



Influence of financialization on the business activity of non-financial enterprises in Poland

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Abstract:

Motivation: Financialization is connected with the phenomenon of dominance of the financial sphere in relation to the real sphere. Financialization, when applied to non-financial entities, means the increase of importance of financial motives in the decision-making processes of enterprises. Changes result from transformations of the system of economic incentives and development patterns, both in the economy and among economic entities, which are focused on fast earning. Enterprises for that purpose, they use leverage and financial instruments to generate profit, limiting the operational and investment activity.

Aim: The aim of this paper is to examine if the processes of financialization have affected the activities of non-financial enterprises operating in Poland based on a multifaceted analysis of the financialization of enterprises: from the point of view of investment activities (assets), sources of external financing (liabilities), income and management. Moreover, an attempt was made to answer the question if these processes apply equally to particular industries and enterprises according to their size.

Results: The conducted research showed that non-financial enterprises operating in Poland do not show signs of financialization of their activities. There is a noticeable upward trend in active and passive financial instruments of the balance sheet total. However, it does not translate into an increase in financial income. Research related to factors affecting ROE as a measure of shareholder value assessment, showed that it is determined by operating performance. In addition, the research showed that there were no statistically significant differences in the financialization of operations between large companies and the SME sector. With regard to sectors, the research indicated that there were sectors



that differed from the others. In terms of the degree of financialization of assets, liabilities and income, it is sector L — “Real estate activities”.

Keywords: financialization; financial statements analysis; small and medium-sized enterprises; large enterprises; sectoral analysis
JEL: G32; G01; F65; G12

1. Introduction

Financialization is an interdisciplinary phenomenon, covering such areas as economy, sociology, politology, psychology and ethics. It was coined and developed at the turn of the 20th and 21st century (Ratajczak, 2012, p. 282). Due to complexity of financialization categories, in literature one can observe problems with the widely accepted definition. What the presented areas have in common is a particular and growing role of the financial sphere and the financial criteria in the functioning of economy and in the economic and social life (Stockhammer, 2004, pp. 719–741).

When referring the issue of financialization to the activity of business entities, it is associated with the importance of financial motives in the decision-making processes of enterprises. The growing role of the financial sector in the economy has led to transformations in the sphere of management and ownership. The companies obtaining their capital from financial markets as stock-listed companies are assessed from the investors' (shareholders) point of view. That is because the shareholders become their owners via the financial market. Moreover, with the growing role of the financial institutions, the importance of institutional investors is also growing. Owners-shareholders from the financial sphere treat their investments as one of periodical and alternative forms of funds allocation (Rydzewska, 2016, p. 55). Their activities, along with the growing role of institutional owners, are associated with so-called impatient capital, that looks for the possibility to gain exceptional profits in a short period of time. The ownership status necessitates changes in the enterprise management. And so, companies management is entrusted to managers, the position and remuneration of which depend on short-term results. Their assessment is linked with the assessment of enterprises, given by the financial markets. Therefore, managers leave these positions, that assume long-term stability of development of a given undertaking, as return on investment takes place in a long run (Williams, 2000, pp. 1–12). They focus on short periods of time, on the dividend and shares rates. The shareholders-owners want for the dividend to be paid as quickly as possible and at the highest rate possible. The rule used so far — “stop and re-invest” — is replaced by “sell and distribute”. In accordance with the first approach, the earned profits were used for the stability and development, which translated into the value for entities affiliated with the company (stakeholders). Within the new rule, the enterprise, as a constant entity with manufacturing or trade value, loses its importance. What is taken

into account is the ability to generate maximum value for shareholders, even at the risk of survival, which involves the phenomenon of short-termism.

Taking into account the above phenomena associated with financialization, the activity of the enterprises, including non-manufacturing companies, is directed towards short-term financial result. Using the conditions of financialization, the companies look for sources that can ensure quick profits. For that purpose, they use leverage and financial instruments to generate profit, limiting the operational and investment activity.

The purpose of this study is to assess if the processes of financialization have affected the economic activity of Polish non-financial entities, taking into account 4 symptoms of financialization: investment activity (assets), sources of external financing (liabilities), income and management. In addition, an attempt was made to answer the question of whether these processes, due to the listed forms of financialization, equally affect individual industries and enterprises depending on their size.

Three research hypotheses were therefore formulated (Davis, 2016, pp. 115–141; Orhangazi, 2008, pp. 863–886; Szczepankowski, 2016, pp. 31–47):

- H1 — The financialization processes influenced the activity of non-financial enterprises functioning in Poland.
- H2 — The financialization processes have not contributed to differences in the financialization of operations between large enterprises and SMEs.
- H3 — The financialization processes have not contributed to differences in the financialization of operations of particular sectors of non-financial enterprises (according to Polish Classification of Business Activity (PKD)).

In the research the following methods were used: ratio analysis and trend analysis. Moreover, tests of significance of differences were carried out, respectively for the groups of enterprises under analysis; for groups of large companies and the SMEs sector: the Mann–Whitney U test, and for the sectors: ANOVA Kruskal–Wallis tests and *post-hoc* tests.

In the research the financial statements of non-financial enterprises published by the Statistics Poland (GUS) for the years 2010–2021 were used, considering the classification of data according to the industry and criterion of size (number of employees).

The article consists of six parts. The introduction includes the rationale for the choice of the research problem, purpose, hypotheses and research methods. The second part (literature review) presents an overview of the most important publications on financialization and its impact on the activities of non-financial enterprises. The third part deals with the research methodology and describes the methods used to conduct the research. Part four presents the results of the research. Part five (discussion) compares the results of the conducted research with the results of other researchers. Part six presents the conclusions of the research, its contribution to science and its limitations.

