The Relation of Inventories Turnover and Liquidity Indicators in the Trade and Services Organizations in the Context of the Solvency Assessment

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Absract

The article considers the need of ensuring the sustainable development of organizations in the unstable external environment, there is founded the correlation of liquidity and inventory turnover indicators for enterprises in the trade sphere, as well as the necessity of reducing standard indicators of absolute liquidity for some organizations, and differentiation of absolute liquidity indicator in others.

Keywords: *stability, sustainable development, willingness to change, liquidity, solvency, inventory turnover.*

1.   Introduction

The company's ability to achieve goals implies a sustainable development to maintain a stable market position and ability to develop under the unfavorable influence of various factors. The sustainable development of the company is characterized by a large number of factors. Their diversity, ambiguity impact on business, as well as the inability to predict some of them lead to high risks. The factors of the sustainable development include the reasons that can change the equilibrium of the enterprise. As a rule, they are classified by the main market categories. (Raudeliūnienė, J., 2014)

Thus, the position of the enterprise in the market depends on internal factors and external environment, the impact of them is necessary to analyze and to predict. As any organization is an open system, which depends on the sharing of resources and the work with the external environment, the company's management should take into account that it is necessary quickly to respond and to adapt to the transformation of the environment for the effective development, the survival and the achievement of its goals.

A number of Western consulting firms engaged in the analysis of Russian enterprises consider as one of the significant factors influencing the lack of sustainable development of the Russian economy the lack of effective management technologies for financial and economic activities of a company (Adrain, 2010; Doff, 2008; Sandström, 2006). In the practice of financial management and assessing the companies` creditworthiness the liquidity indicators are considered as a measure tool of the solvency, the ability of a company to repay its short-term debt.

The high level of the liquidity indicator is provided by the structuring of current assets in a certain way and their further relating to current liabilities. The optimization of the current assets structure implies such kind of working capital elements relation that would solve problems with the solvency based on the recommended criteria (standards). The prevalence of methods for analyzing the liquidity and the solvency using the indicators may be explained by simple calculations, clarity and accessibility of analysis results and the availability of the information base of this method.

In the Russian practice the most stringent criterion is set for the value of the absolute liquidity, its recommended value should be in the range from 0.2 to 0.5. The absolute liquidity indicator shows what proportion of short-term liabilities can be covered by cash and cash equivalents, that means the almost completely liquid assets.

That is up to 50% of short-term obligations of the enterprise should be ensured by current assets in a form suitable for immediate implementation of payments to creditors. At the same time, not being involved in the economic cycle, these assets can not only generate revenue, but depreciate under the influence of inflation (Alekseeva, 2011; Makusheva, 2009). On the other hand, inventories can usually not be implemented in its original form in the current activities of the company without loss of value, they are sold as a part of finished production, work or services or in the form of goods and form receivables. But for the calculation of short-term liabilities receivables need to be transformed into cash, which like the treatment of inventories before the sale takes some time. Thus, the duration of funds turnover does not coincide with the duration of other current assets turnover by the amount of difference in the receivables and payables turnover. If the accounts payable is more than the accounts receivable, the turnover of cash will be longer compared to all current assets. In the opposite situation the result will be opposite. Therefore, the company's management should solve the question: whether it is necessary to keep in the form of the payment instrument such a significant amount of current assets? In our view, the answer to this question is impossible without a differentiation of enterprises by industry and excluding turnover figures of their inventories.

2. Materials and Methods

2.1. The aim of the research is the scientific justification for the importance of the calculation of liquidity and inventories indicators of Russian trade and services companies in the context of organization's readiness for changes to ensure its sustainable development in the modern conditions.

We have identified the following research objectives: to consider the relation of liquidity and inventory turnover indicators for enterprises in the trade branch; to justify the need to reduce regulatory indicators of absolute liquidity for organizations working in the services market; to prove the necessity of differentiation of absolute liquidity indicator within a single industry – the service sector with the isolation of organizations providing transportation and financial services.

2.2. Theoretical and empirical methods. The initial theoretical basis for the study are fundamental assumptions of economic theory and scientific concepts of the theories of organization and management, the works of local and foreign scientists on organizational development. The methodological basis of the work include the systematic analysis and the integrated approach to the study questions of sustainable organizational development, allowing to provide logical harmony of the research and to determine the possibility to study the formation and implementation system for the management mechanism of regulation of organizational changes in the company.

