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INDICATOR ANALYSIS IN THE PROCESS OF FINANCIAL SECURITY MANAGEMENT FOR THE WHOLESALE FOODSTUFF SECTOR

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Abstract. Presented is the indicator analysis in the process of financial security management for Poland's wholesale foods sector. The study examined 160 wholesalers of foodstuffs, beverages and tobacco products (Polish commercial classifications – PKD – from 46.31z to 46.39z), during the period 2008–2014. The study took advantage of corporate balance sheets, and profits and loss accounts of firms organized as limited liability entities and companies for scrutiny were chosen randomly. It was found that wholesaler liquidity difficulty is a signal for other entities of financial commercial stress which can consequently indicate difficulty in payment for entrusted goods. The study confirmed that the scrutinized companies have difficulty in improving their liquidity and profitability, potentially leading to bankruptcy as a result of negative opinions from potential investors.

Key words: financial security, wholesale foodstuffs trade, corporate bankruptcy, financial indicators

PRELIMINARY ISSUES

One of the fundamental elements associated with commercial activity in a competitive market is the assurance of financial security (Karbowiak, 2012), which can be understood as financial guarantee for functioning and development based on daily and multiyear efforts in securing good financial condition (Bednarski et al., 1996). In the event this condition is lacking, the enterprise becomes unreliable in the eyes of stakeholders, creditors, employees, clientele or suppliers and business partners which, in turn, has negative impact on said enterprise and consequently on its financial condition. The concept of security takes on significant meaning under conditions of unstable market conditions, causing a drop in sales revenue, stronger competition or difficulties in operating cash flow (Nowak and Gołembski, 2013). As a result, many firms delay prompt payments to their counterparties. Therefore, suppliers have their problems with timely payments to their creditors causing the so-called 'payment gridlock' which in commercial experience is one of the more important barriers and dangers for business development. The financial problems of one firm frequently impact the counterparties, relatively speaking i.e. the stronger the ties between firms; the stronger the negative impact (Mączyńska, 2005). Too strong relations between companies may lead to the so-called 'domino effect,' whose essence is that one company's bankruptcy may precipitate many more (Schumpeter, 1975). The issue of bankruptcy with the associated payment gridlock attains special significance when examining the relationships of firms functioning within the wholesale foodstuff sector where these firms have significant connections to other entities operating in the market.

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Among the dangers associated with company operations in market conditions are, among others: interference, delays, information system breakdowns, faulty forecasts, loss of intellectual property, rising costs of raw materials and components, uncertainty of receiving due payment, inappropriate reserve stock, or inadequate production capacity (Dedo, 2007). Special attention should be directed towards financial security upon which, to a significant degree, rests the potential risk of payment gridlock resulting from the bankruptcy of one entity of cooperating companies (Jarzębowski, 2013).

Commercial bankruptcy is an integral element of market economies as they cleanse the market of economically ineffective entities (Mączyńska, 2005). Furthermore, bankruptcy is one of the factors which enable competition (Wojtkowiak, 2004). In addition, according to the theory of creative destruction, bankruptcy enables the growth of innovation, removing barriers for development and effectively exploiting restricted resources to the benefit of owners and economies within which they function (Schumpeter, 1975). According to the Law of February 28 2003, declaration of insolvency is a process whereby a commercial entity is earmarked for liquidation or entering into an agreement with creditors in regard to debts. Article 10 specifies that bankruptcy is declared in reference to the debtor who has become insolvent based on the fact that the debtor cannot meet its financial obligations. Polish law allows declaring a debtor as bankrupt even though said debtor fulfills its obligations; however, the value of debt must be greater than the value of total assets (Ustawa…, 2003).

Taking a wider view of bankruptcy under present market conditions, a bankrupt may be an entity which cannot meet its payment schedule, and the value of its assets cannot cover its debts regardless of continuous activity (Juszczyk and Balina, 2014). This means that the company may find itself in poor economic financial condition which may not be associated with production capability. This is why a business is declared bankrupt when it is incapable of continued independent statutory activity and cannot meet its financial obligations without external help.

