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BANKRUPTCY IN POLISH CONDITIONS – AN ANALYSIS OF THE SCALE OF THE PHENOMENON OVER TIME

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Abstract. The dynamics of changes in the business environment, globalization of economies with the rapid progress in technology make entrepreneurs accept the growing level of risk of crisis situations. The economic transformations that have been taking place over the years have initiated the emergence of mechanisms for crowding out unprofitable enterprises from the market that do not match the requirements of the market economy. On the one hand, bankruptcies may be regarded as a manifestation of failure to adapt to market requirements and changes, but more and more often they become a derivative of phenomena beyond the control of entrepreneurs. In particular, we are talking about ever new types of risk that accompanies business activity. The fact that the catalog of occurring risks is still an open catalog is evidenced by, for example, the recent events related to the Covid-19 pandemic. This paper attempts to present the scale of the businesses bankruptcy in Poland in 2009-2018 and a cross-sectional analysis taking into account the geographical origin of the bankrupt entities, the legal forms where they operated and the industries they represented. The analysis of the phenomenon was based on the data of the Central Statistical Office and own research of the documentation of the National Court Register. The purpose of the paper was to analyze the scale of the bankruptcy phenomenon in Poland over the years 2009-2018 and an attempt to identify the existing relationships.

Keywords: bankruptcy; reasons for bankruptcy; bankruptcy risk

1. Introduction

The economic transformations in Poland at the turn of the 1980s and 1990s launched the mechanisms of ousting from the market unprofitable businesses, and those which have problems with adjusting to the requirements of the market economy. Despite the fact that the current reality where entities operate changed significantly over the last few decades, they still face many difficulties. The phenomenon of bankruptcy is a significant problem in the operations of enterprises, whose scale and scope are subject to constant changes, influenced both by the internal policy of enterprises and their market environment. The results of the research conducted prove that the vast majority of entrepreneurs, i.e. 94.6%, see the bankruptcy of other entities in their environment, while 24.5% declare that the consequences of these bankruptcies had the impact on their own results. Within the surveyed group, slightly over 2% of respondents declared that their entities were at risk of bankruptcy. Virtually all respondents see the need for an ongoing analysis of the situation both inside the company and in its environment in order to identify potential threats that may constitute a premise for bankruptcy in the future. At the same time only 35.4% declare that they are prepared for such an eventuality and developed risk management procedures in this area (Dankiewicz, 2018). The catalog of encountered risks, despite the fact that it is constantly analyzed

by practitioners of economic life and academia, as shown by the events of recent months regarding the effects of the Covid-19 pandemic, is still open. It proves once again that the implementation of selected, so far unidentified types of risk may be the cause of bankruptcy of enterprises, especially those included in the group of small and medium-sized enterprises, which most often do not have sufficient financial reserves to secure them in periods of limited revenues (Chłodnicka & Zimon, 2020). Moreover, small and medium-sized enterprises often fail to adequately manage particular types of risk, which is also a reason for bankruptcy (Dankiewicz et. al., 2020). However, it should be stated that currently the phenomenon of bankruptcy is already an inseparable element of running a business, it applies, with few exceptions, to virtually all entities, regardless of their size, sector, or an area of operation.

In the modern world, the economies of most countries position themselves as open economies, the dynamics of which depends on foreign economic relations (Putsenteilo et. al., 2018). The constantly progressing digitization and technological progress, referred to as the Fourth Industrial Revolution, cause many changes in society and technological processes in enterprises (Płonka et al., 2020), which makes it important to create new structures that should respond to the challenges posed by by a competitive market, where unfair market practices also often appear (Ostrowska-Dankiewicz, 2019). The connections of companies operating in global economic systems mean that the phenomenon of bankruptcy affects not only the stakeholders of a given entity, the local community where it operates, but more and more often the regional, macroeconomic or even global environment. Due to its economic consequences for the business environment of the failing entity, and in a broader scope, the analysis of the phenomenon for the entire economy should be considered, and the conclusions should reduce the scale of its occurrence in the future, e.g. by developing procedures limiting the scale of the phenomenon in exceptional situations, or monitoring of particularly vulnerable areas in specific situations.

The aim of the paper is to analyze the scale of the bankruptcy phenomenon in Poland over the years 2009-2018, and to identify the existing dependencies.

2. Literature review

It is extremely important from the point of view of processes taking place in enterprises and the essence of the theory of the life cycle of an enterprise to separate such concepts as insolvency, bankruptcy or a business failure. It turns out that while insolvency or bankruptcy have quite precise definitions, the term business failure does not have a uniform definition and is often treated by researchers as the one that combines the definition of bankruptcy and insolvency (Siciński, 2019). Therefore, business failure is often seen as a combination of factors such as bankruptcy, insolvency and financial difficulties in a company (Piesse et. al., 2006; Narkunienė, & Ulbinaitė, 2018). However, it should be noted that the concepts of business failure and bankruptcy differ from each other in terms of the economic and legal sphere. Bankruptcy is an economic term, while the failure is a strictly legal term, therefore the literature indicates that using these terms interchangeably is not fully justified (Tokarski, 2012), but in many cases such a simplification is used.

One of the subjects of research, both in the domestic and foreign literature, are the possible factors that influenced the occurrence of financial problems in enterprises, and therefore significantly contributed to their failure. The research on the influence of economic and financial variables on the business failure was carried out, among others, by Aleksanyan & Huiban (2016). The authors, examining French food companies, concluded that the smallest and youngest companies were most exposed to the risk of failure, but the food industry itself seems to be much more resistant to the risk of bankruptcy than other sectors. The research conducted by the authors also showed that greater production capacity reduced the risk of bankruptcy, while higher costs of financing with a loan may increase this risk. However, the authors emphasize that the impact of financial characteristics on the possibility of bankruptcy is much smaller than the company's performance and its production capacity. On the other hand, the research conducted by Mackevičius et al. (2018) on a sample of bankrupt companies from Lithuania and Latvia showed that the economic crisis in 2008 had the greatest impact on the wave of bankruptcies. Other factors include the business environment enterprises, as well as geopolitical uncertainty, the threat of terrorism, the future of the European Union and the gray economy. Moreover, the authors

drew attention to the increasing influence of external factors of an international nature on the business risk and financial situation of most enterprises. Some research also shows that there is a significant relationship between the age of a company and its insolvency. Young enterprises tend to fail due to internal shortages, while mature small and medium-sized businesses struggle more with the surrounding competition and economic downturns. Therefore, the failure is not only influenced by the age or size of the entity, but also by these factors in combination with its development and maturity (Kücher et al., 2020; Okpamen, & Ogbeide, 2020).