By solving some specific problems there were applied logical methods of analysis for enterprises as complex systems, as well as statistical methods, methods of observation and comparison, empirical description of abstraction and generalization, system-structural methods, the management theory and decision-making methods, methods of expert estimates.

3. Results

3.1 The effect of liquidity and inventory turnover indicators on the stability of the organization was substantiated.

Under the stability of the organization we mean the ability of the company to function effectively in the changing competitive market environment. The organizational stability can be traditionally divided into internal and external, general and financial. The stability can also be connected with technical, production, supply and marketing aspects and others. The internal stability of the organization is its overall financial condition, when high results of its functioning are consistently provided. To achieve this you need to respond actively to changing internal and external factors. External stability of the organization in the presence of the internal stability is determined by the stability of the external economic environment in which its activity is carried out. It is achieved by the appropriate management system for the whole country's economy. The overall stability of the company can be achieved by such organization of cash flows, which provides a constant excess of income funds (income) on their expenditure (costs). Financial stability is a financial condition of the company, whose business activities provide under normal conditions the fulfillment of all obligations to employees, other organizations and the government. In the context of the balance or excess of income over expenses it is a characteristic of the risk level for the organization. The financial stability is a reflection of a stable excess of revenues over expenditures. It provides free maneuvering in cash and leads to the constant process of production and sales. The financial stability is formed in the process of the entire production and business activities, and can be considered as a major component of the overall sustainability of the enterprise. Assessment and analysis of the financial stability of the organization should be started with a study of liquidity and solvency.

The financial stability is the basis for the stability and survival of the company in the market competition. The financial stability of the company is characterized as more solvent in relation to businesses who do not have financial stability. For such a company it is easier to get a bank loan, to attract investment. The financially sustainable enterprise has the advantage in more qualified personnel, as well as in selection of suppliers. The category of financial stability is influenced by many factors and appears in a variety of assessed indicators of the financial situation in the company.

Summarizing the theoretical thesis about the nature of the financial stability, it should be emphasized that the financial stability depends not only on the optimal structure of funding sources of a business entity, but also on the lawfulness of their use, thereby providing the solvency of the company as well as the profitability of its operations.

In our opinion, the financial stability is broadly defined as a state of an economic system characterizing its ability to function effectively in unstable conditions which affect its activities. A more specific definition of the financial stability is that when it is considered as the solvency of the company at a certain time, which establishes the circumstances of the effective application of financial resources to ensure high financial results.

In modern Western and Russian practice there are many methods and techniques for determining the level of the financial stability. By analyzing figures in the methods of different authors it is important to determine directions (objects) for the study of financial stability of an economic entity. Each object of the analysis corresponds to an indicator reflecting its most significance. The main condition for the formation of the financial stability of the company is its solvency, which means the possibility of the organization to meet its needs for material and financial resources.

Another condition for the financial stability is such an asset structure of the organization, which allows to realize existing and strategic business interests. In order to analyze the financial stability, it is necessary to research indicators characterizing the solvency of the company, the liquidity of its balance sheet, the level of turnover of the enterprise's funds and its creditworthiness. If these figures are high, it indicates the financial stability of the analyzed economic entity. The assessment of the financial condition is carried out according to the financial statements at a certain date. The objects of analysis are the efficient use of the company's capital, the optimal structure of its assets, liabilities and expenses, that means the level of financial independence and liquidity as well as the solvency and investment appeal of the economic entity.

3.2   The relation of liquidity and inventory turnover indicators was substantiated for industrial companies.

Liquidity indicators allow to determine the ability of the company to pay its short-term obligations during a year. The absolute liquidity indicator is the financial coefficient equal to the ratio of cash and short-term investments to current liabilities (current liabilities).

The inventory turnover indicator shows how many times in the analyzed period the organization used the average available balance of stocks. This indicator characterizes the quality of inventories and the efficiency of the management, identifies the unused remains, outdated or sub-standard inventories. The importance of this indicator is connected with the fact that the gain occurs during each inventory turnover (by the use in the manufacturing, operating cycle).

