

## BANKRUPTCY – AN ASSESSMENT OF THE PHENOMENON IN THE SMALL AND MEDIUM-SIZED ENTERPRISE SECTOR - CASE OF POLAND

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**Abstract:** The purpose of the paper is to assess the phenomenon of bankruptcy in the sector of small and medium-sized enterprises. The implementation of the goal required the use of descriptive and statistical methods, in particular the Mann-Whitney U test, the Kruskal-Wallis ANOVA test and the Pearson chi-square test of independence. The direct method - questionnaire was also used. In the paper the essence of bankruptcy was discussed. Some of own survey research from the first quarter of 2021 were also presented. The research results allowed concluding that the causes of bankruptcies are dominated by financial factors. According to the respondents, insufficient sales revenue was the reason for the bankruptcy. The entities considered bankruptcy to be the factor that the most important of them include: changes in the economic environment and improper management of the company.

**Key words:** bankruptcy, insolvency, bankruptcy risk, bankruptcy identification.

DOI: 10.17512/pjms.2021.24.1.15

*Article history:*

*Received July 02, 2021; Revised July 28, 2021; Accepted September 24, 2021*

### Introduction

Bankruptcy is a phenomenon inextricably linked with the modern market economy. Each action, including the one taken in the economic sphere, is aimed at achieving specific results. Nevertheless, economic activity is often accompanied by uncertainty related to risk which is difficult to recognize. It can cause a crisis in an enterprise. Underestimating or not recognizing such a crisis situation in the organization, or adopting an inappropriate strategy of action may lead to a proper crisis, which may become a premise and basis for economic bankruptcy.

The purpose of the paper is an attempt to assess the phenomenon of bankruptcy in the sector of small and medium-sized enterprises. Based on the survey, an attempt was made to identify the causes of bankruptcy, factors that constitute the most significant threats leading to bankruptcy, as well as how risk is identified in the entities surveyed, and what bankruptcy means for the company and an owner or a manager.

The implementation of the goal required the use of descriptive and statistical methods, in particular the Mann-Whitney U test, the Kruskal-Wallis ANOVA test and the Pearson chi-square test of independence that allowed to assess whether the

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relationship or differences between the selected features were statistically significant. The direct method, the questionnaire was also applied. In the paper the essence of bankruptcy based on the literature on the subject was described. Some parts of own survey research from the first quarter of 2021 conducted in Poland in the small and medium-sized enterprise sector were also presented.

### Literature Review

The name "bankruptcy" has its roots in medieval Italy. The term comes from the word *banca rotta* – "a broken bench". Breaking the bench was an Italian custom and concerned the destruction of the stand of a trader who did not pay their obligations. The genealogy of the word "bankruptcy" can also be found in France - the term *banqueroute* means a debtor who constantly runs away and hides from creditors, while avoiding court proceedings (Prusak, 2011). In Romance languages, also in Polish nomenclature, the concept of bankruptcy has been used from the Italian word *fallimento*, or the French *faillite* (Prusak, 2007).

The issues of bankruptcy of enterprises have been a special area of interest for science and business practice for over half a century due to the high economic and social costs associated with it. The direction of research on this phenomenon on a macro scale was initiated by Edward Altman who was the first to identify a set of macroeconomic variables strongly related to the causes of corporate bankruptcy (Altman, 1971; Jencova et al., 2021). Altman's research was continued and developed by: Rose (1982), Hudson (1986), Wathwani (1986), Melicher and Heath (1988), Platt (1994), and Liu (2004). The following also contributed to the development of the bankruptcy theory: Akerlof (1970), Kahneman (1979), Krugman (1995), Miller and Stiglitz (1999). Also in Poland, the issues of macroeconomic determinants of corporate bankruptcies began to constitute an important area of interest. These studies appeared with the change of the socio-economic system of the country. These include the following publications: Appenzeller (2004), Tokarski (2010), Mączyńska (2009), Antonowicz (2015), Pocięcha i Pawełek (2011).

In scientific publications, the term "bankruptcy" is often used next to the word "insolvency". Using the two terms interchangeably is not always fully justified, therefore it is necessary to distinguish them (Dankiewicz and Szymańska, 2020). Bankruptcy is an economic concept, while insolvency is a legal term (Herman, 2010). Identifying bankruptcy with insolvency is justified in the case of culpable bankruptcy (Mączyńska, 2009). In economic terms, bankruptcy means that an enterprise is unable to continue its operations on its own without external financial support. The next term means a situation related to the state of insolvency of an economic entity confirmed by a valid court judgment. Thus, not every bankruptcy necessarily equates to insolvency from a legal point of view. At the same time, the company's inability to pay its current liabilities on time becomes the basis of its technical insolvency (Rutkowska, 2001).

