INTERNATIONAL JOURNAL OF
INNOVATIVE RESEARCH AND KNOWLEDGE
ISSN-2213-1356 www.ijirk.com

Short-term solvency evaluation: The case of Logistics Enterprises listed on the stock market of Vietnam

Thi Quynh Anh Doan & Duc Tai Do
University of Labor and Social Affairs, Vietnam

Abstract
This study presents, analyzes and evaluates the short – term solvency of Logistics Enterprises listed on the stock market of Vietnam. After presenting the research overview and literature review of short – term solvency in enterprises, introducing research methods as well as analyzing the dependent variable of "short-term solvency" through three indices, we then start analyzing and evaluating the short-term solvency of Logistics Enterprises listed on the stock market of Vietnam. The research results show that the short-term payment abilities in Logistics businesses are quite good but not homogenous yet. Based on the research results, we give some recommendations to enhance the short-term solvency of Logistics Enterprises.

Keywords: *Short-term solvency, Logistics Enterprises, index*

1. Introduction

Solvency is the ability of a company to meet its long-term financial obligations with individuals or organizations that are the lenders of the enterprise. Enterprises need to maintain a reasonable amount of working capital to meet their short-term liabilities in time, maintain their inventories both in quantity and variety to ensure the smooth operation of production and business activities. In addition, businesses always care about debts coming due and prepare for the payment. It is easy to realize that solvency helps a company with stable operating mechanisms to continue investing and developing to gain profit in the future.

Logistics is the lifeblood of the economy, helps industries and units be linked together, connects production areas with consumer sectors, connects urban areas with rural areas and vice versa. It also contributes to the export and import industries. In addition, Logistics companies help the economy become unfied. The development of productive forces and the specialization level leads to the constant development of Logistics services.

Warehouses in Logistics services play an important role in goods transporting. Logistics companies can not work productively warehouses. This is unchangeable and can be viewed as a condition to found a logistics company. The Logistics Enterprises are increasingly contributing to the GDP, creating more jobs for labor market… However, these enterprises also face several difficulties and challenges. For example, the status of warehouses and vehicle yards just allows companies to survive but not to grow. This is difficult for those companies to compete with foreign companies operating in Vietnam due to the lack of appropriate legal corridors.

When considering the solvency of enterprises in the Logistics Industry from 2015 - 2017, we see that different companies listed on the stock market have different solvencies.

Although there are studies on solvency of listed companies on the stock market in Vietnam, those researches are still limited due to the inadequate research methodology and not including Logistics Enterprises. On the other hand, it is necessary for executives as well as investors to deeply understand the solvency situation in order to have a more accurate investment plan with less risk.

For the above reasons, the study on ***the short-term solvency assessment of Logistics companies listed on Vietnam's stock market*** is necessary.

2. Research Overview and Literature Review of short-term solvency of enterprises

The Overview of short-term solvency of enterprises

Opler et al. (1999) studied factors affecting the liquidity of 1048 US companies from 1971 to 1994. The dependent variable was liquidity ratio, the number of independent variables was 8. The authors concluded that large companies had better accesses to capital markets, so the efficiency of capital use was enhanced which meant they hold less cash, in other words, less liquidity.

Chen and Mahajan (2010) studied companies from 45 different countries between 1994 and 2005. The research objective was to assess companies' liquidity through macro factors. The results showed that macroeconomic variables such as GDP growth, inflation, real short-term interest rates, budget deficits, credit, private credits, and tax rates directly affected the cash balance of the company, which affected the short-term solvency of the company.

Nguyen et al. (2014) discussed factors affecting the liquidity of listed companies in Vietnam by studying on secondary data from audited financial statements of listed companies on the Hanoi Stock Exchange. Calculated data were used in the study through the financial statement for the period from 2007 to 2013 with 620 companies listed on the stock market. Dependent variable in this study was solvency with short – term solvency as a representative. Thus, this study opened the way for research groups to refer to different sectors listed on the stock market. Each sector has its own characteristics. For Logistics companies with quick capital recovery, if they can manage their capital, solvency as well as other financial indicators efficiently, they will contribute positively and comprehensively to our economy, industrialization - modernization of the country.

