of activity of the firm, as well as the evolution of the value of the ratio. Cash needs depend, in a significant manner, on the specific of the activity. Some business may function very well with a very low liquidity ratio. Others – especially those with a long manufacturing cycle – usually store up a lot of cash in stocks and, as a consequence, present high values of the current ratio. The ratio has to be analysed in its evolution,

from a period to another. It is not enough the current ratio to be over unit, but it is necessary for its sense to be growing. A decreasing evolution of the liquidity points out a falling-off activity.

In what follows, we shall present some aspects that are not taken into consideration when setting the current ratio, but influence the cash inflows and outflows. As we already shown, the current ratio compares the current assets, as available cash resources, with current liabilities. But these resources do not necessarily suppose future cash inflows and liabilities do not necessarily suppose cash outflows.

The input cash flows depend on factors that are not included in the current ratio, such as: sales, cash expenditures, profits, changes in business conditions. For example, in the case of inventories, the determinant factor is represented by the sales. Sale is the one who initiates the conversion of inventories to cash. The future cash inflows depends on the profit margin that can be realised. Neither the sales level, nor the profit margin do not appear in the formula of the current ratio. In the case of the accounts receivable, the main factor is also represented by the sales. Modifications in the level of receivables depend on modifications in sales. Receivables are not necessarily a measure of the future cash inflows. These last ones are influenced by the credit policies and by the collection methods. At the same time, not all accounts receivable suppose future cash flows. It is the case of postponed or overpaid taxes, that do not generate cash inputs. Short term investments are appropriated for cover of current obligations. If are evaluated at their fair values, they allow the estimation of the future cash inflows (net realizable value). Presentation at the historical cost does not allow this. The cash disclosured in the balance-sheet does not really have connections with the level of the activity and, as a consequence, it is not recommended to make previsions on this basis. For example, the value of the cash at the end of a financial exercise can be very high if the company intends to acquire, within the next period, a long-term asset. Moreover, many firms rely on cash equivalents such as open lines of credit, that do not appear in the formula of the current ratio (as long as they are not used) neither as assets, nor as liabilities.

Current liabilities, that is the denominator in the computing formula of the current ratio, depend on sales in a great proportion, too. Purchases increase together with the increase of the sales, so current liabilities to the suppliers increase, too. The exigibility of these attracted funds, the moments of the cash outflows respectively, depend on the trade credit periods stipulated in contracts. But current liabilities do not include some important elements that affect future cash outflows. It is the case of future payments, associated to some certain obligations that do not appear in the balance-sheet, such as: construction contracts (that imply substantial payments that are done along with the execution of the work), lease contracts (rental expenses in case of operating lease, respectively interest in case of financial lease), post-retirement benefits, etc. These payments are mentioned only in notes, without being recognised as liabilities in the balance-sheet. On another side, current liabilities include elements that will not necessarily generate cash outflows. Here we talk about collected advances, current deferred tax liabilities or temporary differences of a recurring nature (such as depreciation).

We also have to remark that the computing algorithm of the current ratio supposes the liquidation of the company. But this is contradicting the usual going-concern of the activity that assumes the current assets as well as the current liabilities are in a continuous movement: new receivables replacing collected receivables, new payables covering payables due.

Current ratio can be influenced through management techniques (such as window dressing). Thus, when the financial exercise comes to end, inventories can be reduced (by postponing new stocks acquisition) as well as receivables (by forcing their collection). Cash obtained like this is used to pay, in advance, current liabilities. By means of example no.1 we show how an anticipated payment can influence the value of the current ratio [1]:

Example no.1. The current assets and liabilities of the company are the following:

	Before Payoff	**After Payoff**
Current assets	200,000	150,000
Current liabilities	100,000	50,000
Current ratio	2	3

The current ratio increases from 2 to 3 by making an earlier-than-normal payoff of 50,000 u.m. of current liabilities.

b) Quick ratio

A more restrictive method to compute the liquidity is represented by the quick ratio. The difference from the current ratio consists in excluding inventories from the numerator of the computing formula. We obtain:

Quick Ratio = (Current assets – Inventories) / Current liabilities

The main reason for excluding the inventory figure is that its liquidity is less secure, as temporal moment and as value, as well. Another reason is represented by the lack of uniformity in inventory valuation. Evaluation methods can be used in a discretionary way by the management of the company.

So, quick ratio (also called acid-test ratio) includes those assets that are most rapidly convertible in cash: cash and cash equivalents, short-term investments, accounts receivable. A value of the ratio between 0,8 and 1 is considered to be optimal [3]. Over unit values indicate that inventories are not financed from short-term liabilities. The informational value of this ratio reveals through comparative analysis in time and through comparison with the current ratio.

c) Immediate liquidity ratio

Immediate liquidity ratio (also called effective liquidity) is the most restrictive method to compute liquidity. It takes into consideration, at the numerator, only cash, cash equivalents and short-term investments. The ratio ensures the comparison of the most liquid current active elements with the liabilities that are immediately exigible:

Immediate ratio = (Cash + Cash equivalents + Short-term investments) / Immediate exigible liabilities

The recommended value of this ratio is at least 0,5. If at the denominator we take into consideration all current liabilities:

Immediate ratio = (Cash + Cash equivalents + Short-term investments) / Current liabilities

then the value of the ratio shouldn't be smaller than 0,2 – 0,3. Too high values of the ratio indicate, in most cases, an inefficient use of the available resources (excepting the situation presented above, when the company preserves cash over the normal value, in order to acquire an non-current asset). A small value of the immediate liquidity ratio does not necessarily represent an alarm signal, if the company owns other current assets, with a high degree of liquidity.