2. Literature review

In the literature of the subject, the issue of financialization is analyzed from the macro-economic point of view, in the assessment of changes between the financial and non-financial sectors. At first, the research was focused on American experiences (Krippner, 2005, pp. 173–208; Onaran et al., 2011, pp. 637–661) that confirmed the phenomenon of economy financialization. Considerations also apply to the problem of interaction between economic policy and financialization (Palley, 2021, pp. 461–492). The subsequent research made attempts to compare particular countries. In these publications, the United States were used as a benchmark. Within the comparisons, the developing countries' economies were analyzed (Lapavitsas & Powell, 2013, pp. 359–379), with the use of different classification criteria, among others, Kalecki's distribution channels (Hein, 2015, pp. 907–934). The subsequent researches took into account the financialization in emerging economies (Karwowski & Stockhammer, 2017, pp. 60–86).

Narrowing down the analysis of publications to the issue of financialization of non-financial sector entities, the researches focus on the use of econometric models for the assessment of changes between the financial macro-economic data and non-financial enterprises. And so, at first the research covered developed countries. On the basis of economies of the USA, Great Britain and France, a negative influence of financialization on the accumulation was indicated (Stockhammer, 2004, pp. 719–741). On the other hand, Orhangazi (2008, pp. 863–886) carried out a research that verifies the influence of financialization on the accumulation of capital in the United States, using for that purpose data from non-financial entities for the years 1973–2003. On the basis of econometric model, Riccetti et al. (2016, pp. 162–172) were able to prove that financialization by way of payments policy influences the instability and distribution of revenues, which has significant consequences for the macro-economic dynamics.

The subsequent part of the research concerned the financialization of non-financial entities in particular countries. And so, the research carried out in India (Sunanda & Dasgupta, 2018, pp. 96–113) indicated that financial assets are relatively more attractive for non-financial entities, as compared with other investments in terms of rates of return and capital gains. In turn, on the basis of the analysis of 41 companies listed on the stock exchange in Istanbul it was indicated that these enterprises moved their working capital funds from the production activity to the purchase of high-yield interest-bearing assets (Akkemik & Ozen, 2014, pp. 71–98). Whereas, Alvarez (2015, pp. 449–475), on the basis of a panel data model of 6,980 French non-financial firms, examined the effects of these financial revenues on wage share.

Seo et al. (2012, pp. 35–49) covered with their research Korean non-financial corporations (NFCs). The research results indicated that the increased payments of dividends and share purchase had negative impact on investment

in research and development. Other Korean researchers have also presented interesting results. According to Park and Han (2022, pp. 1085–1105), financialization, in terms of shareholder value orientation, is an unintended consequence of state pressure on family-owned companies to meet Western standards imposed by the IMF during the economic crisis. On the other hand, in an environment where the political and organizational power of labor unions is strong, they clearly have a negative impact on financialization.

Apart from econometric modeling, to assess the level of enterprises financialization, the financial statements analysis is used. Based on the financial data, sourced from balance sheets of non-financial entities in the United States, Davis (2016, pp. 115–141) analyzed the behaviors of non-financial entities after 1980. The activities associated with financialization were manifested in the financial statements of companies, by way of an increased share of financial assets in NFCs portfolios, increasing indebtedness and equity repurchases among large firms, and deleveraging among smaller firms.

The analysis of the financial statements was used for the research conducted by Rabinovich (2017; 2019). The author, in their publications, questions the financial rentierization hypothesis (Rabinovich, 2017, pp. 1–36) and the financial turn of accumulation hypothesis (Rabinovich, 2019, pp. 738–775), talking about financialization of non financial corporations (NFCs) through growing involvement in financial investments, from which they are receiving increasing financial income. The author, on the basis of a precise identification and analysis of financial asset items and financial income, shows that financial income averages 2.5% of NFCs' total income since the 1980s, oscillating since the beginnings of the 1990s until 2005 and then declining. In terms of assets, some of the alleged financial assets might actually reflect other activities in which NFCs have been increasingly engaged, such as tax avoidance, internationalization, M&A.

With regard to Polish non-financial entities, the issue of financialization is the subject of research of Szczepankowski. In his publications, he analyzes Polish non-financial entities in terms of their susceptibility to financialization processes. The research carried out on the basis of econometric model of the Generalized Method of Moments covered the companies listed on the Warsaw Stock Exchange in the years 2000–2015 (Szczepankowski, 2017, pp. 155–172). The results indicated a positive relationship between higher financial benefits and value migration. The increase of firm value was born, most strikingly, by increasing financial investment and financial profits, or decreasing corporate leverage.

Research in terms of financialization regarding Polish listed companies was also conducted by Socha and Urban (2018; 2019). In their first publication they made a sectoral analysis based on financial statements (Socha & Urban, 2018). In their subsequent research, on the other hand, they conducted a survey of finance professionals employed by listed companies (Socha & Urban, 2019).

The results made it possible to conclude that the phenomenon of financialization in the activities of the surveyed entities does not play a significant role.

3. Methods

In this paper, for the assessment of financialization influence on the non-manufacturing enterprises' activity in Poland, the verification of the following working theories was assumed.

H1 — The financialization processes influenced the activity of non-financial enterprises operating in Poland. According to the literature of the subject (Baud & Durand, 2012, pp. 241–266; Crotty, 2005, p. 89; Dumenil & Levy, 2004, p. 190; Krippner, 2005, pp. 173–208; Nolke & Perry, 2007, pp. 1–27; Orhangazi, 2008, pp. 863–886; Stockhammer, 2004, pp. 719–741), there are four symptoms of financialization distinguished:

- financialization of investment activity (assets);
- financialization of sources of external financing (liabilities);
- financialization of income;
- financialization of management.