The term insolvency as opposed to bankruptcy was defined in Polish law (Bankruptcy and Rehabilitation Law - the Act of February 28, 2003), therefore, in

addition to the economic nature, it also covers the legal aspect of the business of an enterprise that has bankruptcy capacity. In legal terms, insolvency means depriving a person running an enterprise of the right to manage and dispose of the property for the benefit of a receiver appointed for this purpose (Nahotko, 2004). The declaration of insolvency of an entity is possible when the market value of the property allows at least the coverage of the costs of insolvency proceedings. On the other hand, in some definitions, a company that does not have assets that can be sold is considered a bankrupt (Schwarz, 2004). This term is also understood as complete insolvency or permanent state, meaning the formal termination of economic activity without the possibility of recovering capital (Black et al., 2000). Moreover, unlike bankruptcy, insolvency offers the possibility of a debtor's agreement with their creditors, which may also allow for the continuation of economic activity.

Regardless of how the phenomenon is defined, an enterprise does not collapse overnight. Bankruptcy is usually preceded by a crisis that may or may not lead to insolvency. Only the lack of action or mistakes made during the crisis in the enterprise contribute to its bankruptcy. It is worth mentioning that the emergence of a financial crisis may also contribute to bankruptcy. Moreover, such perturbations affect not only small and medium-sized enterprises, but may also contribute to the problems of institutions whose task is to stabilize the market such as insurance companies (Dankiewicz and Simionescu, 2020; Tsvetkova et al., 2021; Meekaewkunchorn et al., 2021). Often the most serious problem is the failure to perceive threats appearing in an organization and its environment, caused by high emotional involvement of the management and unjustified enthusiasm.

Firms show symptoms of impending crisis long before bankruptcy occurs. They are usually characterized by: stagnation, underused resources, ineffective management. Then, a financial analysis is helpful in identifying bankruptcy. It is assumed that the symptoms of impending bankruptcy are noticeable at the index analysis level already in the period from one to four years preceding the court ruling on the debtor's insolvency (Antonowicz, 2015).

There is no closed catalog of factors determining the emergence of a crisis situation and, consequently, bankruptcy of an enterprise. The factors that pose a real risk of bankruptcy and, consequently, insolvency are similar and do not change significantly over the years. The most popular classification distinguishes two groups of threats: financial and non-financial ones. The financial factors include: a systematic decrease in sales revenues, an increase in net loss, deterioration of financial liquidity and the associated excessive build-up of liabilities or/and an increase in difficult-to-collect receivables, disruptions in loan repayment and an increase in demand for short-term loans, etc. One of the reasons for the bankruptcy of an enterprise may also be a domino effect, which can be talked about when financial problems of one enterprise and failure to pay its liabilities cause problems for subsequent entities. This phenomenon is particularly dangerous in relation to the trade credit instrument which is widely used in market practice (Dankiewicz et al., 2021). Therefore, it is extremely important that the offer of a trade credit is supported by appropriate receivables

management procedures in an enterprise (Zimon et al., 2019). Among the non-financial symptoms of a threat to the activity, the following can be distinguished: unfavorable legislative changes, loss of basic sales markets or the main supplier, technological changes, personnel problems, or lawsuits concerning the organization (Gołębiowski and Tłaczała, 2005).