Literature Review of the solvency of the enterprise

The solvency reflects the financial relationship between the ability to pay in the period and financial obligations in the period (Luu and Vu, 2010).

Nguyen (2017) said that short-term solvency was the debt payment obligations of firms within one year from the araising date. To analyze the short – term solvency liabilities, it is common to analyze the following criteria:

(i) Cash ratio:

$$Cash\ ratio\ (MR) = \frac{Cash\ and\ cash\ equivalents}{Total\ current\ liablities}$$

Source: Nguyen (2017)

The metric calculates a company's ability to pay current liabilities using only cash and cash equivalents on hand at any time. If this indicator is high, it shows that the company has the enough ability to cover all short-term debt. However, this may also indicate that a company is not using its capital for its best use, which can lead to low efficiency of using cash resource. Conversely, if this indicator is too low, it will prove that there is insufficient cash on hand to pay off short-term debt which will affect enterprises' prestige and may lead to dissolution or bankruptcy of the enterprise.

(ii) Quick ratio:

$$Quick\ ratio\ (QR) = \frac{Short\ term\ assets - Inventory}{Total\ current\ liablities}$$

Source: Nguyen (2017)

The quick ratio (QR) is a much more commonly used than the current ratio (total working capital divided by total current liabilities). This is because this ratio has excluded inventories from the calculation formula. This formula is used by investors quite commonly when analyzing solvency of enterprises.

This ratio shows the short-term financial situation of a company. In theory, the higher this ratio is, the higher solvency is and vice versa. If the ratio is greater than or equal to 1, it indicates the ability to meet immediate short-term debt. Therefore, enterprises do not have any difficulty if they need to repay immediately current liabilities. Conversely, if the quick ratio is less than 1, the company will not be able to immediately pay off all current liabilities. Therefore, it will be difficult for enterprises to repay current liabilities. Through deeper analysis of solvency, we see that if the quick ratio is much smaller than the current ratio, the current assets depend heavily on inventory. This shows that the liquidity of current assets is relatively low. However, when the ratio is less than 1, the enterprise may not achieve good financial results, but that does not mean that businesses will go bankrupt because there are ways to raise more capital for repayment. In addition, if the ratio is too high, too much money will idle, stagnant and working capital will be low; therefore, the efficiency of capital use is low.

(iii) Current ratio

$$Current\ ratio\ (CR) = \frac{Current\ assets}{Total\ current\ liablities}$$

Source: Nguyen (2017)

This ratio indicates the ability to repay short – term debts with total current assets. The higher the ratio is, the better ability to meet the short – term financial obligations and vice versa. A high current ratio shows that a part of short-term assets is invested from stable capital. In fact, if this ratio is equal to 1, the short – term solvency of enterprises is still very fragile; therefore, executives must pay attention to improve their financial position.

Analysts need to compare these ratios between periods and with other enterprises in the same industry or with the industry average to assess the short – term solvency of enterprises accurately because there is no benchmark for the magnitude of this indicator.

3. Research Methodology

Data collection

Sources collected by the author are mainly secondary data sources, collected from annual audited financial statements (balance sheets) in Logistics companies listed on Vietnam's Stock Market, namely the Hanoi Stock Exchange for a period of 3 years from 2015 to 2017. The sample is 22 Logistics Companies listed on the stock market, corresponding to 66 observations. We use Excel software, formulas to calculate short-term solvency ratios.

Table 3.1: Descriptive Statistics sample

	Max	Min	Mean	Observations
CR	67.136	0.429	4.866	66
QR	63.238	0.362	5.533	66
MR	40.060	0.011	1.581	66

This table describes values which were calculated based on Excel, including some values as minimum value; maximum value; mean value of 22 Logistics Companies Listed on Vietnam Stock Market for three years from 2015 to 2017. As stated in the theoretical part of this study, the measures to measure short-term solvency include: quick ratio (QR); Current ratio (CR) and Cash ratio (MR).

Data Processing

After being collected, secondary data is processed by data processing methods including data classification and data sorting in a scientific way, using diagrams and tables to denote, then analyzed, compared and synthesized.