To assess the financialization of assets, ratio analysis and trend analysis were used. For the analysis, the indicator of the share of active financial instruments in total assets (IAFI) was used — formula 1.

$$IAFI = \frac{\text{financial instruments (assets)}}{\text{total assets}} \times 100\%. \quad (1)$$

The analysis of financialization of sources of external financing (liabilities) was carried out based on trend analysis and the ratio of share of passive financial instruments (credits and loans, financial leasing, liabilities due to issuance of own bonds, liabilities due to derivative assets, other financial instruments) in the total liabilities was used (IPFI) — formula 2.

$$IPFI = \frac{\text{financial instruments (liabilities)}}{\text{total liabilities}} \times 100\%. \quad (2)$$

Financialization of income was assessed by analyzing the ratio of gross profit (before tax) to operating profit (GP/OP) — formula 3. This indicator shows the extent to which financial activities affected the operating activities of the enterprise, and ultimately its financial result.

$$GP/OP = \frac{\text{gross profit (before tax)}}{\text{operating profit}}. \quad (3)$$

The verification of the financialization of management was carried out on the basis of ROE and Pearson correlation coefficient determining the cor-



relation relationship between the ROE variable and respectively the variables: ROA, OP/E and FR/E.

ROE coefficient (return on equity) — formula 4, according to trends used in investors and shareholders practice, is used to assess the quality of enterprise management.

$$ROE = \frac{\text{net income}}{\text{equity}} \times 100\% \quad (4)$$

In order to identify the determinants of its value, the correlation of its value with ROA (return on assets) values was examined — formula 5. This allowed to determine the extent to which the assets contribute to the profitability of equity. Next, to identify sources of profitability: operating activity or financial activity, correlation of ROE with OP/E (operating profit/equity) — formula 6, and with FR/E (result from financial activities/equity) — formula 7,¹ was analyzed.

$$ROA = \frac{\text{net income}}{\text{total assets}} \times 100\%, \quad (5)$$

$$OP/E = \frac{\text{operating profit}}{\text{equity}} \times 100\%, \quad (6)$$

$$FR/E = \frac{\text{profit from financial activities}}{\text{equity}} \times 100\%. \quad (7)$$

H2 — The financialization processes have not contributed to differences in the financialization of operations between large enterprises and SMEs. In order to verify the above research hypothesis, statistical tests of significance of differences for independent samples for 2 groups (large enterprises and SME sector) were used. The analysis of differences was carried out using indicators to assess asset financialization (IAFI), liability financialization (IPFI) and income financialization (GD/OP). Due to the result of a study on all companies, which showed a lack of correlation between the net return on equity (ROE) and the financial activities return on equity (FR/E), the analysis of symptom of management financialization was eliminated from further studies.

The Mann–Whitney U-test was used to determine differences in the financialization of investment activities (assets) and the financialization of financing sources (liabilities), as well as the financialization of income. This test is suitable for testing the differences of 2 groups for a quantitative dependent variable, for which the distribution of dependent variables is not normal. The Shapiro–

¹ Profit from financial activities=gross profit–operating profit.

Wilk test and the Lilliefors test were used to analyze the normality distribution of the variable.

H3 — The financialization processes have not contributed to differences in the financialization of operations of particular sectors of non-financial enterprises (according to Polish Classification of Business Activity (PKD)). Verification of the hypothesis presented was carried out on the basis of the statistical test of significance of differences for independent samples for more than 2 groups (10 sectors according to PKD classification). To determine the differences, as in the case of the H2 hypothesis verification, indicators of asset financialization (IAFI), liability financialization (IPFI) and income financialization (GD/OP) were used.

The test of significance of differences was carried out using ANOVA Kruskal–Wallis tests and *post-hoc* tests. This test is appropriate for more than 2 samples, for the quantitative dependent variable, for normal distribution of dependent variables and heterogeneous variances.

In the research the data from financial statements and other financial information of non-financial enterprises were used, published by Statistics Poland for the years 2010–2021 within the study of Financial instruments of non-financial enterprises in Poland (GUS, 2010–2021a). Annually from 1,497 (2010) to 2,338 (2021) surveyed companies participated in the research. The time period of the research results from the availability of data for the presented period.

The data are published according to the Polish Classification of Business Activity (PKD) and according to size. Data according to size take into account financial information of enterprises employing up to 249 employees or more than 249. In this publication, it was assumed that the enterprises employing more than 249 employees are large enterprises while those employing 249 employees or less are SME enterprises².

4. Results

4.1. The financialization processes influenced the activity of non-financial enterprises functioning in Poland

According to the adopted research methodology, the verification of the first hypothesis is connected with the assessment of four symptoms of financialization.

Financialization of investment activity (assets): when analyzing the value of the indicator of the share of active financial assets in the total assets, with regard to non-financial enterprises in total, on the basis of data presented in Chart 1, one can notice that their share has been increasing. After 2010–

² The choice of the number of employees as a criterion for classifying enterprises into large and small was dictated by data presented by GUS. According to the Commission recommendation (2003), in addition to the number of employees, annual turnover and/or annual balance sheet total are given as criteria.

2012, in which the level of financial instruments stood at 14%, 9%, and 12%, it increased to the level of 20–25% in 2013–2020, and in 2021, it suddenly grew to 31%. The upward trend of the IAFI indicator is confirmed by a well-matched upward trend line ($R^2=0.76$).

The reason for the increase in active financial instruments during the period under review was the growing share of equity financial instruments and deposits and loans granted. On the other hand, the importance of derivatives in company assets increased in the last year.

Financialization of sources of external financing (liabilities): taking into account the IPFI indicator, one can notice the increase of share of passive financial instruments in non-financial enterprises in general. As shown in Chart 2, in the years 2010–2013 this indicator was at the level of 10–14%. Starting from 2014, it went up to the level of 20% and remained at a similar level until 2020. In 2021, it increased to the value of 30.59%. The increasing trend of the IPFI ratio is confirmed by the upward trend ($R^2=0.78$).

