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# DEVELOPMENT OF FACTORING SERVICES IN POLAND IN THE YEARS 2011-2022

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#### DEVELOPMENT OF FACTORING SERVICES IN POLAND IN THE YEARS 2011-2022.

#### **ABSTRACT**

The purpose of the article. The aim of the article is to analyze the market of factoring services in Poland in the years 2011-2022 and to evaluate the impact of selected macro- and microeconomic factors on the development of factoring in Poland during this period. For the purposes of the study the adopted hypothesis regraded the existence of a positive correlation between the value of factoring turnovers and the gross domestic product; revenues from the sale of products, goods, and services; liabilities arising from deliveries and services; and short-term liabilities from loans and borrowings.

**Methodology**. The sources of data on the factoring services market were statistical data from the Polish Factors Association (PFA) and the Central Statistical Office (CSO). Pearson correlation coefficients were used to measure dependencies. Meanwhile, to examine the significance of the obtained results, the t-Student test statistic was employed.

**Results of the research**. The study results confirm the growing popularity of factoring as a source of financing for economic activities. In the period 2011-2022, the number of financed invoices and the value of receivables purchased by factors increased fourfold. The conducted analysis of correlation coefficients revealed a very strong dependence between the value of factoring receivables and all analyzed economic factors (all coefficients had a value above 0.9). The results of the t-Student test suggest that all these dependencies were statistically significant.

**Keywords:** factoring, factoring services, determinants of factoring, GDP (Gross Domestic Product), revenues, trade receivables, credits and loans.

**JEL Class:** G23, G32.

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# INTRODUCTION

Factoring emerged in Europe in the 1960s and quickly gained popularity. Currently, as much as 65% of all receivables worldwide are serviced by banks and factoring companies in Europe (www1). According to FCI (Factors Chain International) data, the turnover of factoring in Europe in 2022 amounted to 3.659 billion euros. It is estimated that over the past twenty years, the volume of factoring services has been increasing annually by 8.68% (www2).

Factoring is more popular in countries with higher levels of economic development and well-established credit information bureaus. This form of short-term financing can also be beneficial in countries with imperfect debt enforcement mechanisms because, in certain cases, factoring assumes the risk of non-payment by customers (Klapper, 2006).

In the literature, it is often pointed out that factoring is frequently directed towards small and medium-sized enterprises (SMEs) because it allows for the immediate receipt of cash without the need for collateralizing a loan or increasing the company's debt burden (Summers and Wilson, 2000). This form of financing is also attractive to rapidly growing businesses planning to make significant capital investments (Asselbergh, 2002).

Many suppliers use factoring to mitigate the effects of trade credit (Tian et al., 2020). Previous research confirms that a company with limited cash resources can improve its cash flows, profitability, and financial liquidity by using factoring (Banerjee, 2003). The benefits of factoring are noticeable not only for the company utilizing factoring but also for all participants in the supply chain (Tian et al., 2020).

There are numerous criteria that businesses consider when choosing sources of financing for their economic activities. The primary factors influencing the choice of capital include the overall attractiveness, which encompasses factors like availability, flexibility, and cost. In times of crisis, as witnessed during the COVID-19 pandemic, alternative sources of financing gain more popularity because the entire economy, including businesses in general, faces financial challenges. Consequently, there is a need to explore alternative sources of financing, among which factoring undoubtedly plays a significant role.

The objective of the article is to analyze the market of factoring services in Poland from 2011 to 2022 and to assess the impact of selected macro- and microeconomic factors on the development of factoring in Poland during this period. The theoretical considerations introduce the essence and basic types of factoring, outline advantages and disadvantages of factoring, and present the factors determining the utilization of factoring. The research section provides an analysis on the influence of selected economic factors on the turnover of factoring in Poland.

# 1. THE ESSENCE OF FACTORING

The concept of factoring is related to receivables arising from the sale of products. Factoring itself can be defined as an intermediary activity involving the resale of receivables before their due date (Popović, 2018). A factoring receivable should be undisputed, free from third-party claims, and have a short maturity period – from 14 to 210 days (Zawadzka and Paluch, 2011).