According to other studies, small and medium-sized enterprises cannot avoid clashing with business risks (Belás et al., 2015; Mentel & Brożyna, 2015; El Idrissi et al., 2020). It is pointed out that in the case of this type of entity, bad financial management, failure of the business plan or inability to settle liabilities can lead to bankruptcy (Khan et al., 2020). Moreover, according to the research of Lukason & Camacho-Miñano (2019), healthy, bankruptcy-free companies present their financial statements on time, as this helps make them trustworthy in the eyes of stakeholders. On the other hand, entities that achieve poor results more often disrupt communication, and failure to submit financial statements on time may be one of the reasons for the company's problems. Paulík et al. (2015) and Grabara et al. (2016) emphasize that ethical standards in financial institutions are important particularly because banks, operating with money of other people, take the risk which may not only result to profit but also cause a loss.

Research conducted on Polish enterprises showed that the number of failures in Poland is largely determined by macroeconomic conditions in the economy. Among the most important macroeconomic determinants that affect both the scale and dynamics of bankruptcy in Poland, the authors indicated the number of the unemployed, the inflation rate, the gross profitability rate of enterprises, the USD exchange rate, and exports (Tokarski, Tokarski, 2018). On the other hand, the research conducted by Hołda & Strojny (2019) showed that bankruptcy petitioners most often provided reasons that objectively resulted from the market conditions where they operated. These are, in particular, such factors as the lack of liquidity, a decrease in sales revenues, a failure to repay liabilities or bad cooperation with contractors, while the issues related to possible poor management are ignored. Different conclusions result from the analysis of the reports of Temporary Court Supervisors, where the reasons for bankruptcy resulting from poor management, lack of control and overinvestment are more often indicated. As research shows, the risk of bankruptcy of enterprises varies regionally and largely depends on the size of the enterprise and the sector of operation (Ptak-Chmielewska, 2018). Similar conclusions can be drawn from the study conducted by Pisula (2020). According to the author, small enterprises are more exposed than medium-sized or large ones, and the risk of bankruptcy, apart from the size of the entity, is also influenced by factors such as the sector or unique features of a given economic activity.

Literature studies show that the phenomenon of bankruptcy in enterprises is continuous and several stages can be distinguished in it. These stages cover the events from the moment the first signs of a financial crisis appear in the economy, through all factors inside the company, such as ignorance and blindness, as well as the resulting inadequate actions, which consequently lead to the bankruptcy of the enterprise (Korol, 2017). Therefore, it is a process that does not occur suddenly, and thus it is possible to predict its occurrence. Research related to the possibilities of forecasting bankruptcy of enterprises occupies a significant place in the literature on the subject. As Prusak (2019) points out that bankruptcy forecasting gained popularity among Polish researchers relatively late, only in the 1990s. Initially, some attempts were made to adapt foreign models, in particular the Altman models, but later the proposals for the first domestic models based on linear multivariate discriminant analysis began to appear. Currently, more and more companies are switching to machine learning systems, which is due to greater accuracy and the fact that the system learns using large data sets (Wyrobek, 2018). Bankruptcy research, and especially forecasting the occurrence of such situations, is extremely important from the point of view of credit risk management in banks. Therefore, it is relevant to assess the risk of bankruptcy, especially in banks for which the financing of particularly threatened enterprises poses a significant risk (Balina, 2018). According to the research, pharmaceutical sector is the one that is least exposed to the risk of bankruptcy, while the largest risk of bankruptcy is associated with mining enterprises. In the case of pharmaceutical companies, it can be seen that these entities are financed by debt to a lesser extent than other sectors (Nehrebecka, 2018).

Legal issues are a significant problem in the entire process of bankruptcy. The research conducted by Tomczak (2018) shows that not every bankrupt company files for bankruptcy. The number of bankruptcy cases is 45 times lower than the number of non-existent entities removed from the register, moreover, only 20% of the initiated proceedings actually ended with the declaration of bankruptcy of the enterprise. The reasons for such a phenomenon include the lack of funds to cover the proceedings by the company. In turn, Antonowicz (2014) points out that over the years in Poland it was possible to observe a very small number of arrangement proceedings, which, according to many studies, are much more financially effective than many years of liquidation processes. The above points at the conclusion that Polish procedures are relatively ineffective when it comes to bankruptcy proceedings. Research indicates that this was the case both in the post-crisis period, in 2008-2015 (Tokarski, 2018), and now. According to research, the temporary effectiveness of Polish bankruptcy law is only 12%, and the average duration of proceedings is 853 days (Staszkiewicz, Morawska, 2019).

3. Research methodology

The analysis of the phenomenon of companies bankruptcy, and key areas of its occurrence was based on historical data from 2009-2018, obtained from the Central Statistical Office and the National Court Register, using the methods of examining documents with the interpretation of the obtained data and the method of analysis. The exploratory research was carried out on a time sample of 8223 entities that declared bankruptcy in the analyzed period and constituted all enterprises of the Polish market from the period adopted for the research. The analyzed sample, taking into account the number of bankruptcies of enterprises in individual years, was as follows: 2009 - 673 entities, 2010 - 691 entities, 2011 - 730 entities, 2012 - 941 entities, 2013 - 926 entities, 2014 - 822 entities, 2015 - 747 entities, 2016 - 805 entities, 2017 - 900 entities, 2018 - 988 entities. It was systematized in terms of provinces, legal forms of the conducted activity and represented sectors.

In the paper the meta-analysis method was applied. It was extended by a review of the literature on the subject and available research results conducted by scientific communities and practitioners dealing with issues related to the phenomenon of bankruptcy in their works. In the course of the conducted analyzes, particular attention was paid to the assessment of the structure and dynamics of bankruptcies in various sections, together with the analysis of the differentiation factor in the assumed period.

The research was conducted in three stages. In the first stage, the dynamics of the number and rates of bankruptcy of enterprises in Poland in 2009-2018 was analyzed, and the relationship of selected macroeconomic variables with bankruptcy rates was examined using the Pearson linear correlation. In the next stage of the research, the structure and dynamics of bankruptcy rates by provinces were analyzed, as well as the structure and dynamics of registered bankruptcies according to the legal form of business and sector. The last stage of the research was a two-stage cluster analysis based on the data from a time sample. The data on enterprises that filed for bankruptcy in 2009, 2012 and 2018 were analyzed. The main purpose of the cluster analysis was to study the similarity or distinctiveness of objects. Therefore, the aim was to divide the objects into classes containing similar objects due to the observations on the variables, and different ones among themselves (Gatnar, Walesiak, 2004).