The increase in the share of passive financial instruments, was mainly influenced by the growing share of credits and loans and liabilities due to the issuance of own bonds. In the last year of analysis, there was also an increase in liabilities due to derivative assets.

Financialization of income: taking into account the income financialization indicator, the relation between gross profit (before tax) and operating profit in case of non-financial enterprises in general in Poland was below 1 (Table 1). In the years 2013 and 2015, it reached the level of 0.59 and 0.52 respectively. It has increased in recent years, and in 2021 it stood at 0.96. A ratio level lower than 1 means that companies generated losses from financing activities, which absorbed profits generated from operating activities, reducing net income.

Financialization of management: in order to identify the determinants of ROE indicator as a measure for assessing management used by investors to assess the profitability of investments in an enterprise, its correlation with the ROA indicator was examined. The Pearson correlation coefficient of the ROE variable and the ROA variable was 0.80 (Table 2) and is statistically significant. This means that there is a statistical relationship between the profitability of equity and the profitability of assets (hence, the effect of leverage was eliminated as a determinant of ROE). Next, in order to identify the sources of profitability (of operating or financial activity), the correlation relationship between ROE and OP/E and FR/E variables was examined. Pearson results indicate a statistically significant relationship between ROE and OP/E (0.90), and a statistically insignificant correlation between ROE and FR/E (0.39).

Thus, ROE indicator is determined by the profitability of operating activity. Investment activity is a statistically insignificant factor.

Due to the lack of correlation between ROE and financial activity results, further studies have eliminated this indicator as a measure to assess the degree of financialization.

4.2. The financialization processes have not contributed to differences in the financialization of operations between large enterprises and SMEs

The verification of the second hypothesis related to the study of differences between groups of large economic entities and the SME sector, according to the adopted methodology and previous results, focuses on the following symptoms of financialization.

Financialization of investment activity (assets): when analyzing the box and whisker plot (Chart 3), one can notice that the average value of IAFI indicator for small and medium enterprises is (0.42) 42%, while for large enterprises it is on a lower level of 0.21 (21%). This means that in SME companies the share of active financial instruments in total assets is twice as high as in large units. Also, for small and medium-sized units there is a higher gap — the difference between Q 75 and Q 25 is 0.25. For large units, the gap is 0.05. Thus, the SME sector is characterized by greater diversity in the asset financialization index.

On the other hand, the results of the Mann–Whitney U-test conducted ($p=0.0885$), with the adopted level of significance ($\alpha=0.05$) indicate that there are no grounds for rejecting the verified null hypothesis (Table 3). Therefore, the research indicates a statistical lack of differences in the degree of financialization of investment activities (assets) between groups of large enterprises and SMEs.

Financialization of sources of external financing (liabilities): when analyzing the box and whisker plot (Chart 4) in relation to IPFU indicator, one can notice that its average value for SMEs sector was higher and amounted to (0.28) 28%, while in the case of large enterprises it was 0.19 (19%). Thus, there is a higher share of passive financial instruments in small and medium-sized enterprises than in large ones. Similarly, as above, the value of ranges is larger for the SME sector (the difference between Q 75 and Q 25 is 0.15). Large enterprises are characterized by a smaller range, which is 0.05. This means that the values of the IPFI index for small and medium-sized companies are more diverse than in the large enterprise sector.

The results of the Mann–Whitney U-test ($p=0.0531$), with the accepted level of significance ($\alpha=0.05$) indicate that there is no basis for rejecting the verified null hypothesis (Table 4). Thus, differences in financialization of financing sources between groups of large enterprises and SMEs are statistically insignificant.

Financialization of income: when analyzing the box and whisker plot (Chart 5) in relation to GD/OP indicator, one can see that the median of this indicator is slightly higher for small and medium-sized enterprises (0.87) than for large enterprises (0.85). Thus, the SME sector generates slightly lower losses from financial activities than large units. On the other hand, the performance gap between the two categories of companies is at a similar level (for the SME sector, 0.17; for large companies, 0.15).

The results of the Mann–Whitney U-test ($p=0.7508$), with the accepted level of significance ($\alpha=0.05$), indicate that there is no basis for rejecting the verified null hypothesis (Table 5). Therefore, due to the GD/OP indicator (financialization of income), the research showed a statistical lack of differences between groups of large enterprises and SMEs.

4.3. The financialization processes have not contributed to differences in the financialization of operations of particular sectors of non-financial enterprises (according to Polish Classification of Activities (PKD))

The verification of the third hypothesis, related to the examination of differences between enterprise sectors (according to the PKD classification), as in the case of enterprise groups by size, focuses on three symptoms of financialization:

Financialization of investment activity (assets): the results of the Kruskal–Wallis test ($p=0$), at the accepted level of significance ($\alpha=0.05$), indicate the rejection of the verified null hypothesis. Thus, by the degree of financialization of assets, at least one sector is statistically different from the others.

Preliminary considerations, based on a box and whisker plot analysis (Chart 6), point to Sector L (Real Estate Activities) as the sector characterized by a higher median index than the other sectors. This sector also has the highest mean rank (89.83). These conclusions have been statistically confirmed in *post-hoc* tests. The results presented in Table 6 show a significant difference between Sector L (Real Estate Activities) and the sectors: E (Water supply; sewage and waste management and remediation activities), H (Transportation and storage) and J (Information and communication). In addition, a test of significance of differences conducted indicated statistically significant differences between sector D (Electricity, gas, steam, hot water and air conditioning supply) against sectors E (Water supply; sewage and waste management and remediation activities) and J (Information and communication). Also, a statistically significant difference was established between sector F (Construction) and J (Information and communication). Sectors D and F had some of the highest average ranks: 73.67 and 70.92, respectively (Table 6).