Factoring in Poland is treated as a service in which the factor (bank or factoring institution) acquires undisputed and short-term receivables from the factorant (supplier or creditor) before their due date, minus a fee for this service, either without assuming the risk of non-payment or with the assumption of such risk (Wejer-Kudełko and Ogrodnik, 2019). Factoring is, therefore, a form of short-term receivables management. The course of the factoring process is presented in Figure 1.

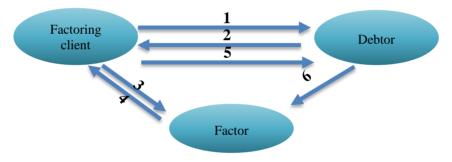


Figure 1. The course of factoring process

Source: Popović (2018).

The entrepreneur sells goods to the customer and issues an invoice with a deferred payment term (1). Subsequently, the customer is obligated to settle the invoice after a specified number of days (2). The entrepreneur sells their receivable to the factor (3), and the factor pays the amount of the receivable, reduced by its fee (4). The entrepreneur (seller) is required to inform their customer about the change of the creditor (5). The final stage of the factoring process is the payment made by the customer for the purchased goods to the factoring institution or the bank after a specified number of days (6) (Popović, 2018).

The process of choosing a factor should be accompanied by a thorough analysis of information about the factoring company. There is a wide variety of factoring contract offers in the market. Businesses must grapple with the decision

of whom to entrust their receivables to: a factoring company or a bank (Jando, 2016).

## 2. TYPES OF FACTORING AND THE RISK OF DEBTOR NON-PAYMENT

Factoring can be classified based on various criteria (Rogacka-Łukasik, 2011).

The primary criterion is the classification based on the allocation of risk: non-recourse factoring, recourse factoring, and mixed factoring.

Non-recourse factoring entails that the risk of the buyer's non-payment of goods will be fully borne by the factor. Simultaneously, in the event of non-payment of the receivable, the factor is deprived of the possibility of recovering the funds transferred to the client.

Recourse factoring gives the factoring company the right to seek payment from the client if the buyer of the goods fails to fulfill the obligation to pay for the invoice (Soufani, 2002). Recourse factoring is dedicated to businesses that are well-acquainted with their customers and can assume the risk themselves (Wejer-Kudełko and Ogrodnik, 2019).

Mixed factoring combines characteristics of both recourse and non-recourse factoring. In this case, the risk of debtor non-payment is shared between the factor and the client (factorant), with the factor being responsible for this risk only up to a specified value.

Klapper's research (2006) indicates that non-recourse factoring is more common in economically developed countries. On the other hand, Kouvelis and Xu (2021) argue that the benefits of factoring depend, among other things, on the credit rating assessment of the supplier and the buyer. Recourse factoring is chosen when the supplier has a high credit rating, while non-recourse factoring is preferred when the supplier's credit rating falls within a certain range (low but above a threshold). Additionally, when the buyer has a higher credit rating, non-recourse factoring is more frequently selected.

## 3. ADVANTAGES AND DISADVANTAGES OF FACTORING

At present, there is no specific legal concept of a factoring agreement in the Polish law, and therefore it is referred to as an unnamed agreement. Consequently, there are no uniform regulations that standardize the relationships involved in the factoring process. The permissibility of entering into such agreements arises from the general principle of contracting agreements.

Factoring is often compared to sales agreements and loan agreements. Kouvelis and Xu (2021) classify non-recourse factoring as the sale of receivables, while recourse factoring is considered a loan agreement, as the recovery of receivables represents a potential liability to the supplier. Such classifications may

not be recognized in the Polish law because the subject matter of a loan agreement and a sales agreement cannot be receivables.

The primary advantage of factoring is the ability to manage receivables. One of the positive outcomes of using factoring in businesses is the elimination of payment delays, increased cash flow turnover, and improved financial liquidity (Wejer-Kudełko and Ogrodnik, 2019). The use of factoring also enables businesses to provide their customers with more favorable payment terms for deliveries and services (Nowak and Przybylski, 2017).