4. Research Results and Discussion

Short-term solvency (Current ratio)

Table 4.1: Short-term Solvency through years

CR (times)	2015		2016		2017	
	Number	Proportion (%)	Number	Proportion (%)	Number	Proportion (%)
CR> 1	19	86.4	18	81.8	17	77.3
CR < 1	3	13.6	4	18.2	5	22.7
Total	**22**	**100**	**22**	**100**	**22**	**100**

Source: Results of data processing by the authors

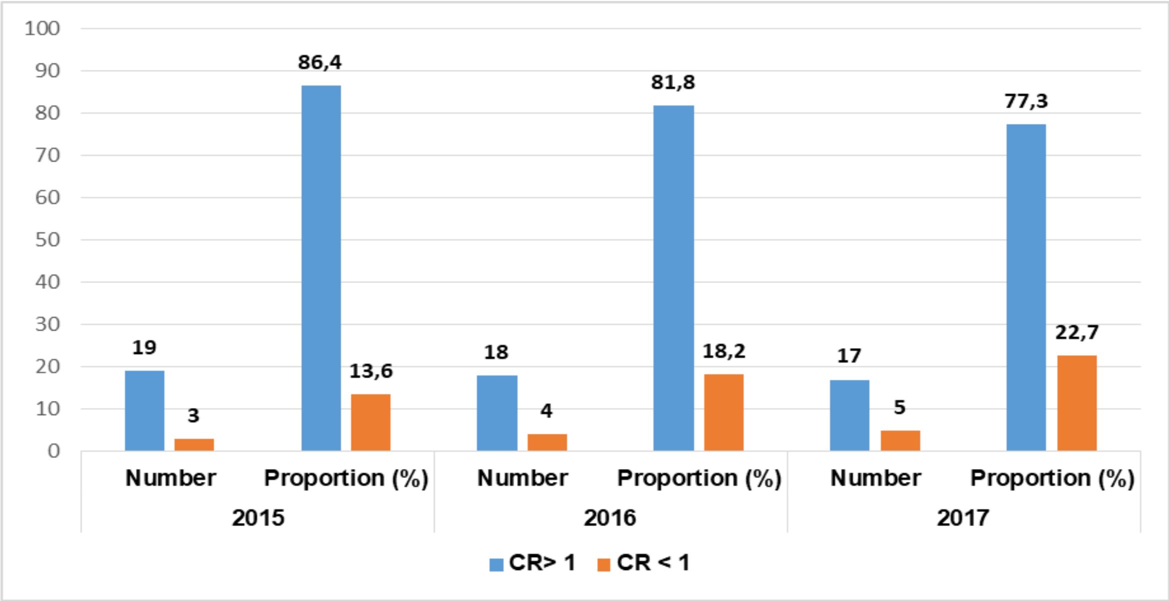

Figure 1: Short-term solvency

Source: Authors' data

The data in Table 4.1 shows that most of the Logistics businesses listed on Vietnam stock market are likely to have the current ratio (CR) of more than 1. This means that current assets of Logistics businesses are able to meet its short-term obligations if they were due at once. There are still companies that have the CR of less than 1, but they only account for a small amount and fluctuate slightly over years. However, most companies have the CR of more than 1, accounting for more than 77%, indicating that companies in the logistics industry are able to fulfill their short – term obligations when they reach maturity date. This could be a positive signal of their financial situation, indicating these companies are flourishing.

The greater current ratio does not necessarily mean that the greater the financial situation of the firm. High short-term liquidity may be due to a number of reasons: high receivables are due to irrecoverable debts; high inventories are due to large amount of raw materials not used up in production, sales or finished goods have not been sold. Large amount of inventories indicate that the use of assets is not really effective because those assets are not profitable as they are not turnover. As a result, the solvency of enterprises is not high, not to say that they cannot repay their debts. In addition**,** current assets may be formed from long-term loans such as prepaid to sellers; other debts (such as deposits, collateral ...), or from equity. Therefore, the short – term debts may be low but the long – term and other debts are high. Taking total current assets divided by total current liabilities to express the ability to pay short-term debt of the business is no different than using debt to repay the loan. For the reason above, a larger number does not necessarily indicate a better company.