One of the classification methods was used for the research. It was the two-stage cluster analysis, which was quite resistant to assumptions about the distribution of variables, allowed assessing the quality of grouping using the Silhouette measure and enabled automatic determination of the number of groups.

4. Research results and interpretations

In the current situation, when companies operate in an extremely dynamic environment characterized by enormous complexity and uncertainty of phenomena, the key issues are to identify risk areas, monitor the economic and financial situation on an ongoing basis, and effectively forecast bankruptcy threats in order to react to them in advance. However, in spite of the awareness of the risks and often created strategies in the event of problems, the phenomenon of bankruptcy is now a natural element of the free market economy, occurring with varying intensity over time.

In the first stage of the research, the influence of selected macroeconomic variables on the number of bankruptcies was assessed. In order to obtain the comparability of data in subsequent years, in the first stage of the research on the structure and dynamics of the number of bankruptcies of enterprises in Poland, the following indicators were analyzed which were the quotient of the number of registered bankruptcies to the number of registered enterprises in a given year. This approach is different from that used in previous studies, which investigated the impact of macroeconomic variables on the dependent variable being the number of bankruptcies. It should be emphasized that it is difficult to provide the exact number of companies operating in Poland, as the Central Statistical Office (CSO) data is not adjusted for inactive entities. The number of bankruptcies of companies in individual years also differs in the statistics of the CSO and COIG (Central Economic Information Center). The number of announced bankruptcies should be supplemented by companies that filed for bankruptcy, but it was dismissed due to their insufficient assets and for data after 2016, those that started restructuring proceedings. The calculated rates of bankruptcy intensity in 2009-2018 are presented in Figure 1.
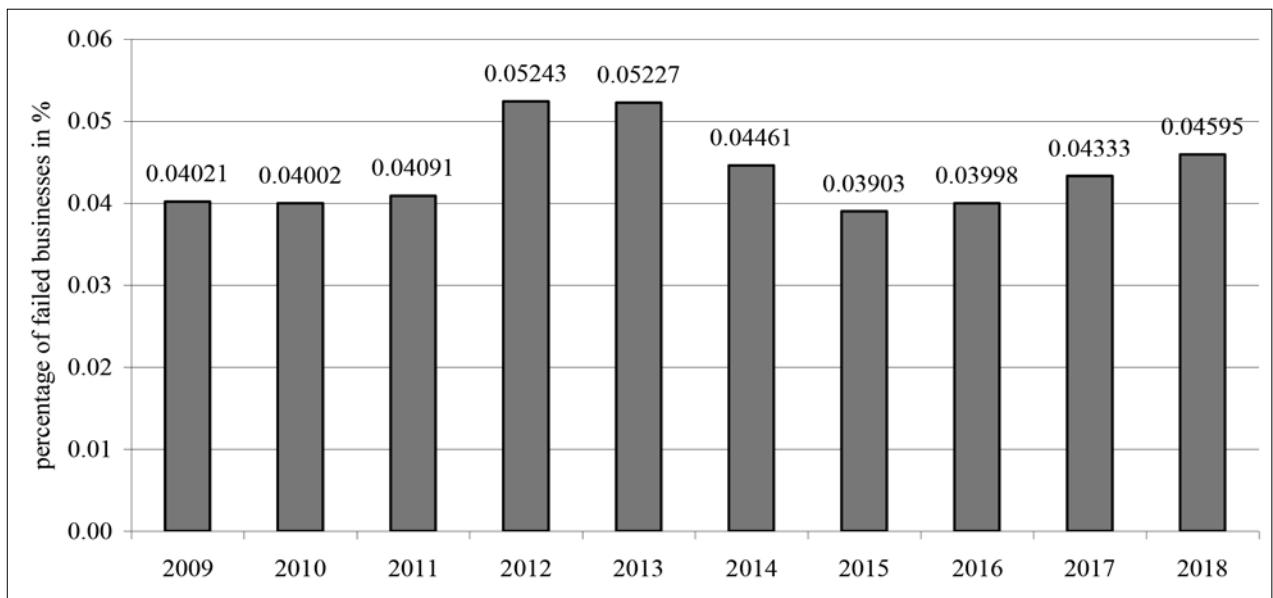
Figure 1. The percentage of bankruptcies of enterprises in Poland in 2009-2018

Source: own research based on the CSO data

The bankruptcy rate in the analyzed years was at the average level of 0.044%. The coefficient of variation measured by the standard deviation shows a slight variation in the rate in individual years (11.38%). This means that the number of bankrupted enterprises in relation to the total number of enterprises did not change significantly from year to year. The average pace of changes indicates the average annual increase in the percentage of bankruptcies by 1.49% in the analyzed years. The bankruptcy rate was the highest in 2012 and 2013, slightly exceeding 0.05%. The years 2012 and 2013 were not favorable for the global economy, which resulted in a reduction in demand in domestic markets. Although the global and Polish domestic product grew, the pace of growth was weaker than that from before the crisis. In the second half of 2013, the process of improving the macroeconomic situation on the Polish market began, which in 2014 resulted in an increase in economic activity and GDP higher than in the two previous years. Figure 2 compares the number of bankruptcies with the bankruptcy rate in Poland in 2009-2018.
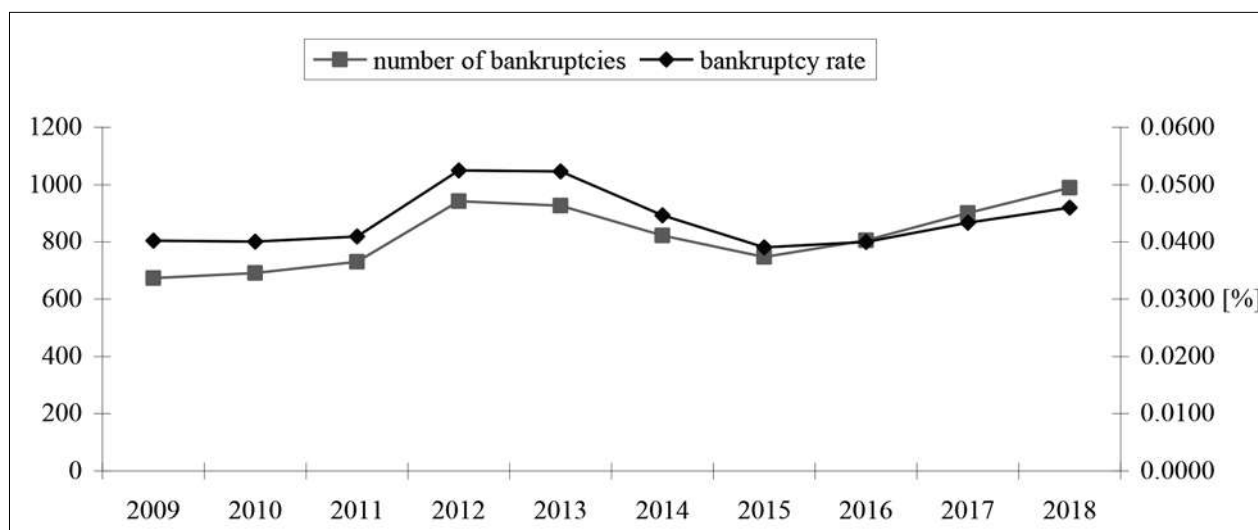
Figure 2. Number and percentage of bankruptcies of enterprises in Poland in 2009-2018