The ability to manage receivables is closely related to the financial function, which involves increasing cash in the business without a simultaneous increase in debt. As a result, the client (factorant) can allocate available funds for various purposes and improve their credit rating (Marcysiak and Marcysiak, 2015).

Another function of factoring is the administrative function. This function primarily involves managing the settlements of transferred receivables or paid obligations of the client (factorant). Factoring also allows for the minimization of the risk associated with granting trade credit and the risk of dealing with unreliable suppliers (Kreczmańska-Gigol, 2013).

Transferring the risk to the financial institution that occurs during the conclusion of factoring agreements is associated with a protective function. In addition to assuming the risk of debtor non-payment, the protective function may involve assessing the creditworthiness of debtors and establishing limits on the value of trade credit (Kreczmańska-Gigol, 2013).

Factoring agreements can also include additional services (the service function of factoring). These services may include: managing settlements with the debtor of the client, sending reminders to customers who are delaying payment of trade credit, financial and accounting advisory, tax advisory, industry analysis, and more (Kreczmańska-Gigol, 2013).

The use of factoring comes with certain negative consequences, which include high administrative service costs (interest, commission, margin). Another issue relates to a change in the way settlements are made with customers, which can potentially weaken business relationships. Additional challenges may include the need to train employees involved in factoring-related transactions and the necessity to alter document processing procedures (Wejer-Kudełko and Ogrodnik, 2019; Rutkowski, 2016).

#### 4. FACTORS DETERMINING THE UTILIZATION OF FACTORING

Various authors point to factors that influence an increase or decrease in interest in factoring. Kubiak (2008) states that the attractiveness of factoring is influenced, among other things, by the availability of this source of financing. The author emphasizes that factoring is characterized by greater accessibility than trade credit

due to the lack of a need for restrictive collateral. Factoring companies do not analyze the creditworthiness of the company, and a blank promissory note is sufficient as security for the factoring agreement. Furthermore, the reduction of turnover thresholds for which factoring services are provided has made factoring more accessible to small businesses.

According to Popović (2018), factors influencing the development of the factoring industry include greater availability of factoring compared to bank loans and the growing awareness of businesses about the benefits of factoring. The author also notes that increased interest in factoring occurs during economic crises when entrepreneurs are forced to seek new sources of financing.

Kreczmańska-Gigol (2015) presents factors conditioning the development of factoring for the small and medium-sized enterprises (SMEs) sector. The author divided the factors into two groups: (1) factors conditioning the supply of factoring services and (2) factors shaping the demand for factoring services. Among the factors conditioning the supply of factoring services, the author mentions, among other things, the types and scope of offered factoring services and ancillary services (e.g., economic information, receivables insurance), the competencies of employees employed in the factoring industry, legal regulations governing factoring activities, and the entities offering factoring services (number, scope of operations, financial situation of factoring companies).

Klapper (2006) also investigated the determinants of factoring in 49 countries. The author found that greater utilization of factoring is influenced by economic development, GDP growth rate, access to credit information, as well as weak debt enforcement.

Baresa et al. (2017), based on the literature reviews, list two main determinants that have a decisive impact on the level of factoring activity in a country's economy. These are:

- a) the overall level of economic development in the country;
- b) the availability of financial information about businesses.

Sinha (2020) examined the impact of socio-economic factors on factoring services in 49 countries. Among the key determinants, the author mentions trade openness, exchange rates, credit interest rates, the level of financial services, credit to the domestic private sector, gross domestic savings, and GDP per capita.

# 5. DATA SOURCES AND METHODOLOGY

The research objective was to analyze the factoring services market in Poland in the years 2011-2022, as well as to assess selected macro- and microeconomic factors influencing the development of factoring during this period. The empirical part focused on the existence of a correlation between the value of factoring receivables purchased during the year by factors  $(Y_0)$  and:

- a) the Gross Domestic Product  $(X_1)$ ;
- b) net revenues from the sale of products, goods, and materials  $(X_2)$ ;
- c) short-term trade receivables  $(X_3)$ ;
- d) short-term liabilities from loans and borrowings  $(X_4)$ .