In the specific literature we can also find another liquidity ratio, that compares the very liquid assets with current assets:

Immediate ratio = (Cash + Cash equivalents + Short-term investments) / Current assets

This ratio expresses the liquidity degree of the current assets. The higher this ratio is, the assets are more liquid.

d) Working capital – measure of the liquidity

Working capital, computed on the basis of short-term elements in the balance-sheet, is the difference between current assets and current liabilities, which makes it a measure of the liquidity. The actual format of the balance allows the immediate observation of the working capital at the beginning and at the end of the financial exercise, respectively. But the computing relation above does not confer enough relevance to the working capital, as an expression of the liquidity (example no.2).

Example no.2: We consider two companies, A and B. The sum of the current assets and liabilities reported by the two companies are the following:

	Company A	**Company B**
Current assets	20,000	110,000
Current liabilities	10,000	100,000
Working capital	10,000	10,000
Current ratio	2	1,1

Even the working capital is the same, 10,000 eur, the situation is not the same for the two companies. This is indicated by the values of the current ratio, 2 for company A and 1,1 for company B.

But a relevant indicator we obtain by relate the working capital to other financial variables, such as the sum of the sales or the total assets.

e) Working capital to sales ratio

Whereas the previous liquidity ratios use balance sheets figures only, here we take into account the ongoing operations by including a value from the profit and loss account. It will often highlight a trend the other ratios miss. It is possible to have a stable current or quick ratios while this ratio is falling. This usually happens when sales grow a lot and the working capital maintains constant. It is considered that an abnormal growth of the sales, when comparing to the resources disclosured in the balance-sheet, may constitute a danger signal of bankruptcy. The term „overtrading" is used to describe such a situation [4].

If we consider that sales figure reflects, to some extent, the operating cash inflows, then we can say that the ratio relates the short-term surplus liquidity to the annual operating cash flow.

The liquidity of the working capital can also be analysed by means of the percentage hold, in the total of current assets, by every component (example no.3).

Example no.3: The structure of the current assets of a company, for years N and N+1:

Current assets	Year N (eur)	%	Year N+1 (eur)	%
Inventory	30,000	30	50,000	50
Accounts receivable	40,000	40	30,000	30
Cash	30,000	30	20,000	20
Total	100,000	100	100,000	100

Even the value of the current assets maintained at 100,000 eur, their liquidity considerably depreciated. We notice a decrease with 10% of the weight, both of cash and liabilities. In return, the weight of least liquid current assets (that is, inventories) has grown. If current assets are presented in the balance-sheet at their total value, information concerning their structure should be presented in notes.

f) f) Cash flow ratio

Cash flow statement is a very important component of the financial statements, due to the information that it contains. The analysis of the liquidity of an entity cannot avoid considering this information source. Considering the fact that liabilities pay in cash, a comparison between current liabilities and cash flow generated by the operating activity becomes very important. Cash flow ratio makes such a comparison:

Cash flow ratio = Operating cash flow / Current liabilities

The disadvantage represented by the static character of the current ratio of liquidity is eliminated by this computing algorithm. In the numerator of the relation, current assets are replaced by a dynamic variable, namely the operating cash flow. This cash flow expresses the measure in which the basic activity of the company generated enough liquidity to meet the liabilities, without considering external financial sources.

Conclusions

When analysing the liquidity of a company, it is recommendable to take into account all available information. If the analysis is made by an external user of the financial statements, that cannot access the internal information of the company, he must use all relevant data and not only those in the balance-sheet. As has been proven, the ratios computed only on the basis of the balance-sheet are not enough. Even if they are important, the information offered by these ratios must be completed with information offered by other ratios mentioned in our article. A great disadvantage of the classical ratios, based only on the balance-sheet figures, is that they do not grasp temporal correlation between cash inflows and cash outflows caused by the falling due of the debts. This disadvantage can be avoided, in a significant manner, by using relevant data from:

- cash flow statement (especially when this are prepared through the direct method)
- notes on the financial statements (for example, day's sales in receivables, day's purchases in accounts payable, inventory turnover).

If this is possible, interim reports must be also analysed. These reports offer information that are available at certain moments along the year (in Romania, halfyearly reports are compulsory only for the information

needs of the government institutions). They allow a better approximation of trend of a certain ratio, as well as the tracing out of the window-dress situations (that are more difficult to be realised during the year).

References

1. Wild, J.J., Subramanyam, K.R., Halsey, R.F., Financial Statement Analysis, 9th edition, McGrow-Hill 2007
2. Vintila, G., Gestiunea financiara a intreprinderii, editia a VI-a, Ed.Didactica si Pedagogica, Bucuresti 2006
3. Pavaloaia, W., Paraschivescu, M.D., Olaru, G.D., Radu, F., Analiza financiara-studii de caz, Ed.Tehnopress, Iasi 2006
4. Walsh, C., Key management ratios, 4th edition, Prentice Hall Financial Times 2006