The causes of bankruptcies are also microeconomic (endogenous) and macroeconomic (exogenous). The first ones result from the reasons inherent in the enterprise itself, i.e. its organizational structure, management system and economic information. Inconsistencies in internal management systems lead to deterioration of relations with stakeholders, which in their turn, have the negative impact on business performance and vice versa. Particularly, following the current research of enterprises competitiveness and financial resilience, there is an obvious link between corporate social responsibility in environmental actions, social community support, maintaining of human rights, employee welfare and core financial indicators, which include company's market value and bankruptcy risk (Myšková & Hájek, 2019). The similar findings are obtained in investigation of human capital management effectiveness regarding the hiring and retaining of skilled employees and financial success of enterprise (Bilan et al., 2020). Respectively, effective management in near environment of business should consider the expectations of the stakeholders, particularly, incentives to work within subjective perception of employees (Tvaronavičienė et al., 2021). Essential influence on financial risks has also motivation of business owners to start the business - for money or as an expression of the own mission (Belás et al., 2018). They are influenced by management, unlike macroeconomic reasons, which are independent of the entity and its managers (Zelek, 2003). Exogenous factors can be divided into three groups: related to the situation in the industry (e.g. strong competition), resulting from the economic environment (e.g. recession, changes in law) and those resulting from the global situation (e.g. political changes in other countries) (Nowak, 2008; Dankiewicz, 2020). In the light of new challenges for business development an important factor influencing financial efficiency of the enterprises is macroeconomic shifts in qualified labor force distribution in favor of countries with developed knowledge-based economy (Oliinyk et al., 2021). Besides, governance quality, transparency of business environment and measures to eradicate informal business activity can significantly affect societal relations and financial prerequisites for business activity (Mishchuk et al., 2020; Prabawani et al., 2020).

There are also demand and supply barriers to the functioning of entities from the SMEs sector. The demand includes: insufficient funds at the disposal of customers, too much competition in the market, and supply: insufficient technologies, insufficient financial resources of an enterprise, a lack of raw materials, a lack of qualified workforce (Borowiecki and Siuta-Tokarska, 2008).

The literature on the subject also includes the classification of the causes of the collapses of entities into two groups (Sojak, 2001):

- internal reasons - financial management (e.g. a lack of financial liquidity), fixed assets management (e.g. high costs of maintaining non-productive assets), organization and management of the entity (e.g. excessive employment);
- external reasons - resulting from factors inherent in the micro-environment (e.g. collapse of sales markets) and the macro-environment of the enterprise (e.g. liberalization of foreign trade).

Sometimes, apart from internal and external factors, also indirect ones are mentioned, i.e. lack of capital, high rents, change in demand, or the supplier's withdrawal from the existing cooperation (Szczerbak, 2007).

### Research Methodology

The analysis of the results of the survey conducted in the first quarter of 2021 among small and medium-sized enterprises from all over Poland includes a numerical and percentage statement as well as the results of the Mann-Whitney U test, Kruskal-Wallis ANOVA test and Pearson chi-square test of independence. They allow an assessment whether the relationship or differences between the selected features are statistically significant. The significance level of  $\alpha=0.05$  was adopted for the research. It is assumed that: when  $p < 0.05$ , there is a statistically significant relationship (marked with\*);  $p < 0.01$ , there is a highly significant relationship (\*\*);  $p < 0.001$ , there is a very high statistically significant relationship (\*\*\*)

The Pearson's chi-square test is the most important non-parametric test. It is used in the calculation of measurement error in natural sciences, engineering and social sciences. It is one of the most commonly used statistical significance tests in social science (Babbie, 2007). The chi-square test of independence is applied to assess the relationship between the frequency distribution of responses in one variable with respect to the other variable. This method allows evaluating whether the observed distribution of one feature depends on the other. With its help, it is checked whether the discrepancies in the responses between two features are large enough to be considered as a real influence of the independent variable.

The Mann-Whitney U test is one of the most popular non-parametric significance tests. It is widely used in a variety of analyzes. In addition to medical applications, it is used, among others in social demographic research, marketing research, opinion polls, etc. (Order and Foreman, 2009). It was originally proposed by Frank Wilcoxon in 1945 as a shift test for two parallels, but was generalized in 1947 by Henry Mann and Donald Ransom Whitney for various attempts to test stochastic equality (Mann and Whitney, 1945). This method is used to compare two groups in terms of a given quantitative variable. The Mann-Whitney U test is a nonparametric test, which means that it can also be used when the data distribution does not match the criterion of fitting to the normal distribution and when the data distribution is significantly asymmetric to the mean. Its advantage is that it does not require meeting the assumption that the studied groups are equal. It compares each observation against the median, not the mean. The basic requirement for applying the test is that the

dependent variable should be measured on a scale at least ordinal (the test also accepts a dichotomous scale).

The Kruskal-Wallis ANOVA test is a non-parametric alternative to the one-way analysis of variance. It is used to compare the distributions of several variables. Due to the fact that there is no need to meet the troublesome assumption of the normality of distributions, the Kruskal-Wallis ANOVA test (Kruskal, 1952; Kruskal and Wallis, 1952), along with the Mann-Whitney U test, is the most widely used homogeneity test in clinical trials in medicine, biology and in social demographic and marketing research, etc. (Zar, 2010). This test is used to verify the hypothesis that the differences between the medians of the studied variable in several populations are irrelevant.