Previous research results show a correlation between economic growth and the popularity of factoring services among businesses (Klapper, 2006; Baresa et al., 2017; Sinha, 2020). To examine the existence of this relationship, the nominal value of the Gross Domestic Product in national currency (in PLN) was adopted for the analysis ( $X_1$ ). The analysis assumes that interest in factoring will be greater the higher the value of goods and services produced in the economy of a given country.

Another factor analyzed is the value of revenues from sales of products, goods, and materials in the business sector in PLN  $(X_2)$ . This factor is related to GDP because with higher economic growth, the activity of businesses in terms of production and sales of offered products will increase. As a result, there should be an increase in the value of revenues from sales in the business sector.

The next selected factor subjected to analysis is the value of short-term receivables from deliveries and services in PLN  $(X_3)$ . This factor is correlated with revenues from sales of products, goods, and materials because an increase in sales revenue may encourage entities to offer better sales terms and extend invoice payment deadlines. As a result, there should be greater interest in factoring among businesses.

The last of the factors used in the analysis is the value of short-term liabilities from loans and borrowings in PLN ( $X_4$ ). This factor is not related to the variables described earlier but pertains to the capital structure of the company. It can be assumed that an increase in debt by businesses will lead entities to accelerate cash flow turnover through factoring (Wejer-Kudełko and Ogrodnik, 2019).

The literature mentions factors shaping the demand for factoring services. Among them are, for example, revenues from sales and the value of receivables of businesses. The value of business receivables can increase when sales revenues grow. This situation typically occurs during a good economic climate (Kreczmańska-Gigol, 2015). In such times, both businesses and the factoring market can develop more rapidly.

It should be emphasized that both trade receivables and trade liabilities are the most significant items in the balance sheets of most companies in terms of value. Their level will determine whether a company will continue to grow, remain stagnant, or be forced to declare bankruptcy (Dąbrowski, 2023).

During an economic crisis, companies face greater challenges with payment backlogs, financial liquidity, and even solvency. The cause of this situation is market uncertainty, rising interest rates, and restricted access to cash (Baresa et al., 2017). By employing factoring, companies can improve the appearance of

their balance sheets, thereby enhancing financial liquidity ratios and providing greater flexibility of working capital (Czerwińska-Kayzer and Bieniasz, 2008).

Pearson correlation coefficients were used to measure dependencies. Meanwhile, to examine the significance of the obtained result, the t-Student test statistic was employed:

$$t_n = \frac{r}{\sqrt{1 - r^2}} \sqrt{n - 2};$$

where:

*n* denotes the sample size,

r represents the correlation coefficients.

The calculated statistic was compared to the values in the t-Student distribution table, assuming a significance level of  $\alpha = 0.05$ .

For the purposes of the study the adopted hypothesis stipulated the existence of a positive correlation between the turnover of factoring and the variables  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ . The economic growth of a country is assumed to lead to increased demand for external capital by businesses, which should also result in a greater utilization of factoring. Furthermore, an increase in sales revenues and trade receivables is expected to contribute to a higher interest in trading receivables and factoring services.

Finally, the increase in short-term indebtedness from loans and borrowings confirms the growing demand for external financing, which presents an opportunity for the development of the factoring market.

To verify the hypothesis, data from the Polish Factors Association (PFA) and the Central Statistical Office (CSO) were used.

The proposed research method allows, based on publicly available quantitative data, to confirm the influence of selected factors described in the literature on the factoring market in Poland. The analysis adopted selected factors shaping the demand for factoring services  $(X_1, X_2, X_3)$  as well as a factor related to the capital structure  $(X_4)$ .

# 6. FACTORING SERVICES MARKET IN POLAND FROM 2011 TO 2022 (FACTORING CLIENTS' PERSPECTIVE)

The analysis of the factoring services market shows that factoring is gaining significant popularity among Polish entrepreneurs. Figure 2 illustrates the number of factorants from 2011 to 2022.