Source: own research

Based on the data presented in figure 2, it can be seen that the dynamics of changes in the number and the bankruptcy rate are not identical. For example, in 2010, the number of insolvencies increased by 5.64% compared to 2009, but the percentage of insolvencies decreased slightly. The increase in the number of bankruptcies after 2016 was much greater than the analyzed rate.

The relationship between the bankruptcy rate and the macroeconomic variables described in the literature on the subject, such as: unemployment rate, GDP, export of goods, USD exchange rate, selected trading profitability ratios, selected financial liquidity ratios, consumer price index, and foreign trade balance was examined. The results are presented in Table 1.

Table 1. Pearson's linear correlation coefficient between the bankruptcy rate
and individual variables calculated on the basis of macroeconomic data for 2009-2018

Unemployment rate	GDP	Goods export	USD exchange rate	Gross turnover profitability ratio	1st degree financial liquidity ratio	2nd degree financial liquidity ratio	3rd degree financial liquidity ratio	Price index of consumer goods and services	Foreign trade balance
0.28	0.33	-0.27	-0.20	-0.29	-0.59	-0.48	-0.24	0.23	-0.31

Source: own research based on the CSO data

Correlation analysis shows the strongest linear relationship between the bankruptcy rate and the 1st degree financial liquidity ratio. Pearson's linear correlation coefficient (equal to -0.59) indicates a strong, negative linear correlation. So the higher the 1st degree financial liquidity, the lower the bankruptcy rate. According to the Glossary of Terms of the Central Statistical Office, this ratio is the relation of short-term investments to short-term liabilities. The values of the 1st degree financial liquidity ratio and the bankruptcy rate in 2009-2018 are presented in Figure 3.
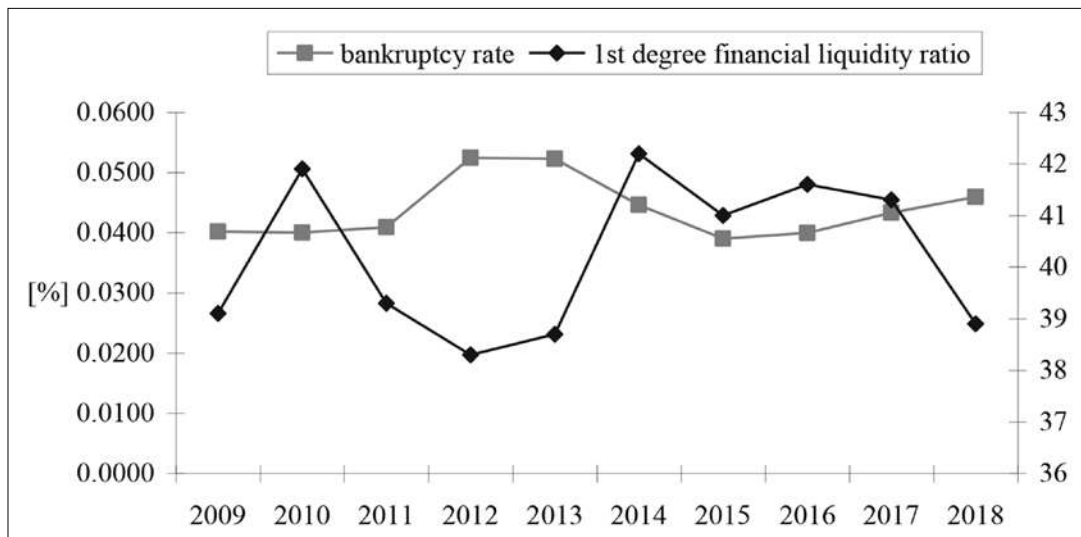
Figure 3. The values of the 1st degree financial liquidity ratio and the bankruptcy rate in 2009-2018

Source: own research based on the CSO data

The analysis of the data presented in figure 3 shows that the financial liquidity ratio was the lowest in 2012-2013, i.e. the years characterized by the highest bankruptcy rate in the analyzed period. There is clearly a negative correlation between the indicators.

A fairly strong linear correlation with a negative direction also occurs between the bankruptcy ratio and the 2nd degree financial liquidity ratio (relation of short-term investments and short-term receivables to short-term liabilities).