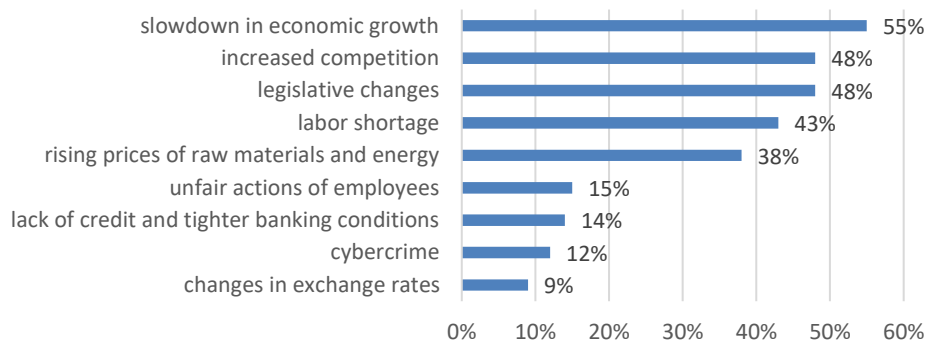
This method is an extension of the Mann-Whitney U test to more than two populations or categories of variables. In this case, there is no requirement for the group to be equal in terms of the number of people, and the variance is not required to be homogeneous. The condition for applying the test is that the dependent variable is measured on a scale at least ordinal and the observations in the analyzed groups should be independent of each other, which means that a respondent in one group should not be in another compared population (Piskorski, 2019).

In the statistical study of the surveys presented in the next section of the paper, the ANOVA Kruskal-Wallis test was applied to analyze a variable with more than two categories (ranges). In the case of features with two categories, the Mann-Whitney U test was used to test the relationship.

### **An Analysis of the Results and Inference**

This part of the paper presents the results of the survey conducted in the first quarter of 2021 in Poland in the small and medium-sized enterprise sector. The sample covered 364 business entities of various sizes, from various industries and individual forms of business. In order to identify the entities, a request to fill in the questionnaire was sent to enterprises from the SMEs sector, taking into account the distribution of these enterprises in the economy.

Figure 1 presents the structure of responses to the question regarding the most significant threat to the companies surveyed. According to the respondents, the most significant factor is the economic slowdown - this option was chosen by 55% of entrepreneurs. According to almost every second respondent (48%), an increase in competition in the sector and legislative changes (48%) are also significant. For 43% of entities, the factor that poses a threat to their activities is labor shortage, and for 38% - rising prices of raw materials and energy.



**Figure 1: The structure of answers to the question about the most significant threats for the companies surveyed (own study based on questionnaire surveys)**

It was checked whether the size, a form of operation and an area of operation of the entities examined had an impact on the indicated threats. The research shows that both the size of the company and the form of its activity, as well as the industry in which it operates, have the impact on selected threats. Based on the independence test chi Pearson square (Table 1), it was indicated that the size of the company was related to the assessment of the increase in competitiveness  $p < \alpha$  ( $p = 0.0409$ ), economic slowdown  $p < \alpha$  ( $p = 0.0365$ ), a lack of credit and tightening banking conditions  $p < \alpha$  ( $p = 0.0152$ ), legislative changes  $p < \alpha$  ( $p = 0.0057$ ) and rising prices of raw materials and energy  $p < \alpha$  ( $p = 0.0021$ ).

**Table 1. The results of the Pearson chi square independence test. The size of the company, a form of operation and an area of operation and the most significant threats**

	Company size	Activity form	Branch
increased competition	0.0409	0.0872	0.0037
slowdown in economic growth	0.0365	0.0665	0.0370
lack of credit and tighter banking conditions	0.0152	0.2388	0.1926
legislative changes	0.0057	0.0499	0.2065
changes in exchange rates	0.2287	0.6811	0.0199
rising prices of raw materials and energy	0.0021	0.0907	0.0001
unfair actions of employees	0.2233	0.0289	0.9205
cybercrime	0.3240	0.7472	0.0475
labor shortage	0.0684	0.7943	0.0001

An increase in competition as the determinant that poses the greatest threat to the conducted activity was indicated by 53% of micro-enterprises, 44% of small enterprises and 38% of medium-sized enterprises. The economic slowdown is the greatest threat according to 50% of micro-entities, 64% of small enterprises and 62%

of medium-sized business entities. Lack of credit and tightening of banking conditions according to 11% of micro-entities, 24% of small and 12% of medium-sized entities may be the greatest threat to their companies in the next 5 years. According to 51% of micro-entities, 33% of small and 56% of medium-sized enterprises, legislative changes are a significant. The size of enterprises also diversified the statements of the respondents regarding the rising prices of raw materials and energy. According to 30% of micro, 46% of small and 49% of medium enterprises, the costs of energy resources may constitute the most significant threat to their companies.