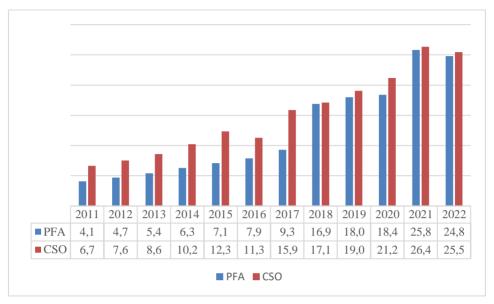


Figure 2. The number of factorants in Poland from 2011 to 2022 (in thousands)

Source: own study based on *Działalność faktoringowa* ..., (www3) and (www4).

According to data from the CSO, during the analyzed period, the number of factorants increased from 6.7 thousand in 2011 (4.1 thousand according to the PFA data) to 25.5 thousand in 2022 (24.8 thousand according to PFA data). This means that there was a 280.6% growth in the number of factoring service clients during the study period (504.9% according to the PFA clients).

The increase in the number of factoring service clients is associated with the growth in the number of financed invoices, as presented in Figure 3.

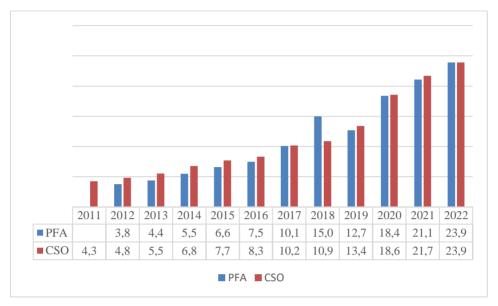


Figure 3. The number of financed invoices by factors in Poland from 2011 to 2022 (in million PLN)

Source: own study based on *Działalność faktoringowa* .... (www3) and (www4).

According to the CSO data, from 2011 to 2022, the number of financed invoices by factors increased from 4.3 million to 23.9 million, representing a growth of 455.8%. Even greater growth in the number of invoices was recorded by the PFA, which saw a 528.9% increase from 2012 onward<sup>1</sup>.

The above data should be related to the value of factoring receivables purchased by factors from 2011 to 2022. This data is presented in Figure 4.

Data published by the CSO also shows a significant increase in the value of receivables serviced by factoring companies. As can be observed, in 2011, the turnover of factorants amounted to PLN 94.9 billion, while in 2022, these turnovers reached PLN 476.9 billion, representing a growth of 402.5% in the value of serviced receivables. For factoring companies affiliated with the PFA, the growth during the same period was even greater, amounting to 586.4%.

<sup>&</sup>lt;sup>1</sup> The Polish Factors Association (PFA) does not have data for the year 2011.

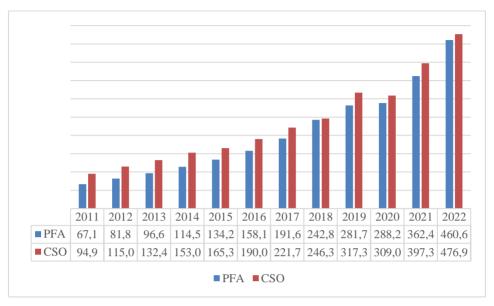


Figure 4. The value of receivables purchased by factoring companies in Poland in the years 2011-2022 (in billion PLN)

Source: own study based on Działalność faktoringowa ..., (www3) and (www4).

To illustrate how the market of factoring services in Poland developed in the years 2011–2022, it is valuable to compare the share of factoring receivables in relation to the GDP (Figure 5).

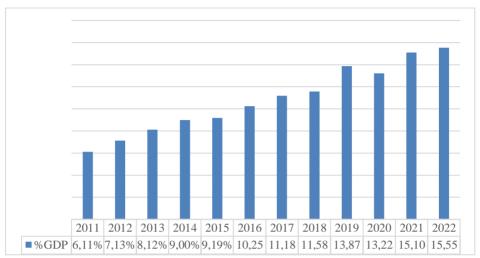


Figure 5. The percentage share of factoring receivables purchased during the year by factors in the Gross Domestic Product (GDP) from 2011 to 2022 (in %)

Source: own study based on (Działalność faktoringowa ...).