In order to make the considerations more detailed in the further part of the study, an analysis of the bankruptcy rate by provinces was performed, as presented in Figure 4.
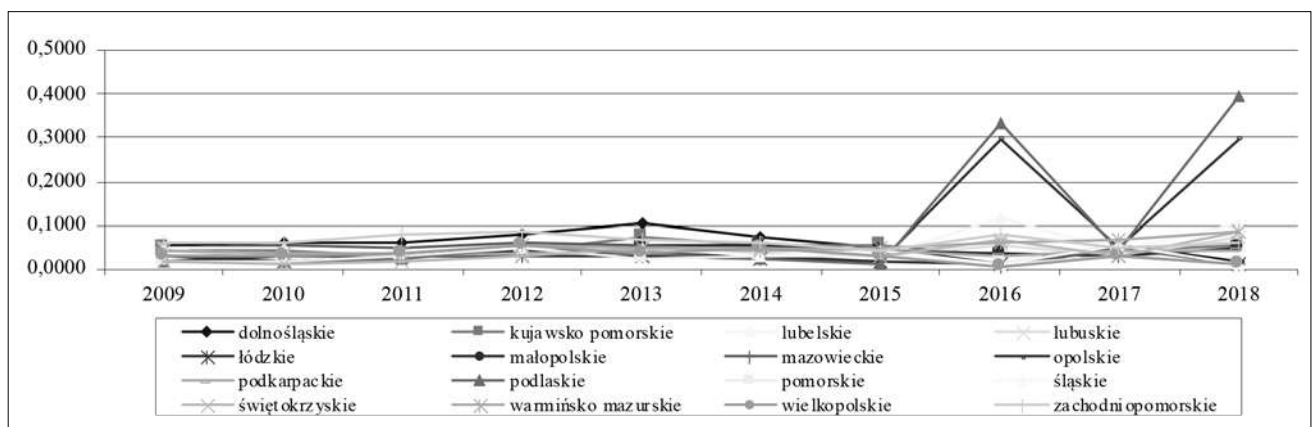
Figure 4. The structure of the bankruptcy rate by provinces in Poland in 2009-2018

Source: own research based on the CSO and National Court Register (NCR) data

The analysis of bankruptcy rates by a province allows the conclusion that in the analyzed years in most provinces the bankruptcy rate did not exceed 0.06%. The exceptions were the Zachodniopomorskie and Dolnośląskie provinces for which the indicator was slightly higher (approx. 0.1%) and the years 2016 and 2018, which were analyzed separately and presented in Figure 5.
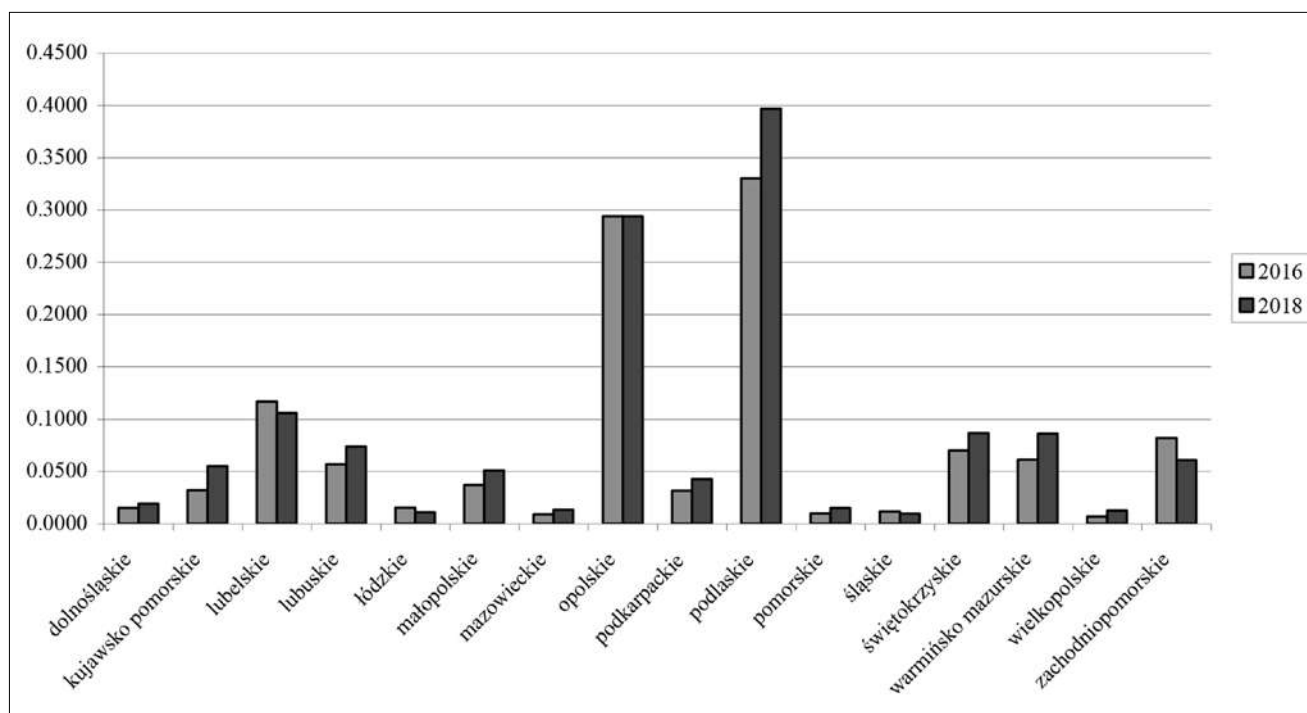
Figure 5. Bankruptcy rates by a province in 2016 and 2018

Source: own research based on the CSO and NCR data

The differentiation of the analyzed index by a province in each of the analyzed years was moderate (the differentiation index measured by the standard deviation ranged from 30% to 44%). The years 2016 and 2018 were analyzed in particular, for which the differentiation increased to over 130%, which proves that it has become very strong. This was probably due to a significant increase in bankruptcy rates in two provinces, i.e. Opolskie (to approx. 0.3%) and Podlaskie (to approx. 0.35%) and a noticeable increase in the Lubelskie Province (to over 0.1%).