Financialization of sources of external financing (liabilities): the result of Kruskal–Wallis test ($p=0$), at the accepted level of significance ($\alpha=0.05$) indicate rejection of the verified null hypothesis. Thus, in terms of liability financialization, there is at least one sector statistically different from others.

Preliminary analysis, based on a box and whisker plot (Chart 7), highlights sectors N (Administrative and support service activities), J (Information and communication) and L (Real estate activities) as different from the others. These sectors are characterized by higher median values and a large scattering nature. In addition, these sectors are characterized by the highest median rank values: sector N 95.27, sector J 77.14, and sector L 5.38.

The *post-hoc* tests conducted (Table 7), confirm a statistically significant difference between the sectors in question: sector N (Administrative and support service activities) against sectors: C (Manufacturing), E (Water supply; sewage and waste management and remediation activities), F (Construction), G (Wholesale and retail trade; repair of motor vehicles, including motorcycles) and H (Transportation and storage). In contrast, sector J (Information and communication) and L (Real estate activities) are statistically different from sector F (Construction).

Financialization of income: the result of Kruskal–Wallis test ($p=0.0001$), at the accepted level of significance ($\alpha=0.05$) indicate rejection of the verified null hypothesis. In terms of income financialization, there is at least one sector statistically different from others.

Considering the box and whisker plot (Chart 8), it can be seen that sector L (Real estate activities) and M (Professional, scientific and technical activities) differ from the other sectors in terms of the GD/OP ratio. The medians of the ratios in question are greater than 1 (the other sectors have a GD/OP ratio less than 1).

Confirmation of preliminary conclusions is provided by *post-hoc* tests (Table 8), indicating a statistically significant difference between sectors L (Real estate activities) relative to sectors J (Information and communication) and N (Administrative and support services activities). There are also statistically significant differences between sectors M (Professional, scientific and technical activities) and E (Water supply; sewage and waste management and remediation activities) against sector J (Information and communication). Rank averages are highest for the sectors: L (Real estate activities) 86.58, sector M (Professional, scientific and technical activities) 75.25, and E (Water supply; sewage and waste management and remediation activities) 74.58.

5. Discussion

On the basis of the conducted research, it should be concluded that non-financial enterprises operating in Poland do not show any signs of financialization of their activities.

The analysis of the share of active financial instruments in the balance sheet total indicates an increase in the importance of financial assets in the assets of enterprises. According to the literature on the subject, the increase in the share of financial assets is one of the manifestations of the financialization of investment activities (Orhangazi, 2008, pp. 863–866), which, together with the increase in the share of financial income, leads to “shifting the activities of non-financial enterprises towards banking” (Davis, 2016, p. 138).

However, when analyzing the results of research conducted on Polish non-financial enterprises, it can be observed that the indicators of income financialization (gross profit/operating profit) are lower than 1. It indicates that enterprises generate losses from financial activities. Thus, an increase in fi-

financial assets does not translate into an increase in financial income. Enterprises increase financial investments, but not in order to make quick profits. Analyzing the structure of financial investments it can be seen that the largest increase occurred in the groups of equity financial instruments (shares, interests in other companies) and deposits and loans granted. This situation may be associated with a greater commitment of funds to the shares of foreign companies, but it may also be the result of consolidation of business units and financial settlements within corporate groups. An increase in the share of derivatives in financial assets over the past year is also noticeable. The main reason was the increase in embedded and hedging instruments, which was related to the effects of the COVID 19 pandemic.

The above results duplicate the results of research carried out by Rabinovich (2017; 2019), who, after a thorough analysis of the balance sheet components of the category of financial assets, as well as the sources of financial income, undermined the financial turn of accumulation hypothesis and financial rentierization hypothesis (results of econometric models: Davis, 2017, pp. 1332–1358; Hecht, 2014, pp. 1171–1206; Orhangazi, 2008, pp. 863–886; Stockhammer, 2004, pp. 719–7741). The results of his research indicate that non-financial enterprises in the U.S., in order to maximize shareholder value (ROE), focus on non-financial activities such as M&A or internationalization.

When looking at the results of the research on the financialization of liabilities, one can see an upward trend in the share of passive financial instruments in total liabilities. The symptom of liability financialization is the growing importance of various forms of debt as a source of enterprise financing (Crotty, 2005, p. 89), where internal sources of financing are complemented by external sources and not the other way round (Milberg, 2009, pp. 420–451). Using the leverage effect, companies can increase the ROE value as a measure of shareholder value (Froud et al., 2000, pp. 80–110).

Analyzing the determinants of ROE indicator in relation to non-financial enterprises in Poland, the research eliminated the leverage effect and indicated a strong relationship with return on assets (ROA).

Further research on the factors influencing ROE has shown that it is significantly correlated with OP/E. This means that the performance of enterprises is determined by their operating results. Thus, the concept of shareholder perspective related to decisions aimed at a rapid increase in market value from financial activities (Dore, 2002, pp. 115–121; Palley, 2007, pp. 1–31) is not confirmed by the performance of Polish enterprises. Their income comes from operating activities (production, trade or services). These results are in line with studies conducted in Poland based on listed companies on the Warsaw Stock Exchange. These companies did not show signs of financialization of operations. Their financial activities did not affect the generated net results (Socha & Urban, 2018, pp. 93–102; 2019, pp. 141–152).

The conducted statistical research shows a lack of statistically significant differences between large enterprises and the SMEs sector, taking into account the financialization of investment activities, sources of financing and income.