In 2011, the share of factoring receivables in relation to the Gross Domestic Product (GDP) was 6.11%, and this share steadily increased to a level of 15.55% in 2022. This indicates that the market of factoring services during the examined period increased its share in relation to the GDP by as much as 9.44 percentage points.

# 7. EVALUATION OF SELECTED MACRO- AND MICROE-CONOMIC FACTORS INFLUENCING THE DEVELOP-MENT OF FACTORING IN POLAND IN THE YEARS 2011-2022

In the years 2011–2022, there was a dynamic growth in factoring services in Poland. To examine which economic factors influenced the development of factoring services in Poland, four explanatory variables were selected for the analysis:

- a) Gross Domestic Product  $(X_1)$ ;
- b) net revenues from the sale of products, goods, and materials  $(X_2)$ ;
- c) short-term trade receivables  $(X_3)$ ;
- d) short-term liabilities from loans and borrowings  $(X_4)$ .

The explained variable was the value of factoring receivables purchased during the year by factors  $(Y_0)$ . The calculated correlation coefficients are presented in Table 1.

Table 1. The Pearson correlation coefficients and critical values of the t-Student test results for the variables under investigation

Specification	GDP (X <sub>1</sub> )	Net revenues from the sale of products, goods, and materials (X <sub>2</sub> )	Short-term trade receivables (X <sub>3</sub> )	Short-term liabilities from loans and borrowings (X4)
The correlation coefficients of variable Y <sub>0</sub> with variables X <sub>1</sub> -X <sub>4</sub> .	0.995	0.955	0.965	0.906
Test t-Statistic	32.80	10.20	11.58	6.75
Critical value for $\alpha$ =0.05.	2.228	2.228	2.228	2.228

Source: own compilation based on the CSO (Central Statistical Office) data and own calculations.

The analysis of correlation coefficients indicates the existence of a very strong positive correlation between factoring turnovers and all the variables under investigation  $(X_1-X_4)$ . The strongest relationship was observed between the Gross Domestic Product  $(X_1)$  and the value of factoring receivables purchased by factors during the year  $(Y_0)$  – the Pearson correlation coefficient was 0.995.

In order to examine whether the obtained correlation coefficients were statistically significant, a t-Student test was conducted. The analysis of Table 1 indicates that for each variable, the t-test statistic was higher than the critical value for  $\alpha$ =0.05, meaning that the obtained results were statistically significant at the p=0.05 level.

# 8. DISCUSSION

Factoring emerged in Poland in the years 1993–1994. Initially, factoring did not gain much interest among entrepreneurs and developed very slowly due to a lack of experience and trained personnel. Since 2007, there has been a dynamic increase in turnover of factored receivables (Sobol, 2020), and in 2022, their share in relation to GDP was 15.55%, allowing Poland to rank 6<sup>th</sup> among European Union countries (Ciechomska-Barczak, 2023).

Factoring is indeed an attractive source of financing for businesses. One of its greatest advantages is the variety of factoring transaction forms, which provide an individualized approach to the situation and requirements of the business. Factoring also allows for the quick acquisition of funds in the foreseeable future, eliminates the problem of delays in settling receivables, and insolvency of

customers, and improves the financial liquidity of the enterprise. More detailed analyses, however, indicate a lack of direct impact of using factoring services on improving the profitability indicators of the company (Kubiak, 2008).

The analysis of statistical data clearly indicates that the factoring services market is growing dynamically. According to the CSO data, from 2011 to 2022, there was an increase in:

- the number of factoring clients by 280.6%;
- the number of financed invoices by 455.8%;
- the value of receivables purchased by factors by 402.5%

Conducted correlation analyses between the turnover of factoring and the nominal GDP, sales revenue, receivables from deliveries and services, as well as short-term liabilities from loans and borrowings, confirm a very strong relationship between the factoring market and the business activity of enterprises, along with the level of socio-economic development. These results align with findings from the other authors. Mol-Gómez-Vázquez et al. (2018) confirmed that the size of the factoring industry is larger in countries with higher economic growth rates. Therefore, a positive relationship between GDP and the likelihood of using factoring can be expected.