As part of the own research, entrepreneurs were also asked about the method of risk identification and assessment. The structure of responses to this question is presented in Table 2. The respondents admitted that risk was most often identified and assessed while performing other activities related to running a business - 59% of respondents indicated intuitive and spontaneous risk identification. Almost every fifth person admitted that the diagnosis of risk results from regular activities in accordance with formalized procedures, specially prepared for this purpose. Only 5% of entities have a professional risk management unit.

The Pearson chi square test was checked to see if the way in which risk is identified and assessed in the company is related to the company's size, legal form and industry (Table 3). The analysis shows that the size of the entity and its legal form are related to method of risk assessment in the enterprise. In both cases,  $p < \alpha$  ( $p = 0.0000$ ). However, there is no relationship between the industry and the company's risk assessment method  $p > \alpha$  ( $p = 0.2463$ ).

**Table 2. The way how risk is identified and assessed in the company**

Specification	Number	Percentage
We have a professional risk management unit	19	5%
We do not deal with risk issues	48	13%
Regularly according to formal procedures	81	22%
Intuitively and spontaneously in connection with other processes	216	59%

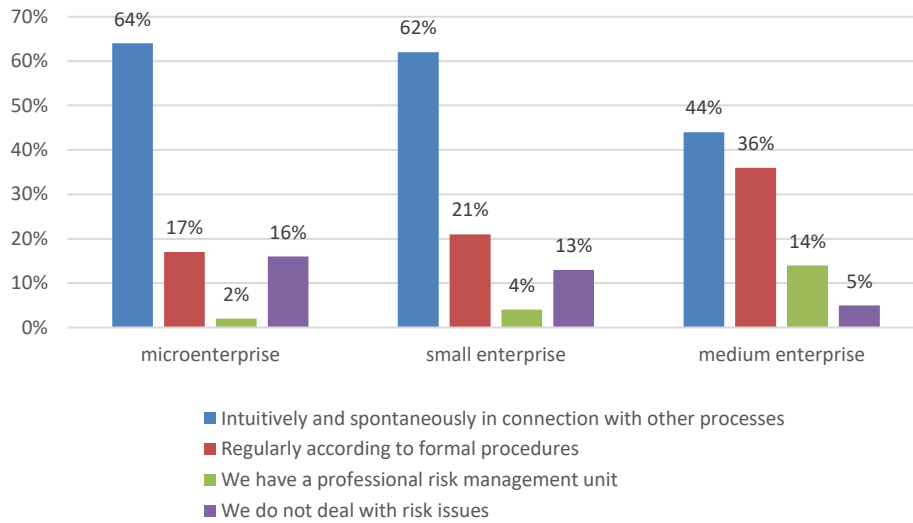
**Table 3. Pearson chi square independence test results. The size of the company, legal form and industry and the method of risk assessment in the company**

	p-value
Company size	0.0000
Legal form	0.0000
Branch	0.2463

Figure 2 shows the methods of risk identification depending on the size of the entity. As shown in Figure 6, the larger the enterprise, the more regular the risk assessment becomes (36% of indications among medium-sized entities, 17% among micro-