Symptoms influencing a business' condition can be variably divided into two groups. Literature points to clearly occurring crisis symptoms in the area of operations directly associated with the company's activity and financial sphere as the quickest indicators signalling deteriorating economic-financial condition (Sierpińska and Jachna, 2004). For several decades scientists and professionals in the area of finance the world over have been attempting to generate such tools which would accurately indicate whether bankruptcy threatens a business, or not. The significance of this type of solution is especially important in the case when considering a number of companies closely associated with each other where every occurring uncertainty causes turmoil in all the companies (Kołosowski and Jóźwiak, 2012).

This is why the knowledge of a company's present and forecasted financial condition in this area is a key factor when undertaking decisions regarding cooperation or granting mercantile credits to any given business (Juszczyk and Balina, 2009). The information that any business refers to must be accurate and current; especially important when said information may be negative which can significantly impact a company's solvency and/or its smooth market performance.

Having access to basic financial sheets, various financial-economic indicators can be generated which then illuminates a company's condition (Bień, 2008). Financial statements like balance sheets and income accounts provide a vast amount of data related with the financial state of a company. These data, then, are simplified through financial ratio analysis, in order to understand and analyze the company's performance and financial state (Kanto and Martikainen, 1992; Olinsky et al., 1996). However, most ratios by themselves are not highly meaningful, unless they are compared with some standard, such as industry trends or yearly trends. Consequently there is a real risk of information chaos; hampering – instead of assisting – the economic-financial assessment of any given company. Furthermore there exists the problem of the interpretation of chosen indicators which frequently give conflicting information. For these reasons it has been decided to verify the financial condition of the chosen businesses using five selected financial indicators. Such choice of indicators will allow for a financial condition comparison of foodstuff wholesalers – those which have not survived and those which continue to prosper during an economic slowdown.

Industry financial ratios not only allow a comparison of a company's financial performance with its rivals within the same industry, but also allow a comparison of the industry itself over time. However, there is a vast amount of financial ratios that can be used during comparisons and some are more important than the others for different industries. This raises the issue of classifying financial ratios by reducing redundancies (Ocal et al., 2005).

Liquidity is one of the elements to examine when assessing the financial condition of businesses, as liquidity determines the existence and development of commercial endeavours. Substantial reduction of liquidity raises the risk of long term solvency loss which can lead to bankruptcy. On the other hand, too much liquidity may restrict a company's development possibilities. As a criterion for assessing a company's finances, liquidity is also an issue worthy of attention for all the neighbouring businesses, especially for investors in assessing a company's capacity for multiplying its fortune, for creditors in deciding to service debt and timely payments of obligations, as well as employees regarding maintaining employment and receiving payments on time at expected levels (Gołaś and Witczyk, 2010). Furthermore, in assessing financial condition of businesses, profitability is another indicator used. The phenomena of financial liquidity and profitability are mutually dependent, and not only do they individually influence a company's condition, but also together. In short term periods there are normally conflicting indications by profitability and liquidity indicators – companies characterized with high profitability sometimes have a difficulty with liquidity, and vice versa, those with a high liquidity show low profitability. However, in the long term view, positive association dominates between profitability and liquidity. In the longer term, high profits raise equity which, in effect, determines a company's solvency (Zuba, 2009).

RESEARCH METHODOLOGY

The objective of the study was to determine the possibility of taking advantage of selected financial analysis indicators in the process of managing corporate financial security for food beverage and tobacco product wholesalers.

The study encompassed 160 companies in the wholesale sector of foodstuff, beverage and tobacco products (Polish commercial classifications – PKD – from 46.31z to 46.39z), from 2008 to 2014. The study took advantage of limited liability company balances, and profit and loss accounts in the above mentioned sector operating in the Republic of Poland.

The selection of entities was random where 80 firms were confirmed as insolvent (bankrupt) in 2014, and 80 which were solvent, in continuous operation. In the bankrupt group, the study took into account those firms which published their financial reports in "Monitor Polski B" during the years of the study in focus and whose information regarding insolvency (late payments) towards counterparties was noted in 2014. To contrast these firms, solvent firms were considered which were in continuous operation from 2008 to 2014 and were comparable in total assets (± 500,000 PLN).

Upon completion of selecting the firms to be examined, five economic-financial indicators were chosen determined by their general application in pertinent literature (Sierpińska and Jachna, 2002) and their usefulness in forecasting bankruptcy, or continued solvency (Ohlson, 1980). With the above criteria in mind, the following indicators were chosen:

- X_1 = current assets/current liabilities,
- X_2 = short term investments/current liabilities,
- X_3 = net profits/total assets,
- X_4 = net profits/current assets, and
- X_5 = total activity costs/total activity revenues.