However, descriptive analysis of indicators of financialization of assets, liabilities and income indicates some differences, though statistically insignificant. Thus, in relation to IAFI indicator and IPFI indicator, the average for SMEs sector is higher than the average for large enterprises. A higher share of financial assets in small enterprises compared to large ones was also shown in research (after 2010) conducted among American enterprises (Davis, 2013, pp. 1–25). However, the differences are related to the reasons — components of financial assets. A higher increase in the share of financial assets in the group of smaller Polish enterprises occurred as a result of an increase in equity securities and deposits and loans granted, whereas in the case of enterprises in the USA — as a result of an increase in cash & short-term investments. As regards the degree of financialization of liabilities, large American enterprises show a higher level of indebtedness compared to small units, due to, among other things, intensified buybacks of their own shares after 2000.

The presented differences in financialization of particular activities in groups of enterprises by size result from various factors, such as the methodology of selecting groups (in Poland it is the SMEs sector, in the US — a group of small enterprises), the degree of economy financialization and the capital market model.

Both descriptive and statistical studies show that there is at least one sector that differs from others in terms of measures of financialization. Taking into account all the indicators: asset financialization, liability financialization and income financialization, sector L — Real estate activities stands out clearly. Analyzing the medians of the IAFI, IPFI and GD/OP indicators, they are higher for the sector in question and have a wider spread. The significance tests conducted confirmed the statistical differences. Noteworthy is the GD/OP ratio, which is 1.35, indicating that companies in this sector generate income from financial activities. Considering the activities of the real estate sector, these include the purchase and sale of real estate (treated as investments in balance sheet law), rental and management of real estate, real estate brokerage. Thus, the scope of activities has the nature of investment activities (in the accounting sense), for the implementation of which a portfolio of financial instruments is necessary. These instruments can be considered as forms of allocation of surplus cash (assets) and as sources of investment financing (liabilities). On the other hand, the results of trading a portfolio of investments generate financial gains/losses.

For the asset financialization ratio, the statistical analysis still pointed to Sectors D and F differing significantly from the others. Sector D (Generation and supply of electricity, gas, steam, hot water and air for air conditioning systems) is characterized by a high level of active derivatives, while sector F (Construction) has a high share of deposits and placements. In contrast, the results of the allocation of funds listed forms of financial assets do not translate into financial returns.

Considering the sectors that differ from the others in terms of the financialization of liabilities, these are (in addition to the already discussed sector L) sector N (Administrative and support services activities) and sector J (Information and Communication). These industries are characterized by a high degree of indebtedness as a result of, among other things, loans taken out to finance operations. However, this should not be linked to the phenomenon of leveraging to increase ROE.

With regard to the index of income financing, apart from sector L, the study showed significant differences regarding sectors M (Professional, scientific and technical activities) and E (Water supply; sewage and waste management and remediation activities). On the other hand, analysis of the medians of the GD/OP ratio showed that only in the case of the M sector is it greater than 1 (it is 1.2), which means generating profits from financial activities. The specificity of the M industry concerns the activity of providing knowledge-intensive services — i.e. accounting, legal, management consulting, marketing architecture, etc. Hence, achieving financial profits can be a form of increasing the financial result for this sector.

The considerations presented on the analysis of the relevance of sectoral differences indicate the complexity of the problem of assessing and interpreting the phenomenon of financialization in enterprises. This is in line with the considerations presented by Faust and Kädler (2018, pp. 167–194) that there is a problematic stretching of the concept of financialization. The term is defined differently and is not sufficiently distinguished from similar concepts. Therefore, a comprehensive financial analysis is recommended, taking into account the analysis of the environment.

Analyzing the reasons for the low degree of financialization of Polish non-financial enterprises, according to the literature, they are the result of the behavior of business entities, as well as the state of the market (Yang & Chen, 2023, pp. 103407).

Polish enterprises were characterized by good financial condition in the studied period 2010–2021. Tracking the results of profitability from operating activities and profitability of gross financial result, they were at a similar level (3–4%) during the period under study, and in the last year they increased to the level of 6% (GUS, 2021b). Thus, Polish companies, while achieving satisfactory results from operative activities, are not interested in additional income from financial activities. The discrepancy between the income obtained in the real sphere and the financial sphere is also noticeable in enterprises operating in other economies (Cupertino et al., 2019, p. 1836; Zhu et al., 2023).

Against the international background, Polish companies are characterized by a lower degree of indebtedness. The dominant model of financing investments using own funds is explained as the reason. In addition, this phenomenon is compounded by the significant share of foreign-investor-owned companies, which generally have good access to foreign intra-group financing (NBP, 2020).

The lower degree of financialization of Polish companies is influenced by the environment. Poland has a bank-based model. According to the literature, higher degrees of financialization are characterized by models based on the dominance of financial markets (Gołębiowski & Szczepankowski, 2015). Polish banks, on the other hand, are characterized by a conservative mode of operation. Their offerings in terms of supply and diversity and provide are moderate, with the dominance of traditional products and services (Marszałek, 2022).

On the other hand, analyzing the state of the entire financial market in Poland, despite the systematic development of financial intermediary institutions and financial instruments, there is still a significant gap in relation to highly developed markets. The value of financial assets (calculated as % of GDP) is in Poland at a level significantly lower than in countries with mature market economies (Poland 137.3; Eurozone 570.3) (Marszałek 2022) . The volume of derivative transactions and more complex financial assets was also insignificant. In Poland, the WSE, which is one of the largest regional stock exchanges in Central and Eastern Europe, has been in operation since the beginning of the transition. However, comparing its capitalization level of USD 0.3 trillion, it is significantly lower than the largest European exchanges (LSE Group UK USD 3.1 trillion, Duetsche Boerse USD 1.89 trillion). This situation is due to historical conditions, related to the functioning in Poland of almost half a century of centrally managed economy. The economic transformation that began in 1989 allowed the construction of a modern financial system. However, with the uninterrupted development of financial markets of countries with mature market economies, the Polish market has not been able to catch up. In the United States, on the other hand, there has been an increase in the degree of dependence of economic units on financial markets and institutions since the 1950s (Davis, 2013, pp. 1–25).