Over the last three years, an alarming upward trend in bankruptcy was observed in Poland. At the same time, in the entire analyzed period, there were no grounds for concluding that a linear upward trend exists. Similarly to the lack of grounds to conclude that the number of bankruptcies was directly related to the economic situation, as evidenced by the analyzes conducted for 2011, 2015, 2017. An important source of information is the analysis of the risk of bankruptcy taking into account the legal form in which the business is conducted. The share of bankruptcies of enterprises of a given legal form in total bankruptcies in a given year is presented in Figure 6.
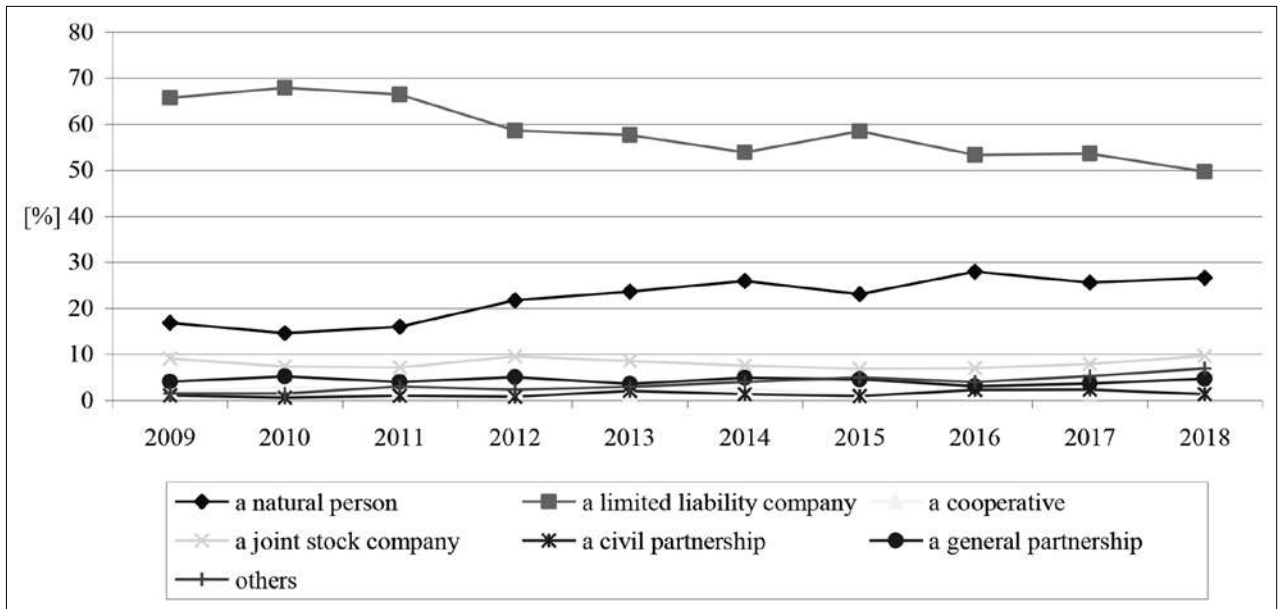
Figure 6. Business bankruptcies by legal forms in Poland in 2009-2018 [%]

Source: own research based on the CSO and NCR data

The analysis of the data from the chart above shows that those entities that operate as limited liability companies are most at risk of bankruptcy. In their case, the percentage of bankruptcies is on average 58.54% of all enterprises in the analyzed years. At the same time, attention should be paid to the fact that in the analyzed years this percentage decreased from 65.77% in 2009 to 49.70% in 2018. However, there was a noticeable increase in the percentage of bankruptcies among natural persons from 16.82% in 2009 to 26.62% in 2018). The remaining legal forms accounted for no more than 10% of bankruptcies in individual years and remained at a fairly stable level. It should be emphasized that the number of bankruptcies for individual legal forms increased from year to year, on average by a total of 7.57%. In order to obtain a complete picture of the situation, an analysis was made of the share of bankruptcies of enterprises in a given industry in the total number of bankruptcies in a given year, which is presented in Figure 7.
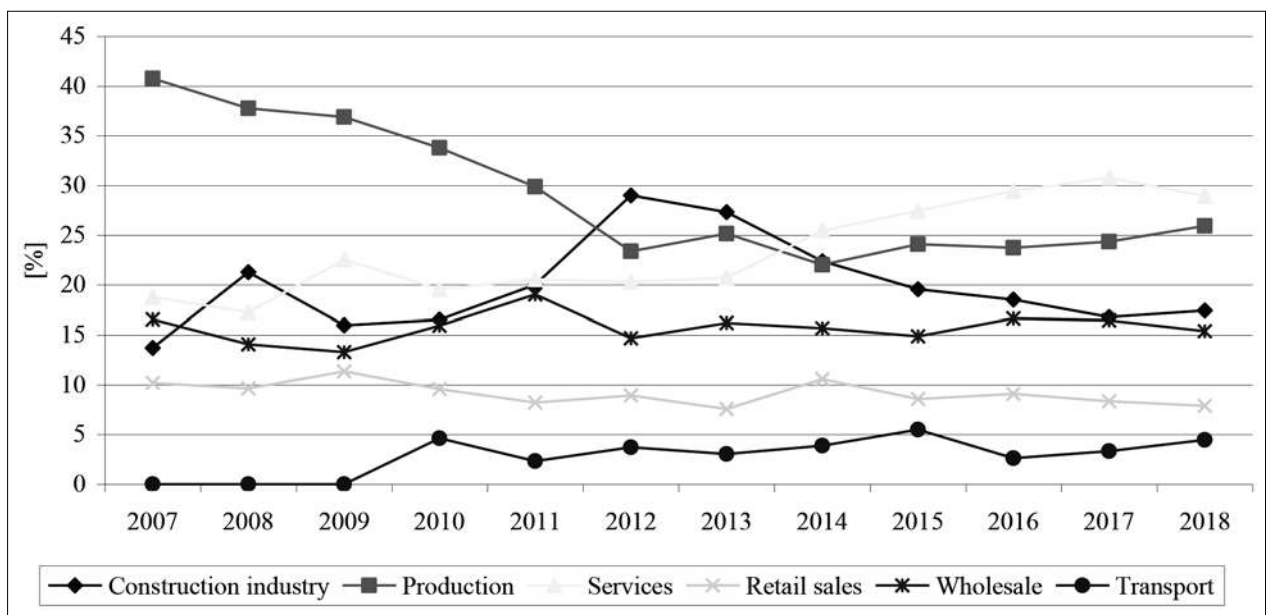

Figure 7. The structure of bankruptcies by sectors in Poland in 2007-2018 [%]

Source: own research based on the CSO and NCR data

The analysis of the data presented in figure 5 shows the highest share in the total bankruptcies of enterprises: the manufacturing sector in 2007-2011 (30% -40% of the total), construction in 2012 and 2013 (approximately 29%), and from 2014 in the services sector (25% -29%). In the analyzed years, a significant decrease was observed in the share of production enterprises in total bankruptcies (from 40.76% of enterprises in 2009 to 25.92% in 2018, a decrease by 14.85 percentage points) and an increase in the share of service enterprises (from 18.79% in 2009 to 28.95% in 2018, an increase of 10.16 percentage points). In construction, significant increases in the share of bankruptcies were observed in 2012 (up to 29.01%) and 2013 (27.32%).

In the next stage of the research, a two-stage cluster analysis was carried out on the basis of a time sample for the years 2009, 2012 and 2018. The year 2012 was characterized by the highest percentage of bankruptcies in the analyzed period. The cluster analysis used the provided data containing the following quantitative and qualitative variables: a province, a sector, a legal form, a turnover and employment (in the year preceding the declaration of bankruptcy). The aim of the research was to evaluate the structure of enterprises in terms of the variables mentioned. The SPSS package with the distance measure being the likelihood ratio was used for classification.