In addition to the company's condition assessment, the average national value in the specific sector for each indicator was considered. These values were determined on the basis of data from GUS (2015).

During the study the relations between various selected indicator levels were studied for effectively insolvent and continually solvent companies for periods of 1 to 5 years before official bankruptcy. These results enable counterparties – and companies themselves – to gain valuable information pertaining to which key factors to observe to avoid collaboration with failing entities. It is as important for the wholesaler as it is for counterparties to avoid cooperation with a potentially insolvent company since it may endanger their own financial security.

STUDY RESULTS

The financial condition of selected firms was assessed with the help of selected indicators. The application of certain standard indicators allowed judging the financial situation of companies exhibiting early signs of insolvency and comparing those indications with companies with good financial condition indications. Upon standardization of the indicator contents, these indicators can be exploited by firms for internal financial analysis, but also by banks, shareholders and potential investors.

The first indicator group to be utilized for analysis was that which determined liquidity. Various authors

(Czekaj and Dresler, 2002; den Haan et al., 1999) have concerned themselves with the issue of financial insolvency i.e. the inability to make current payments and meet current debts, considering it the primary source for insolvency and company bankruptcy. Financial liquidity is also related to the size of a company and its projected growth, how large investments may be, the sector's uniqueness, as well as other, numerous indicators defining the financial and economic condition of a company (Lins et al., 2010). As a result the observation and analysis of company liquidity belong to the fundamental tools for establishing condition and perspectives for growth.

Figure 1 reflects the indicator behaviour for current financial liquidity for the selected companies. Initially, at the beginning of the study period, the continuously operated companies displayed the highest indicator values for current liquidity, and only these companies continued to do so exceeding the minimum level (1.2). In the following years there was a slight drop in the indicator value for these companies and stabilization of the average level for the entire sector. Important to note is that the current liquidity indicator value for the companies in good financial condition fluctuated near the studied industry average. As Surmowa points out, if the indicator level holds out between 1 and 2, then it can be stated that the company has good liquidity (Surmowa, 1991). For the whole study period, the current liquidity indicator for the considered insolvent companies displayed significantly lower values than the industry value and showed falling tendency which can be interpreted as evidence of deteriorating condition. This situation could have been a relevant signal for the counterparties of these businesses as granting them mercantile credits would engender serious risk in that the said businesses would most likely encounter difficulty in timely payment of their debts from funds out of their current assets. In the case of firms dealing with wholesale trade, the lack of current liquidity indicates potential problems of servicing current debt since these firms base their operations on current assets. In considering a cooperation with a foodstuff wholesaler, on the basis of the carried out analyses, it can be concluded that in the case when current assets steadily linger below industry averages, it may indicate financial difficulties within the company in question and any mutual undertaking carries a significant risk.

The next indicator utilized in this study was the 'quick ratio' as presented in Figure 2. In this calculation only the assets with the highest liquidity were taken into account. Calculating this indicator is especially significant when considering payment gridlock which is characteristic for Polish companies (Sierpińska and Wędzki, 2005), which may be all the more important during economic recession as was the case in 2008 to 2014.

The quick ratio indicator for financially solvent companies maintained a level above 0.24 and above the foodstuff sector average throughout the entire study period. In fact, the indicator value fluctuated within the optimal range as suggested by literature. The significantly higher value for companies in good financial condition, above the whole foodstuff sector average, indicates efficient management by these entities in their primary activity of commercial trade. The same indicator value for those entities deemed insolvent fell in the area slightly below 0.15 which can be tied to high risk, because

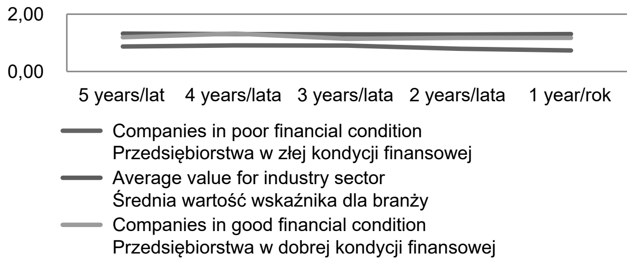

Fig. 1. Current Liquidity Indicator in Selected Businesses
Source: own research.
Rys. 1. Wskaźnik płynności bieżącej w badanych przedsiębiorstwach
Źródło: badania własne.