6. Conclusion

Carried out empirical research gave grounds to verify the working theories present in the paper.

Firstly, non-financial enterprises operating in Poland do not show any signs of financialization of their activities. Therefore, the first hypothesis (H1) was rejected. On the basis of the analysis of the share of active financial instruments in the balance sheet total, an upward trend of financial assets in the assets of enterprises is noticeable. Though, it should be noted that this does not translate into increase in financial income (the enterprises generate losses on financial activities). The increase in financial investments can rather be identified with a greater involvement of financial resources in shares of other companies, but also with the processes of consolidation of business entities.

When analyzing the results of the research on the financialization of liabilities, one can see an upward trend in the share of passive financial instruments

in total liabilities. Based on the study, the leverage effect was found to be statistically insignificant from the point of view of its impact on equity profitability.

Further research related to factors influencing ROE as a measure of shareholder value assessment showed that it is determined by operating results. Thus, the concept of shareholder perspective related to decisions aimed at a rapid increase in market value from financial activities (Dore, 2002, pp. 115–121; Palley, 2007, pp. 1–31) is not confirmed by the activities of Polish enterprises.

Secondly, the research conducted has shown that there are no statistically significant differences in the financialization of activities between large enterprises and enterprises of the SMEs sector. Therefore, the second hypothesis (H2) was confirmed. However, descriptive analysis (of indicators of financialization of assets, liabilities and income) indicates some differences, though statistically insignificant, but indicating higher level of financialization of small and medium enterprises.

Thirdly, statistical research and descriptive analysis have shown the existence of sectors that are different from others. Therefore, the third hypothesis was rejected. In terms of the degree of financialization of assets, liabilities and income (composite analysis), it is sector L “Real estate activities”, which showed the characteristics of financialization of investment activities, sources of financing and income.

The research and conclusions carried out in the article contribute to the current state of knowledge, as:

- involve a multifaceted analysis of the financialization of companies, from the point of view of investment activities (assets), sources of external financing (liabilities), income and management;
- include a comparative analysis of the degree of financialization of the activities of companies by industry and by size using significance tests of differences appropriate for the studied groups of companies and post hoc tests;
- take into account the financial data of Polish companies forming the reports of the Statistics Poland (GUS), and not only listed companies, which have been the subjects of previous studies in Poland.

The financial statements including financial instruments of non-financial enterprises in Poland were used for the research. It should be noted, however, that the possibilities of using the data were determined by the details of information presented by the Statistics Poland (GUS), which constituted a limitation in conducting the research³. Moreover, the research period covers the last twelve years, resulting from the availability of published data. This represents a relatively short research horizon, albeit one that provides opportunities to observe the most recent behavior of companies. It should also be noted that the limitation of the study is the analysis of only one market-Poland. A comparative analysis

³ As an example of the limitation of the study, in 2015 the GUS stopped presenting data on the result from operations on financial instruments. To assess the financialization of income, data on the result on financial operations was used as the difference between the gross result and the result on operations.

of international scope, would give the opportunity for a deeper interpretation of the degree of financialization of non-financial enterprises in Poland.

The research provided a basis for drawing conclusions on the impact of financialization on the activity of non-financial enterprises in Poland, but also indicated possible areas for further research. Since an upward trend in the share of financial assets is noticeable, it would be worthwhile to analyze the directions of financial investments of Polish non-financial enterprises. Secondly, it would be useful to establish discrepancies in the financialization of investment activities and sources of financing between groups of the SME sector and large units, although they are not statistically significant. Thirdly, it would be worthwhile to undertake further research on a comprehensive analysis of the L (Real Estate Activities) and M (Professional, scientific and technical activities) sectors, which have shown signs of financialization.

The presented areas do not exhaust the research possibilities. Financialization is a complex phenomenon; therefore research on the discussed issue should be continued.

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Appendix

Table 1.
Gross profit/operational profit (GO/OP) from 2010 to 2021

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
0.93	0.92	0.83	0.60	0.75	0.52	0.85	0.95	0.90	0.85	0.76	0.96

Source: Own preparation based on GUS (2010–2021).

Table 2.
Pearson correlation coefficient of ROE variable and variables: ROA, OP/E and FR/E

Variable	ROA	OP/E	FR/E
ROE	0.80	0.90	0.39

Notes:

Indicated correlation coefficients are significant with $p < .05000$; ROE with ROA and OP/E statistically significant, while with FR/E they are not.

Source: Own preparation based on GUS (2010–2021).

Table 3.
The results of the Mann–Whitney U test for comparisons of groups of large enterprises and SMEs based on (asset financialization) ratios

Analysis of normality of the distribution of the IAFI variable for groups of large enterprises and SMEs										
	SME		Large							
	Value of statistics	Value of p	Value of statistics	Value of p						
Shapiro–Wilk test	0.92	0.27	0.90	0.16						
Lilliefors test	0.21	$p < .20$	0.25	$p < .05$						
	Based on the result of the Shapiro–Wilk test: $p = 0.2658$ at the significance level $\alpha = 0.05$, there are no grounds to reject the hypothesis of normality of the distribution of the “IAFI” variable.		Based on the result of the Shapiro–Wilk test: $p = 0.1563$ at a significance level of $\alpha = 0.05$, there is no basis to reject the hypothesis of normality of the distribution of the “IAFI” variable.							
	Based on the result of the Lilliefors test: $p < .20$ at the significance level $\alpha = 0.05$ there are no grounds to reject the hypothesis of normality of the distribution of the “IAFI” variable.		Based on the result of the Lilliefors test: $p < .05$ at a significance level of $\alpha = 0.05$, the hypothesis of normality of the distribution of the “IAFI” variable should be rejected.							
	Since at least one of the selected tests rejected the hypothesis of normality of distribution, it is suggested to reject this hypothesis.									
The results of the Mann–Whitney U test										
	Sum.rang SME	Sum.rang large	U	Z	p	With corrections	p	N importance SME	N importance large	2*1 exp. exact p
IAFI	180.00	120.00	42.00	1.70	0.09	1.70	0.09	12.00	12.00	0.09

Notes:

Indicated results are significant with $p < .05000$.