Quick ratio

Table 4.2: Quick ratios over years

QR (times)	2015		2016		2017	
	Number	Proportion (%)	Number	Proportion (%)	Number	Proportion (%)
QR <1	5	22. 7	8	36.4	5	22.7
1 <QR <5.533	13	59.1	10	45.4	14	63.6
QR> 5.533	4	18.2	4	18.2	3	13.7
Total	**22**	**100**	**22**	**100**	**22**	**100**

Source: Results of data processing by the author

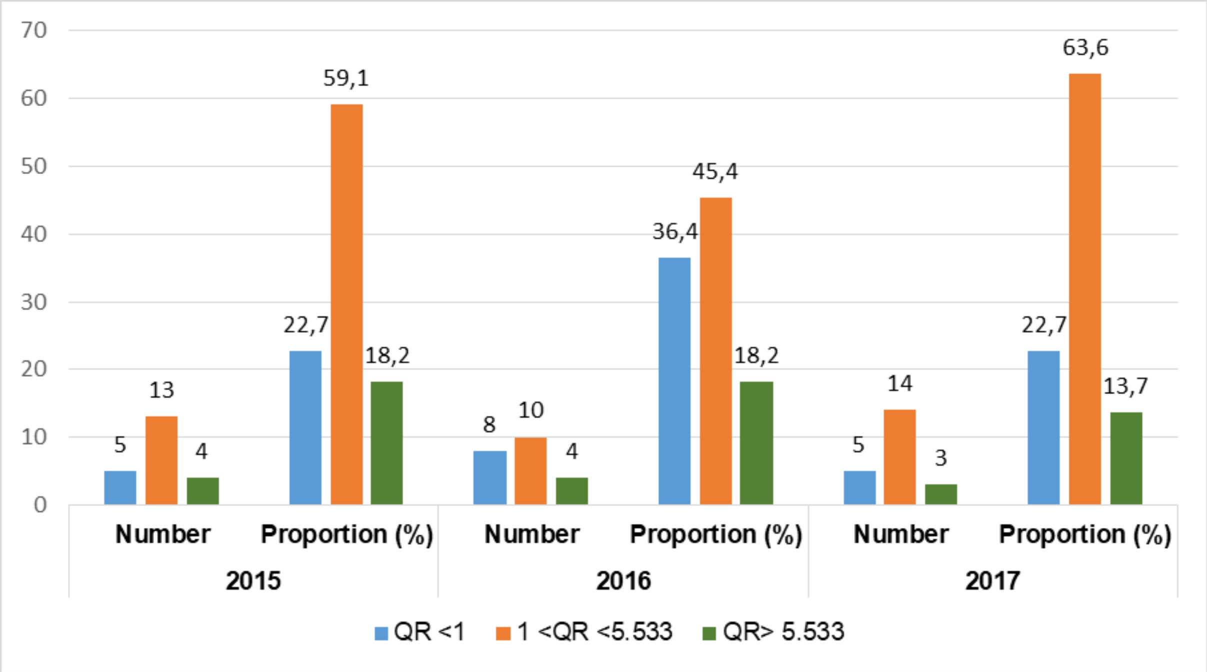

Figure 2: Quick ratio over years

Source: Data processing results of the authors

The data in Table 4.2 shows that the average of the quick ratio of companies in the logistics industry is 5.533, which means that each unit of current liabilities of the logistics business will be secured by 5.533 current assets (excluding inventories).

In general, companies maintaining high liquidity (above industry average) is a positive signal. It should be noted, however, that the quick ratio (QR) formula sometimes inadvertently omits the enterprise's non-cash payment capability in paying its maturity debts. That means the possibilities of businesses using a commodity that is in high demand and can be sold on the market right away, or receivables be negotiated to offset the obligations to creditors are not taken into account. It would be a mistake if the ability of a company to pay its current liabilities assessed as low when the cash on hand of the firm is little, the short-term investment of the business is not available, but inventory can be sold immediately at any time, the receivables can offset the high payables. Moreover, if the short – term debt is high but has not come to maturity, the ability to meet the obligations of the business can also be considered good. It is quite unreasonable if evaluate the firm only based on the ability to meet its current liabilities that has not reached maturity date yet but does not take the long-term debts that have already overdue into account. This is also the reason why many large scaled companies, have high position in the market have QR less than 1, which is in the second group in three comparisons.