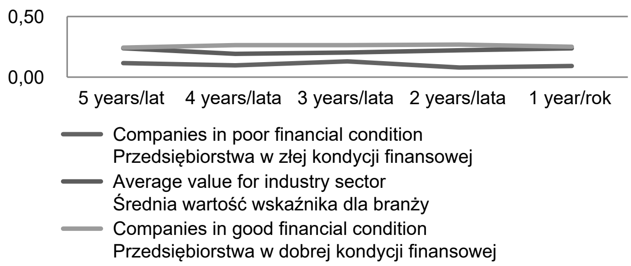

Fig. 2. 'Quick Ratio' Indicator in Selected Businesses
Source: own research.
Rys. 2. Wskaźnik płynności natychmiastowej w badanych przedsiębiorstwach
Źródło: badania własne.

unexpected difficulties, especially during recession, can arise and cause the loss of liquidity. Furthermore, from the perspective of initiating cooperative ventures within the foodstuff sector with an entity whose quick ratio extensively lingers notably below sector average can indicate lack of liquidity in which case would speak against cooperation as it would then endanger the financial security of the counterparty.

For a full company financial assessment, the assessment of profitability is essential. The study took advantage of 'return on total assets' and of 'current asset activity' where these two indicators most significantly characterized the activity of a business involved in foodstuff wholesale trade.

The first indicator of this group is 'Return on Total Assets' (ROTA) whose levels are shown in Figure 3. The research indicates significant differences in the formation of the indicator results between the insolvent companies and the remaining two groups. Throughout the study period, the indicators for solvent companies and industry average were relatively equal – only minor deviation – and their levels did not exceed 0.1. Interestingly, the average value of the Return on Total Assets in solvent companies remained below the industry average as presented by the Polish Central Statistical Office throughout the full study period. In the case of the insolvent companies, they had already displayed a negative index 5 years prior to their bankruptcy indicating continued inability to correct their condition in subsequent years. The continued negative ROTA value for the whole study period in the group of businesses which finally declared bankruptcy indicates that they were not profitable which would certainly be a warning for any potential counterparties.

The second analysed profitability indicator is the Return on Current Assets as presented in Figure 4, which configured in a similar fashion to ROTA. All groups experienced deterioration in the ratio of profit to current assets. The drop in profitability of each fixed asset unit (PLN) engaged in the entity's activity, regardless of the group, may have resulted from market conditions and not from improper corporate decisions. The wholesale industry is dependent on other businesses in other market sectors which causes stronger reactions to turmoil in various markets. The results for Return on Current Assets should be viewed negatively for the companies which declared bankruptcy since they consistently reflected a negative index regardless of any fluctuations which, in the case of foodstuff wholesale, may have been caused by high levels of liabilities.

For a full analysis of the financial conditions of the selected businesses, a comparison of Total Costs and Total Revenues was initiated for certain entities which is presented in Figure 5. In accordance with the classic model, these number breakdowns enable establishing a firm's profitability i.e. the point where production capacity produces profit.

For the whole study period only the solvent companies displayed cost level indicator values below 1.0, and were relatively close to the average for this industry indicating that firms from this group were able to generate profits. Those companies which declared bankruptcy showed values above 1.0. Comparing total costs and

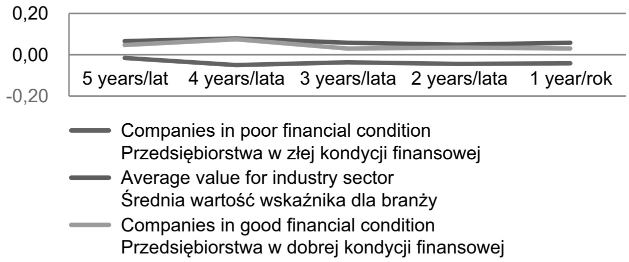

Fig. 3. Return on Total Assets in Selected Businesses
Source: own research.
Rys. 3. Wskaźnik rentowności aktywów ogółem w badanych przedsiębiorstwach
Źródło: badania własne.