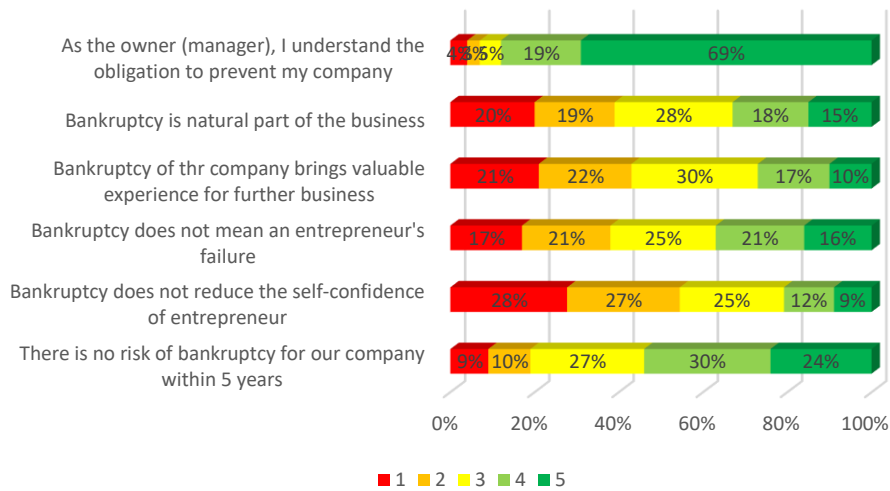


enterprises), and the recognition of risk in smaller enterprises is more spontaneous and intuitive (64% of micro-enterprises, 44% of medium-sized enterprises)



**Figure 2: The size of an enterprise and methods of risk assessment**

The scope of the survey also included the issue of how the owners or managers of the company approach the issue of bankruptcy. The respondents were asked to rate individual questions about bankruptcy on a scale of 1 to five, where 1 means that the respondent does not agree with the statement, and 5 - agrees the most (Figure 3).



**Figure 3: Structure of answers to questions about bankruptcy**

The respondents most often agreed with the statement that the responsibility of the owner or the person managing the company is to prevent bankruptcy and to take appropriate measures to prevent it (69% of responses to the score of 5 and 19% - to the score of 4). Every fourth respondent was completely sure that his company would not be at risk of bankruptcy in the next five years (24% of responses to the 5th grade). Almost every third person participating in the survey was of the opinion that the company's bankruptcy does not mean the entrepreneur's failure (16% of responses to 5 and 21% - to 4), but it reduces his self-confidence (28% of responses to 1 and 27% of responses to 2 in question about the impact of bankruptcy on a businessman's self-esteem).

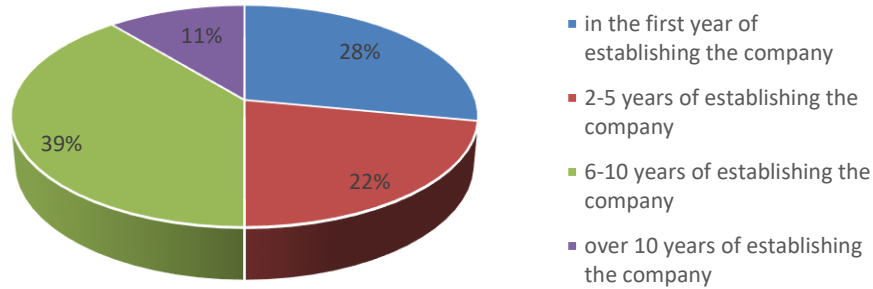
**Table 4. Results of the Mann-Whitney U test and Kruskal-Wallis ANOVA. An assessment of statements and features indicated.**

	Gender	Age	Length of running a business	Education	Position in a company
	p-value				
As an owner (a manager), I understand the obligation to prevent my company	0.9687	0.4358	0.4202	0.1109	0.2871
Bankruptcy is a natural part of the business.	0.0001	0.0682	0.2064	0.7548	0.0276
Bankruptcy of the company brings valuable experience for further business.	0.0049	0.0414	0.0021	0.0952	0.1059
Bankruptcy does not mean an entrepreneur's failure.	0.6130	0.0236	0.0104	0.4800	0.1888
Bankruptcy does not reduce the self-confidence of the entrepreneur.	0.9161	0.3415	0.1099	0.7015	0.8608
There is no risk of bankruptcy for our (my) company within 5 years.	0.0695	0.7875	0.0227	0.3295	0.5461

On the basis of the Mann-Whitney U and Kruskal-Wallis ANOVA test, it was checked whether the opinions on bankruptcy were related to gender, age of the entrepreneur, length of running a business, position in the company and education (Table 4). It was indicated that gender was related to the assessment of the following statements: bankruptcy is a natural part of the business  $p < \alpha$  ( $p = 0.0001$ ) and the