For turnover figures there are no generally accepted standards, they should be analyzed within an industry branch, and even better – in the dynamics of a particular enterprise. The reduction of the inventory turnover indicator may reflect the accumulation of excess inventory, inefficient storage management, the accumulation of unusable materials. But the high turnover figure may not always be considered as a positive indicator because it can mean the depletion of inventory, which could lead to disruptions in the production process.

The figures usually tend to vary significantly for different industries, as well as for different companies of the same industry branch. And the complete view of the financial condition of a company can only be obtained in the analysis of the entire set of financial figures, taking into account the features of the company activities.

Table 1: Calculation of absolute liquidity and inventory turnover indicators for industrial enterprises.

The Name Of The Organization	Absolute liquidity indicator		Inventory turnover, in days	
	2013 г.	2012 г.	2013 г	2012 г
OJSC «AVTOVAZ»	0,06	0,23	51,7	39,8
OJSC «Kuznetsov»	0,05	0,01	243,2	329,2
OJSC «Novokujbyshevsk oil refinery»	0,00008	0,48	70,4	36,07
OJSC «Aviakor – aircraft factory»	0,019	0,02	348,7	628
PAO «Samara factory «Elektroshild»	0,21	0,4	50,23	55,4
OJSC «Aviaagregat»	0,07	0,11	152,5	169,6

Based on the carried out calculations, we can see that some industrial enterprises such as OJSC «Aviaagregat», OJSC «Kuznetsov», OJSC «AVTOVAZ» have a low level of the absolute liquidity. A number of enterprises have a absolute liquidity figure which is near the recommended indicator of 0.2. As for the index of the inventory turnover indicator in days, almost all large industrial enterprises have a rather high value. The inventory turnover in days shows the number of times during the analyzed period, when the organization used the average available balance of inventories.

According to the results of calculations we can also see that the greater is the period of inventory turnover, the slower they turn, the greater is the value of the absolute liquidity coefficient. If the absolute liquidity indicator is less than 0.2, then, as a rule, the company is unable to pay immediate obligations at the expense of funds of all kinds, as well as the funds received from the sale of securities.

3.3 The relation of liquidity and inventory turnover indicators was substantiated for trade enterprises.

As for retail companies (food trade firms) we can see that such as «Magnit», «Okay», «Lenta» and X-Retail Group have very low levels of the absolute liquidity. The standard value of this indicator is 0.2, however, these organizations rarely have a situation when they have to pay all its short-term obligations at the same time. It is more appropriate not to create funds for the payment of such debt but to put money into circulation, as we can see, that they have a short period of inventory turnover in days. The reduction of this figure means accelerating of the inventory turnover and in general that the company's operations become more efficient, as the product «leaves» a warehouse faster and faster. However, the equally important criterion is the credit line for this product. For example, the product has a turnover period of 15 days and the loan obtained from the supplier of this product is 30 days. That means that the company can use the money for another 15 days. It is vice versa when the term of the loan is less than the term of the goods turnover. In order to pay the supplier the company will have to use borrowed funds. Therefore, the turnover in days can not exceed the period of trade credit.

According to the obtained calculations results the greater is the period of inventory turnover, the more slowly they turn, and the greater is the value of the absolute liquidity coefficient. We can see that by two such huge retailers like X-Retail Group, which sells food and M-Video that sells home appliances, electronics, etc.
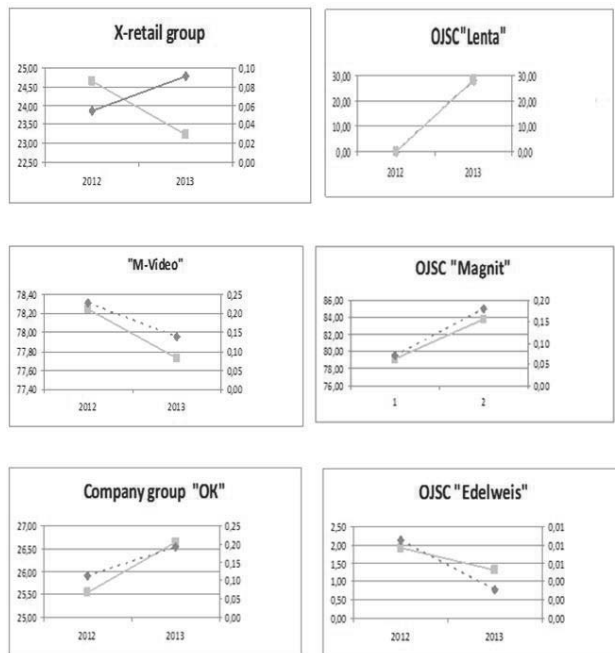

Figure 1 – Graphical display of connection between the liquidity and inventory turnover indicators for the trade organizations (Black Line – Absolute liquidity indicator, Grey Line – Inventory turnover, in days).