The results of the classification using all the variables mentioned did not give good quality grouping in the form of the Silhouette measure values. The province and the legal form are not a good predictors because the Polish market has the largest number of limited liability companies and companies registered in the Mazowieckie Province. Therefore, after the elimination of subsequent variables, the classification was used as predictive variables: employment and turnover, and as an evaluation variable: industry. Classification with the use of these variables in each of the studied years was characterized by a measure of consistency and distinctiveness at a level exceeding 80%, which proves a very good division of enterprises into clusters and a good level of importance of the predictor variables (see results in Table 2).
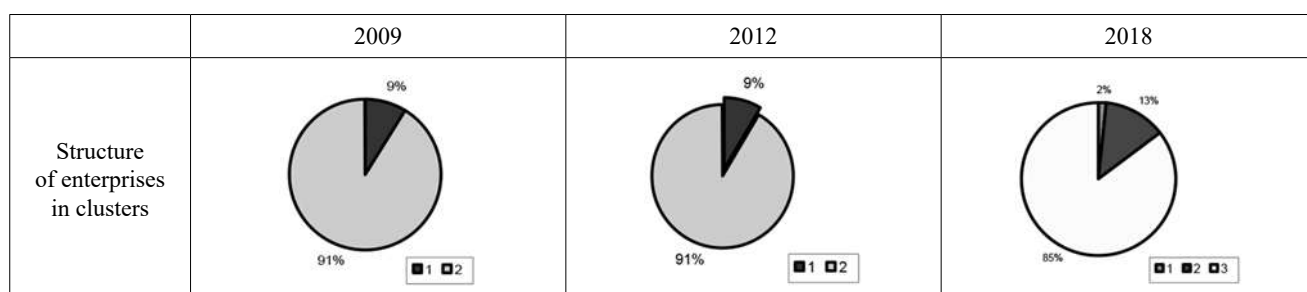
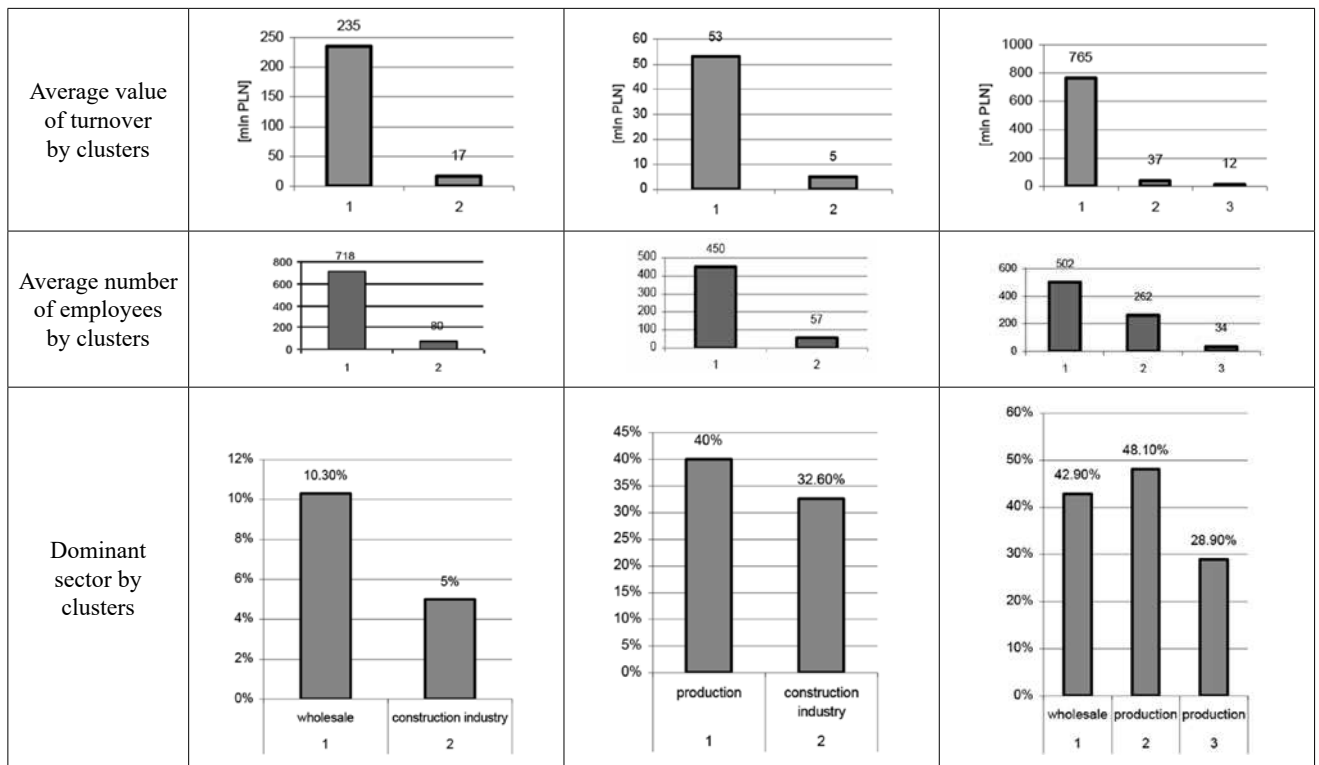**Table 2.** Assessment of the model fit and importance of variables

	2009	2012	2018
average value of the Silhouette measure	0.9	0.8	0.8
number of clusters	2	2	3
Predictor importance: turnover employment	1 0.44	1 0.86	1 0.65
Importance of the evaluation variable	0.02	0.05	0.01

Source: own research

The classification results are presented in table 3.

Table 3. Classification results by a cluster

	2009	2012	2018
Structure of enterprises in clusters			

Average value of turnover by clusters			
Average number of employees by clusters			
Dominant sector by clusters			

1st cluster, 2nd cluster, 3rd cluster

Source: own research

The results of the classification indicate quite large changes in the structure of groups of enterprises that declared bankruptcy in 2009, 2012 and 2018.

Two groups of companies that declared bankruptcy in 2009 can be identified: small, accounting for only 9% of the surveyed companies, and large - 91%. The first group includes the enterprises with an average net turnover in the year preceding the bankruptcy of PLN 235 million and an average number of employees equal to 718 employees, i.e. mostly large companies. The dominant sector was wholesale, accounting for 10.3% of the companies in this group. The second group includes enterprises with an average annual turnover of PLN 17 million and employing an average of 80 employees, i.e. rather medium-sized enterprises. The dominant sector was construction (5% of companies in this cluster).