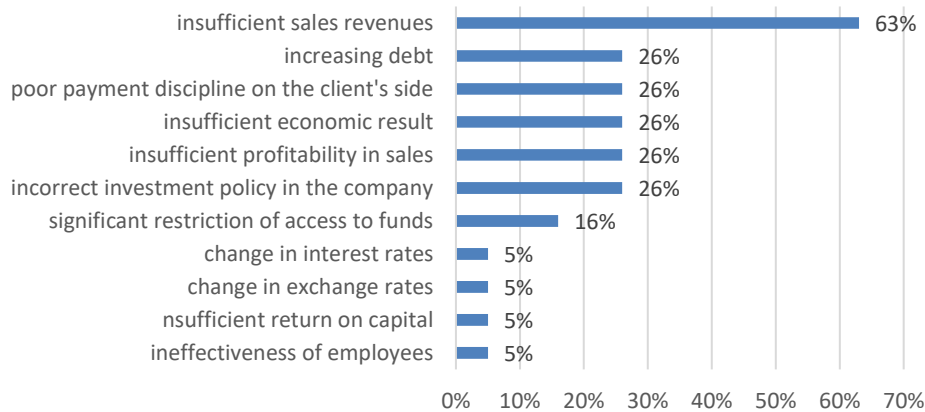
bankruptcy of the company brings valuable experience for further business  $p < \alpha$  ( $p = 0.0049$ ). Men agree more with these statements.

Figure 4 illustrates the structure of answers to the question of: when did the surveyed company go bankrupt. Bankruptcy in the first year after setting up a business was indicated by 28% of the entities, nearly every fourth company went bankrupt within two to five years, and in 39% of cases, bankruptcy took place between the sixth and tenth year of the company's operation.



**Figure 4: Structure of the answer to the question of when the respondent's bankruptcy occurred**

In the research conducted, enterprises that failed were also asked about the causes of their problems. The results are presented in figure 5.



**Figure 5: Structure of answers to the question about the financial causes of bankruptcy**

In the vast majority of entities, financial factors were indicated as the main reason (67% of bankrupted entities). Only in every third company the determinants were not of a financial nature. Among the financial reasons, the most important were: insufficient revenues from the sale of products and services (63% among companies indicating financial reasons as the reason for their bankruptcy), incorrect investment policy (26% of responses), insufficient profitability of sales (26%), insufficient economic (26%), the problem with debt collection from customers (26%) and an increase in debt (26%).

### **Discussion and Summary**

Bankruptcies are phenomena that intensify in the period of economic downturn or a situation in which it is difficult to run business, e.g. as a consequence of an epidemiological situation. They serve as a tool for clearing the market of individuals who cannot or do not respect its requirements and rules of the market economy. Nevertheless, bankruptcies are still neither in theory nor in practice sufficiently diagnosed (Tokarski, 2012). The problem arises from the difficulty of estimating the number of bankrupt entities.

It is important to distinguish bankruptcy as an economic category from insolvency as a legal category. Bankruptcy is a business failure, but entities or their creditors do not always file for insolvency in court. There are numerous cases of enterprises which, although they went bankrupt in the economic sense, their debts were repaid from other sources, e.g. from family savings. Moreover, in accordance with the applicable legal regulations, insolvency proceedings cannot be initiated when the assets of the insolvent debtor (the so-called bankruptcy estate) are not sufficient to cover the costs of court proceedings (Mączyńska, 2013).

The number of actual bankruptcies is much higher than the number of officially declared insolvencies. A significant number of applications for the opening of insolvency proceedings are returned by the courts due to formal deficiencies and redemptions or dismissed due to the aforementioned lack of assets. In addition, many companies, especially small ones, close their activities without conducting insolvency proceedings before the court. Also in the area of events included in the so-called "deaths" of enterprises, the following forms of discontinuation of business activity are mentioned: bankruptcy, liquidation for other reasons, change of legal form, takeover, merger, change of location (Dominiak, 2005).

The assessment of the phenomenon under study is also debatable. Although bankruptcy or insolvency bring about positive consequences, which include, first of all, the elimination of weak, ineffective entities or better allocation of economic resources, the socio-economic costs accompanying the liquidation of an enterprise cannot be ignored. As a result of bankruptcy, an entity bears both financial costs, e.g. loss of committed funds by shareholders, losses of lenders, losses of contractors related to unpaid receivables and social costs, i.e. an increase in unemployment, lowering the competitiveness of the region.

The data of the European Commission show that 50% of enterprises are not able to survive the first five years of their activity. On average, in the EU countries, 7% of business entities are liquidated each year, and insolvencies constitute approximately 15% of all closed enterprises (Commission of the European Communities, 2007). According to E. Mączyńska, more than a half of newly established enterprises go bankrupt within 4 years, and another fail within 10 years (Mączyńska, 2005).