In general, companies with high liquidity ratios - approximately equal to or more than the industry average, are medium- and large-scale companies, have operated for a long time, have stable financial status and low inventories in the asset structure, so the profitability ratios or financial performance is high, ensuring the repayment of loans. On the other hand, companies with low liquidity ratios are small-sized, new companies, so their financial situation is volatile, less sensitive to changes in the economic environment and their inventories are high; as a result, the businesses face many difficulties so that financial performance is relatively low, make it difficult for them to secure the payment.

Cash ratio

Table 4.3: Cash ratios over years

MR (times)	2015		2016		2017	
	Number	**Proportion (%)**	**Number**	**Proportion (%)**	**Number**	**Proportion (%)**
MR <1	16	72.7	15	68.2	20	90.9
1 <MR <1.581	2	9.1	1	4.5	0	0
MR> 1.581	4	18.2	6	27.3	2	9.1
Total	**22**	**100**	**22**	**100**	**22**	**100**

Source: Results of data processing by the author

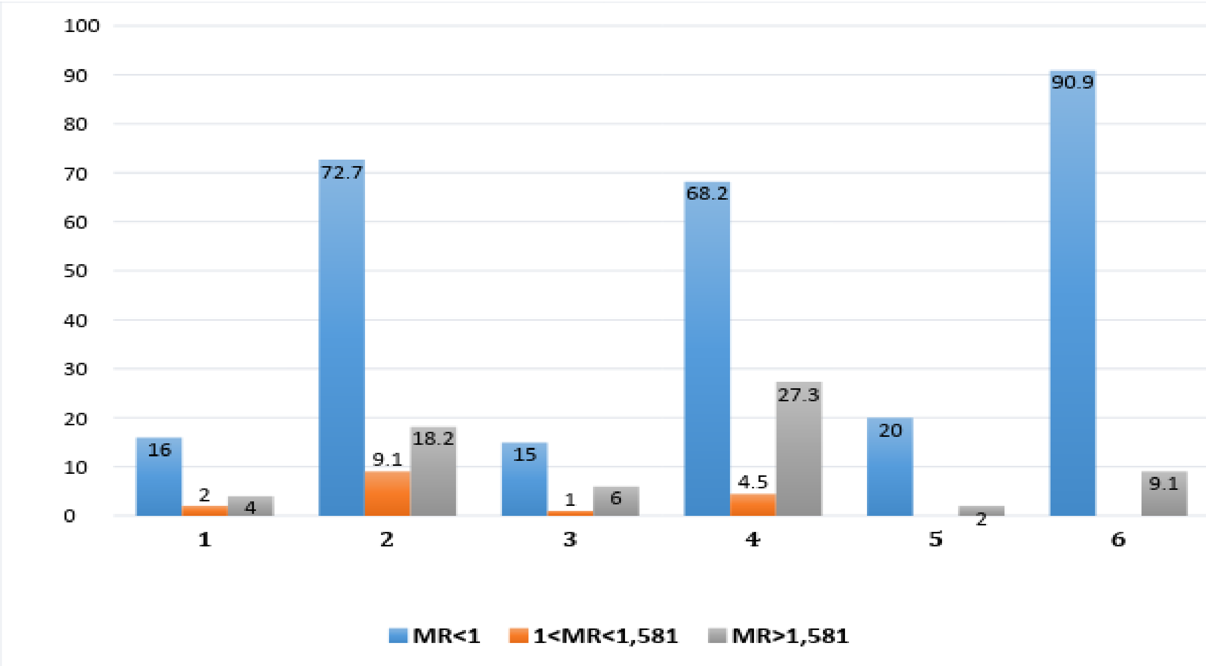

Figure 3: Cash ratios over years

Source: Author's data processing results

From the data in Table 4.3, we can see that the average of cash ratio in Logistics industry is 1.581, which means that each unit of current liabilities will be guaranteed by 1.581 cash available. Most Logistics companies have MR <1,581, which indicates that executives have used a reasonable amount of money to pay for short-term debt as well as invest in long-term activities. This avoids the situation where the amount of idle money is large, which leads to stagnant capital, low capital efficiency.

In general, logistics companies that have a steady liquidity ratio is stable enough to cover short-term liabilities and increase the firm's ability to utilize capital.