In 2012, when the largest number of companies, taking into account the years 2009-2018, declared bankruptcy, the classification also resulted in two groups: small (9%) and large (91%). However, a significant decrease in the average value of turnover and employment in each group could be observed compared to 2009. In the small group (cluster 1), the average turnover in the year preceding the declaration of bankruptcy was PLN 53 million, and the average employment this year was 450 employees. In the large group (cluster 2), the average turnover was PLN 5 million, and the average number of employees was 57 people. However, it should be emphasized that in both groups, unlike in 2009, clearly dominant industries appeared. In a small group (cluster 1), 40% of companies were manufacturing enterprises, and in a large group (cluster 2), almost 33% was the construction sector.

The results of the 2018 classification are completely different. Three clusters were obtained: very small ones - covering 2% of companies (cluster 1), small ones - 13% of companies (cluster 2) and large ones - covering 85% of companies (cluster 3). Group 1 had a very high average turnover in the year preceding the declaration of bankruptcy, amounting to PLN 765 million, and average employment of 502 people. Wholesale was clearly the dominant sector in this cluster (almost 43% of companies). In group 2, the average turnover was PLN 37 million, and the average employment rate was 262 employees. The production sector clearly dominated here

(over 48% of companies). In group 3 - the most numerous - the average turnover was PLN 12 million, the average employment rate was 34 people, and the manufacturing sector dominated (over 28%).

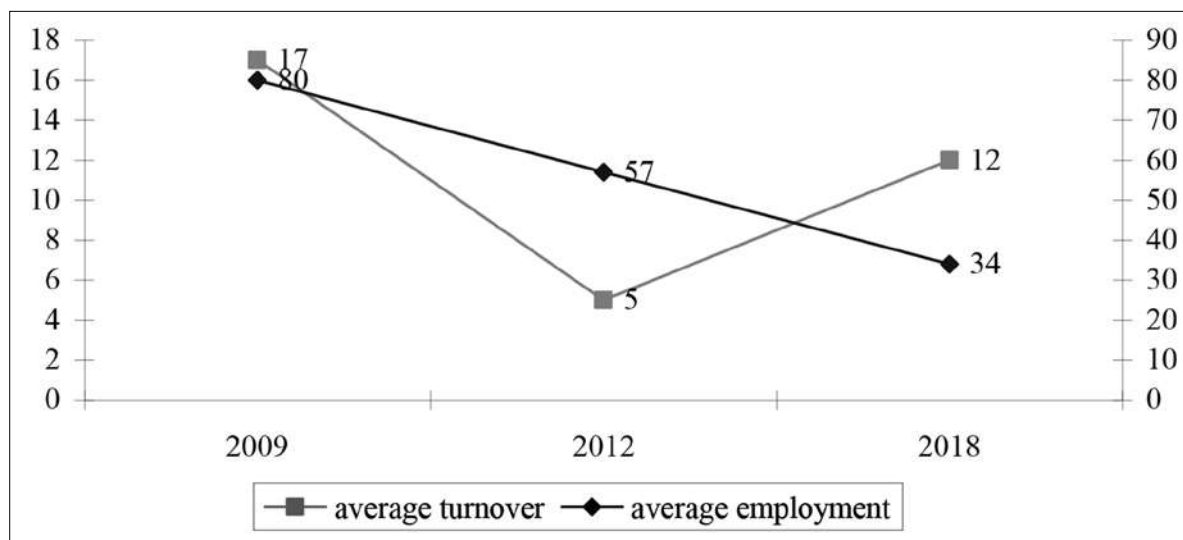The average values for the most numerous clusters in a given year are shown in Figure 8.

Figure 8. Average value of a turnover and number of employees in the most numerous clusters by years of bankruptcy

Source: own research

Summarizing the results of the classification, most of the companies declaring bankruptcy in Poland in the analyzed years had, on average, not very high turnover and the number of employees in the year preceding its announcement. Year by year, bankruptcy began to affect companies with fewer and fewer employees. Larger companies also did not avoid it.

Conclusions

The economic transformation of the 1980s and 1990s, combined with the dynamic business environment, as well as the globalization of economies, meant that companies that had problems and were unable to cope with the new operating conditions began to be driven out of the market. Although the bankruptcy phenomenon became to some extent a natural element of the market economy and was not occurring to an excessive extent, it is still a significant problem that is noticed by most entrepreneurs. The scale of this problem and its scope is determined by factors of various origins, which are the subject of intense discussion among scientists dealing with corporate bankruptcy issues. The extremely dynamic environment and the uncertainty of the phenomena occurring in it make it very important to control the economic and financial situation of enterprises and to use models that allow to forecast the risk of bankruptcy in advance so that an appropriate response is possible, allowing an effective reduction of this phenomenon.

The analysis of the problem of bankruptcy of enterprises in Polish conditions shows that the bankruptcy rate in 2009-2018 was not characterized by excessive differentiation, which means that the number of bankrupted enterprises did not change significantly in the analyzed period, and the average annual increase in the rate was 1.49%. Moreover, this indicator was relatively low in Poland as a whole and did not exceed 0.06%, except for the Dolnośląskie and Zachodniopomorskie provinces. Although it can be said that the situation related to the bankruptcy of enterprises in Poland seems to be quite stable and at a moderate, safe level, an alarming upward trend were observed in the last three years, but there are no grounds for concluding both a linear trend and a direct linking the increase in bankruptcies to the economic situation.

However, it is worth noting that in the light of the conducted research, the largest percentage of the total num-

ber of declared bankruptcies concerned companies operating in the form of limited liability companies, which suggests that companies operating in this form are most at risk of bankruptcy, but also the largest number of them. In recent years, some changes also became apparent in the sectors most at risk. While in 2007-2011 the largest percentage of total bankruptcies were enterprises from the manufacturing industry, in 2012 and 2013 enterprises from the construction industry accounted for the main share, and since 2014 the highest number of bankruptcies was observed in the service sector.

The analysis of bankruptcy across the years 2009-2019 showed that this phenomenon was not permanent, its scale was changing, to a greater or lesser extent, as well as the exposure of individual industries to the risk of bankruptcy. Although these changes were not directly related to the economic situation, one could find indirect relationships between macroeconomic determinants and the scale of bankruptcy, which was confirmed by numerous studies conducted by scientists from various countries around the world.

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