The inventory turnover in days by M-Video is almost three times greater than that of X-Retail Group. This is due to the fact that food products are purchased more frequently than technique. Accordingly, its implementation takes more time and businesses rarer get proceeds in cash. From this we can conclude that the company will have to hold more cash from circulation in order to guarantee repayment of its obligations. The same can be seen in the indicators of the organizations «Detski Mir», «Okay». That means the more days it takes for the implementation of the average balance of inventories, the greater amount of cash, cash equivalents and short-term investments to pay for liabilities there should be (Figure 1).

3.4 The necessity of the reduction of the absolute liquidity standard indicators for service organizations was substantiated.

Having become of WTO, Russia has begun to introduce new trends in the development of the national economy quite actively. A lot of attention is paid to the development of the service sector, as the last decades are characterized by an increase in the role of the this sector in the global economy.

The largest service sectors in Russia are the trade and public catering, transport, finance, credit and insurance, communication. Tourism sector (including hotel management), banking and insurance, personal and cleaning services, fast food, commerce, medicine, education, repair and construction services; the services sector related to entertainment and entertainment events are also developing rapidly.

The study also reviewed the organizations working in the service market. For these organizations there were also calculated the absolute liquidity indicator and the inventory turnover indicator in days. The relation between these figures can be presented in the Figure 2. After analyzing the lines in these charts, we can conclude about the close empirical relation between the studied parameters.

If we consider companies that produce commercial products, the standard indicator of the absolute liquidity must be at least 0.2. The greater the number of inventory turnover for the year will mean a greater ability of the enterprise to repay its short-term debt for a short period of time. However, it would be pointless to state the same for organizations providing services. For them, the opposite is true: the increasing number of inventory turnover for the year the company can afford a lower coefficient of the liquidity without loss of real solvency. This can be explained by the following fact: in these organizations, stocks take a small share in the asset structure or absent at all, and therefore the number of turnover for the year may be equal to several dozens. These companies are characterized by another feature – they have quite a high proportion of retail revenue, which does not generate the emergence of receivables and thus allows to reduce the duration of the financial cycle.
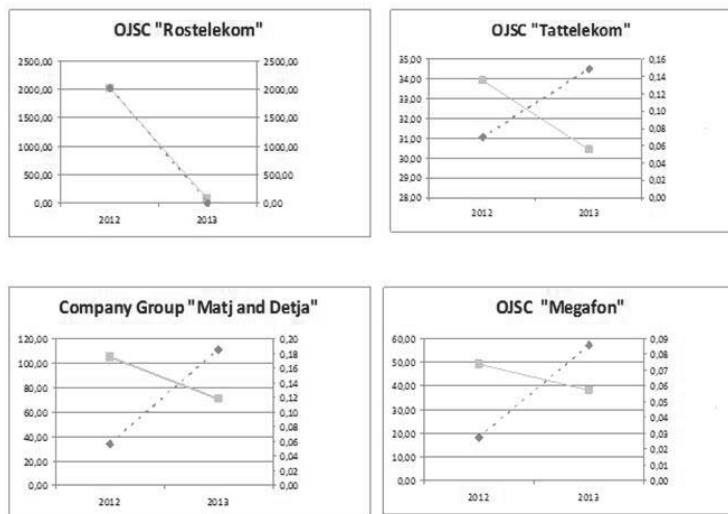

Figure 2 – Graphical display of connection between the liquidity and inventory turnover indicators for communications services organizations (Black Line – Absolute liquidity indicator, Grey Line – Inventory turnover, in days)

That means that with a sufficiently high inventory turnover the company has no need to freeze large amount of cash to cover its short-term liabilities. It makes sense to put cash into circulation, thereby further increasing its business activities.