5. Conclusions and Recommendations

Conclusions

Based on the short-term solvency theories presented in Section 2, the authors focus on the current state of the financial situation, the short-term solvency of Logistics companies listed on Vietnam's stock market. Analysis shows that companies in Logistics industry have relatively stable short – term solvency, which is helpful for the expansion of the market share and firms' development.

Recommendations

For State agencies

State agencies need to provide policies and guidelines to create a good environment for Logistics companies to improve their solvency. One of the policies is: Stabilizing the macro environment, creating favorable conditions for businesses.

In general, an unstable macro environment is one of the causes of risk for the logistics industry in Vietnam. The imbalance of macroeconomics causes unsustainable development of the economy. The continuous trade deficit has put pressure on the exchange rate. The high national debt, the deficit balance, and the frequent budget expenditure drastically reduce the resources for investment development. High inflation has caused many difficulties for businesses. To resolve the problem, the government must maintain flexibility and sensitivity to react to macroeconomic changes. Macro policy formulation should be based on a micro basis, focusing on the impacts and interactions between key factors of the economy, especially businesses. Thus, a stable macroeconomic environment is an important factor in ensuring the existence and development of companies.

In addition, the Ministry of Transport should quickly learn and understand the business practices of foreign businesses operating in Vietnam in order to build appropriate legal framework as well as create a level playing field for Vietnamese businesses in the logistics industry, fostering healthy competition in the market.

For Logistics enterprises

First: Need to maintain a reasonable size of business

Enterprises in logistics industry are in the sector that requires large amounts of capital, fast turnover. Therefore, in addition to the amount of capital that businesses have available (equity), another source of capital is very important, which is loan. If the company is not strong enough, not have a steady annual revenue and not steadily grow over the years, it will be difficult for it to raise capital from investors, and banks. At the same time, they are not able to take the advantages of interest, payment period like large companies in the same industry. In addition, when the size of the business is maintained properly, it will build trust in the relation with customers and suppliers in the market; which gives company a chance to have a significant number of loyal customers and partners contributing to the company's revenue and growth. As a result, the solvency is also guaranteed thanks to large and stable revenue.

Second: Enhancing Information Technology Modernization

The Industrial Revolution 4.0 poses many challenges, but also creates opportunities if the logistics industry is brave enough to abandon the old habits to adapt.

With the pressure from competition in the industry of both domestic and foreign competitors, reducing raw material costs but maintaining quality is a challenge for businesses. In the era of science and technology and its applications to logistics becoming more and more popular in the world, Vietnamese enterprises cannot be left out. Logistics companies should promote investment in modern machinery and equipment to improve the quality of products and services as a regular and long-term business strategy. The development of high technology in modern logistics industries is an urgent requirement in the context of integration today. Enterprises need to invest in new machinery and equipment at reasonable prices to improve their abilities to generate high profit and quality production, reduce the cost of raw materials as well as take advantage of the available resources of the business. That brings a great source of income for businesses, raises their position and polishes brand, speeds up the rotation of inventory, improves collection of debt. All of those will bring the advantage of solvency for businesses.

Third: Improve business efficiency
Enterprises in the industry also need to pay attention to improve production efficiency, because this is an important factor that has a two-way impact on solvency. In order to improve the efficiency of production, enterprises can: closely manage capital, have a new investment plan, understand the needs of customers, and promote new products and services to build further customers for new products entering the market; at the same time maintain previous well-known, high quality and reliable items; look for new partners, new customers and improve the skill of workers.

References

+ Chen, N. and Mahajan, A. (2010), Effects of Macroeconomic Conditions on Corporate Liquidity, *International Journal of Finance and Economics*, Issue 35 (2010), pp. 112-129.

+ Luu, T.H. and Vu, D.H. (2010), Enterprise Finace, National Economic University Publishing House.

+ Nguyen, D.T. and et (2014), Determinants Influencing solvency of enterprises post-market stock in Vietnam, Scientific research projects at grassroots level.

+ Nguyen, V.C. (2017), Business Analysis, National Economic University Publishing House.

+ Opler, T., Pinkowitz, L., Stulz, R. and Williamson, R. (1999)*, The Determinants and Implications of Corporate Cash Holdings, Journal of Financial Economics*, 3-46.

+ Logistics Enterprises' Financial Statements, from 2015 to 2017.

+ www. bizlive.vn