Similar conclusions are reached by Koišová and Ivanová (2015). The stronger and more developed the economy, the more frequently alternative methods of financing for businesses are utilized.

Alayemi et al. (2015) also indicate that the economic situation in a country and the level of development of the financial market have a significant impact on the level of factoring activity. In the case of emerging markets, the conditions are unfavorable for the development of factoring services. A significant barrier to the development of factoring in these countries is a weak legal system, issues with debt enforcement, and a lack of access to financial information about businesses.

This relationship has also been demonstrated by Sinha (2020), who substantiated a positive correlation between GDP per capita and factoring worldwide. According to the authors' estimates, a 1% increase in GDP per capita leads to a 0.27% increase in the value of factoring services globally.

#### CONCLUSION

This article focuses on the analysis of the factoring services market in Poland from 2011 to 2022. The results of this analysis confirm that Poland is a leader in the utilization of factoring in Central and Eastern Europe. In 2022, the value of factoring turnovers reached PLN 476.9 billion.

The significant impact on the development of the factoring services market in Poland was the increase in the competitiveness of the Polish economy. The heightened economic activity of businesses results in companies expressing

additional demand for external financing, contributing to increased activity by banks and financial institutions in terms of providing loans and borrowings, as well as alternative sources of financing, including factoring.

The paper presents how the market of factoring services developed in Poland during the studied period and explores the macro- and microeconomic factors that may influence the development of factoring. Future studies could focus on analyzing the development of factoring services in Poland compared to the European Union and selected EU member states (Włodarczyk and Ostrowska, 2017), as well as on the analysis of selected determinants of factoring development in the Visegrád Group countries (Čulková et al., 2018).

## **DECLARATION BY THE AUTHORS**

The author declares no conflict of interest.

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# ROZWÓJ USŁUG FAKTORINGOWYCH W POLSCE W LATACH 2011-2022

**Cel artykułu.** Celem artykułu jest analiza rynku usług faktoringowych w Polsce w latach 2011–2022 oraz ocena wpływu wybranych czynników makro- i mikroekonomicznych na rozwój faktoringu w Polsce w tym okresie. Na potrzeby badania przyjęto hipotezę o istnieniu dodatniej zależności między wartością obrotów faktoringowych a produktem krajowym brutto; przychodami ze sprzedaży produktów, towarów i usług; należnościami z tytułu dostaw i usług oraz zobowiązaniami krótkoterminowymi z tytułu kredytów i pożyczek.

**Metoda badawcza.** Źródłami danych na temat rynku usług faktoringowych były dane statystyczne z Polskiego Związku Faktorów (PZF) oraz Głównego Urzędu Statystycznego (GUS). Do pomiaru zależności wykorzystano współczynniki korelacji Pearsona. Natomiast w celu zbadania istotności uzyskanego wyniku wykorzystano statystykę testową t-Studenta.

**Wyniki badań.** Wyniki badania potwierdzają wzrost popularności faktoringu jako źródła finansowania działalności gospodarczej. W latach 2011–2022 czterokrotnie zwiększyła się liczba finansowanych faktur oraz wartość wierzytelności wykupionych przez faktorantów. Przeprowadzona analiza współczynników korelacji wykazała bardzo silną zależność między wartością wierzytelności faktoringowych a wszystkimi czynnikami ekonomicznymi poddanymi analizie (wszystkie współczynniki miały wartość powyżej 0,9). Wyniki testu t-Studenta sugerują, że wszystkie te zależności były istotne statystycznie.

**Słowa kluczowe:** faktoring, usługi faktoringowe, determinanty faktoringu, PKB, przychody, należności handlowe, kredyty i pożyczki.

JEL Class: G23, G32.

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