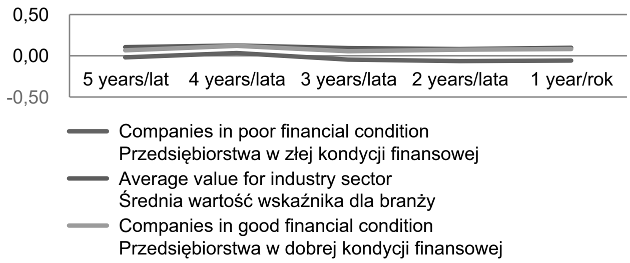

Fig. 4. Return on Current Assets Indicator in Selected Businesses
Source: own research.
Rys. 4. Wskaźnik rentowności aktywów obrotowych w badanych przedsiębiorstwach
Źródło: badania własne.

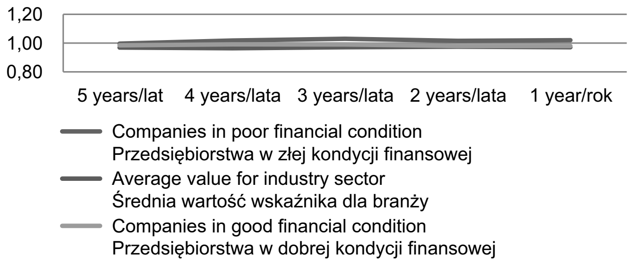

Fig. 5. Costs Indicator in Selected Businesses
Source: own research.
Rys. 5. Wskaźnik poziomu kosztów w badanych przedsiębiorstwach
Źródło: badania własne.

revenues for the entire industry of the study indicates improved dependency for the period in question. This situation suggests that the condition of the foodstuff wholesale industry is improving.

SUMMARY

Assessing the financial condition of companies in Poland's foodstuff wholesale industry in the context of financial security management is an important issue. An analysis of selected liquidity indicators showed that companies which finally declared bankruptcy already had liquidity difficulties five years earlier. Current liquidity and quick ratio indications were well below those of examined solvent companies, as well as the industry average. Difficulties with liquidity are a clear signal for other entities of financial stress which, in turn, may engender delayed payment for entrusted goods.

Return indicators also reflected clear differences between insolvent entities and the other businesses. The low value of these indicators by the insolvent group, and lack of improvement during the study period suggests ineffective asset management. Other entities lose their enthusiasm for undertaking risk with a company whose various fiscal components are unbalanced. The risk of corporate bankruptcy and its impact on counterparties (as in lost revenue) rise in periods of crisis. Those firms involved in wholesale are strongly dependent on other sectors of industry which makes the wholesalers especially sensitive to sudden changes.

These studies may be helpful to companies through the observation that maintaining appropriate relation between revenue and costs is essential. Risky moves by companies may cause turmoil with liquidity. Study confirms that companies have difficulty with improving their liquidity and profitability which can in turn lead to insolvency as a result of the negative opinions of potential investors.

Taking advantage of this article, and its observations, by company management of the selected sector may contribute to their financial security through their reduction of risk by avoiding cooperation with unstable entities.

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ANALIZA WSKAŹNIKOWA W PROCESIE ZARZĄDZANIA BEZPIECZEŃSTWEM FINANSOWYM W BRANŻY HANDLU HURTOWEGO ARTYKUŁAMI SPOŻYWCZYMI

Streszczenie. W artykule przedstawiono analizę wskaźnikową w procesie zarządzania bezpieczeństwem finansowym w branży handlu hurtowego artykułami spożywczymi. Badaniami objęto łącznie 160 przedsiębiorstw z branży handlu hurtowego żywnością, napojami i wyrobami tytoniowymi (PKD 46.31z – 46.39z). Badania obejmowały lata 2008–2014. W badaniach wykorzystano bilanse oraz rachunki zysków i strat przedsiębiorstw w formie spółek z ograniczoną odpowiedzialnością. Dobór próby do badań był losowy. Stwierdzono, że problemy z płynnością są sygnałem dla innych pomiotów o trudnościach finansowych przedsiębiorstw, co w konsekwencji może skutkować problemami w uzyskaniu płatności za powierzony towar. Badania potwierdziły, że analizowane przedsiębiorstwa mają problemy z poprawą swojej płynności i rentowności, co w konsekwencji może doprowadzić do ich upadłości ze względu na negatywną opinię wśród potencjalnych inwestorów.

Słowa kluczowe: bezpieczeństwo finansowe, sprzedaż hurtowa artykułów spożywczych, bankructwo przedsiębiorstw, wskaźniki finansowe

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