In Poland, we have been dealing with bankruptcies of enterprises since the beginning of the systemic transformation. The literature on the subject quite consistently assumes that mismanagement is a key intra-organizational determinant that results in bankruptcy. Research shows that a large number of enterprises do not have properly developed procedures relating to risk management, which is often due to the lack of knowledge and experience of managers in this area (Dankiewicz et al., 2020; Havierníková et al., 2019). The number of bankruptcies is also often linked to the rate of economic growth. An increase in the number of bankruptcies usually takes place at the time when the GDP growth rate slows down, and the improvement in the economic situation results in a reduction in the number of liquidated entities. It is assumed that a 1% decrease in GDP leads to an increase in bankruptcies by 3 to 10% (Brossard et al., 2006). At the same time, GDP growth of 2-3% may turn out to be too small to reverse the upward trend in the number of bankruptcies. There is the thesis that a very low GDP growth, at the level of 1%, most often causes not a decrease, but an increase in the number of bankruptcies in the amount of 5-10% (Gołębiowski, 2006).

The research showed that the economic slowdown was the most significant threat to the functioning of an enterprise - this variant of the answer was chosen by 55% of the respondents. According to almost every second respondent (48%), an increase in competition in the sector and legislative changes (48%) are also significant.

Authors' own research in the group of "insolvent" entities shows that financial factors dominate among the causes of bankruptcies. The main reason for the bankruptcy was insufficient sales revenues (63% of the answers provided). The entities pointing to non-financial determinants as a factor of bankruptcy recognized that the most important of them were: changes in the external economic environment (26%), improper management of the company (21%), lack of business risk management (16%) and too strong competition (16%).

Taking into account the age of the enterprise, it can be concluded that the longer the period of operation in the market, the lower the risk of bankruptcy. Most often, entities whose operating period did not exceed 10 years failed. As part of their own research, the respondents indicated that bankruptcy most often took place between the sixth and tenth year of the company's operation (39% of cases).

The phenomenon of bankruptcies is a process that is permanently inscribed in the functioning of the market. From the point of view of enterprises, it is a very troublesome situation, while from the perspective of the entire economy, it is a condition for its development. It is also an extremely complex process, difficult to quantify, of an economic, legal and even psychological basis. At the same time, in

an increasingly complex economic world in terms of the number of relationships, there are cases of bankruptcies and insolvencies of prospering entities that cannot be explained by theory, as well as deaths of living individuals considered healthy in the light of modern medicine.

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## UPADŁOŚĆ – OCENA ZJAWISKA W SEKTORZE MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW – PRZYPADEK POLSKI

**Streszczenie:** Celem artykułu jest ocena zjawiska upadłości w sektorze małych i średnich przedsiębiorstw. Realizacja celu wymagała zastosowania metod opisowych i statystycznych, w szczególności testu U Manna-Whitneya, testu ANOVA Kruskala-Wallisa oraz testu niezależności chi-kwadrat Pearsona. Wykorzystano również metodę bezpośrednią – ankietę. W artykule omówiono istotę upadłości. Przedstawiono również niektóre własne badania ankietowe z I kwartału 2021 roku. Wyniki badań pozwoliły na stwierdzenie, że w przyczynach upadłości dominują czynniki finansowe. Według ankietowanych przyczyną upadłości były niewystarczające przychody ze sprzedaży. Podmioty uznały upadłość za czynnik, z których do najważniejszych należą: zmiany w otoczeniu gospodarczym oraz niewłaściwe zarządzanie firmą.

**Słowa kluczowe:** upadłość, niewypłacalność, ryzyko upadłości, identyfikacja upadłości.

## 破产——对中小型企业部门现象的评估——以波兰为例

**摘要：**本文的目的是评估中小企业部门的破产现象。目标的实施需要使用描述性和统计方法，特别是 Mann-Whitney U 检验、Kruskal-Wallis ANOVA 检验和 Pearson 卡方独立性检验。还使用了直接方法——问卷调查。本文讨论了破产的本质。还介绍了 2021 年第一季度的自己的调查研究。研究结果允许得出结论，破产的原因主要是金融因素。受访者表示，销售收入不足是破产的原因。实体认为破产是最重要的因素包括：经济环境的变化和 Company 管理不当。

**关键词：**破产，资不抵债，破产风险，破产认定。