3.5   *The necessity of differentiating the absolute liquidity indicator within a single industry branch (the service sector with the isolation of organizations providing transportation and financial services) was substantiated.*

If we consider an organization providing another services (the transport of passengers and goods), the absolute liquidity indicator increases due to the increase of the number of inventory turnover for the year (Figure 3).
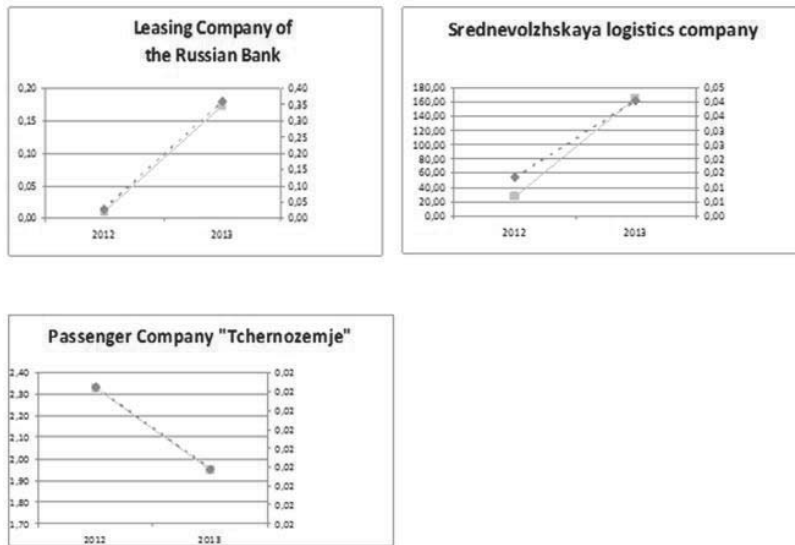запасов за год (Figure 3).

Figure 3 – Graphical display of connection between the liquidity and inventory turnover indicators for service organizations in the field of transport and finance (Black Line – Absolute liquidity indicator, Grey Line – Inventory turnover, in days)

This situation can be explained by the fact that quantitatively own stocks of such organizations may be small, but off-balance sheet accounts of these companies have assets, which do not belong to the organization, but for which it has to bear the burden of the risk by loss or damage from its activities. These are supplies of goods that the transport company must carry, this is the responsibility for the safety ensuring of the passengers transportation, for a leasing company these are risks in the filed of its responsibility for the delivery and preservation of the property, which will then be transferred to the lessee. Thus, for these organizations it is characterized that they have a high level of risk to refund the contractors the damage to property in the event of unforeseen and adverse circumstances that may not normally be treated as force majeure because of their routine for some specific activities. And the higher the company's business activity is, the faster is the turning of its own reserves and the higher is the quantitative probability of risk.

As firms in this sub-sector of the services market usually work not only with individuals, but also with legal entities, the level of their receivables, as a rule, it is quite high. Consequently, to fulfill all their short-term liabilities in the short term under the circumstance of the risk probability seems to be a very difficult task, as the sum of short-term obligations increases substantially in the risk case. Due to these circumstances, transport and leasing companies are forced to maintain a high level of the liquidity, despite of the fast turnover of their own reserves, and in the graph we can see the pointedness of turnover and absolute liquidity indicators dynamics.

4. Discussion

Thus, in our opinion a more detailed elaboration and justification of the recommended values of the coefficient of absolute liquidity seems to be necessary as well as a setting a relation between this indicator and the indicators of inventory and assets turnover in the whole, taking into account the characteristics specific to the various sectors of enterprises' activities for the purpose of more accurate and meaningful assessment of the solvency of both groups of external and internal users of their reporting.

Conclusion

In the context of our study we carried out the calculation of liquidity and inventory turnover indicators of Russian trade and services companies and found out the effect of the inventory turnover indicator on the actual value of the absolute liquidity indicator.

  The analysis revealed that in the case of enterprises producing commercial products, the standard indicator of the absolute liquidity must be at least 0.2. The greater the number of the inventory turnover for the year will mean a greater ability of the enterprise to repay its short-term debt in a short period of time. However, it would be pointless to state the same for organizations providing services. For trade organizations the following relation was found out: the more days it takes for the implementation of the average balance of inventories, the greater cash, cash equivalents and short-term investments to pay for liabilities there must be.

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