Source: Own preparation based on GUS (2010–2021).



Table 4.
The results of the Mann–Whitney U test for comparisons of groups of large enterprises and SMEs based on IPFI indicators (financialization of liabilities)

Analysis of normality of the distribution of the IAFI variable for groups of large enterprises and SMEs										
	SME					Large				
	Value of statistics		Value of p			Value of statistics		Value of p		
Shapiro–Wilk test	0.86		0.05			0.95		0.60		
Lilliefors test	0.26		p<.05			0.16		p>.20		
	Based on the result of the Shapiro–Wilk test: p=0.0550 at the significance level $\alpha=0.05$, there are no grounds to reject the hypothesis of normality of the distribution of the variable “IPFI”.					Based on the result of the Shapiro–Wilk test: p=0.5983 at the significance level $\alpha=0.05$, there are no grounds to reject the hypothesis of normality of the distribution of the variable “IPFI”.				
	Based on the result of the Lilliefors test: p<.05 at the significance level $\alpha=0.05$, the hypothesis of normality of the distribution of the “IPFI” variable should be rejected. Since at least one of the selected tests rejected the hypothesis of normality of distribution, it is suggested to reject this hypothesis.					Based on the result of the Lilliefors test: p>.20 at the significance level $\alpha=0.05$, there is no basis for rejecting the hypothesis of normality of the distribution of the “IPFI” variable.				
The results of the Mann–Whitney U test										
	Sum.rang SME	Sum.rang large	U	Z	p	With corrections	p	N importance SME	N importance large	2*1 exp. exact. p
IPFI	184.00	116.00	38.00	1.93	0.05	1.93	0.05	12.00	12.00	0.05

Notes:

Indicated results are significant with p<.05000.

Source: Own preparation based on GUS (2010–2021).



Table 5.
The results of Mann–Whitney U test results for comparisons of groups of large enterprises and SMEs based on GO/OP indicators (income financialization)

Analysis of normality of the distribution of the IAFI variable for groups of large enterprises and SMEs										
	SME					Large				
	Value of statistics		Value of p			Value of statistics		Value of p		
Shapiro–Wilk test	0.96		0.77			0.83		0.02		
Lilliefors test	0.20		p>.20			0.24		p<.05		
	Based on the result of the Shapiro–Wilk test: p=0.7709 at the significance level $\alpha=0.5$ there are no grounds to reject the hypothesis of normality of the distribution of the “GD/OP” variable.					Based on the result of the Shapiro–Wilk test: p=0.0207 at the significance level $\alpha=0.05$, the hypothesis of normality of the distribution of the variable “GD/OP” should be rejected.				
	Based on the result of the Lilliefors test: p>.20 at the significance level $\alpha=0.05$ there are no grounds to reject the hypothesis of normality of the distribution of the “GD/OP” variable.					Based on the result of the Lilliefors test: p<.05 at the significance level of $\alpha=0.05$, the hypothesis of normality of the distribution of the “GD/OP” variable should be rejected.				
	Since at least one of the selected tests rejected the hypothesis of normality of distribution it is suggested to reject this hypothesis.									
The results of the Mann–Whitney U test										
	Sum.rang SME	Sum.rang large	U	Z	p	With corrections	p	N importance SME	N importance large	2*1 exp. exact. p
GD/OP	156.00	144.00	66.00	0.32	0.75	0.32	0.75	12.00	12.00	0.76

Notes:

Indicated results are significant with $p<.05000$.

Source: Own preparation based on GUS (2010–2021).



Table 6.
Results of ANOVA Kruskal–Wallis test and *post-hoc* analysis for groups of enterprises, sectors due to IAFI variable (assets financialization)

Dependent:		Kruskal–Wallis ANOVA rank; IAFI (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=111)=46.59348 p=.0000			
IAFI	Code	N important	Sum rang	Median range	
C	101	12	633.00	52.75	
D	102	12	884.00	73.67	
E	103	12	337.00	28.08	
F	104	12	851.00	70.92	
G	105	12	614.00	51.17	
H	106	12	373.00	31.08	
J	107	7	141.00	20.14	
L	108	12	1078.00	89.83	
M	109	10	684.00	68.40	
N	110	10	621.00	62.10	

Dependent:		Value p for multiple (bilateral) comparisons; IAFI (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=111)=46.59348 p=.0000								
IAFI	C	D	E	F	G	H	J	L	M	N
	R:52.750	R:73.667	R:28.083	R:70.917	R:51.167	R:31.083	R:20.143	R:89.833	R:68.400	R:62.100
C		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.2147	1.0000	1.0000
D	1.0000		0.0235	1.0000	1.0000	0.0537	0.0212	1.0000	1.0000	1.0000
E	1.0000	0.0235		0.0502	1.0000	1.0000	1.0000	0.0001	0.1548	0.6110
F	1.0000	1.0000	0.0502		1.0000	0.1095	0.0410	1.0000	1.0000	1.0000
G	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	0.1465	1.0000	1.0000
H	1.0000	0.0537	1.0000	0.1095	1.0000		1.0000	0.0004	0.3049	1.0000
J	1.0000	0.0212	1.0000	0.0410	1.0000	1.0000		0.0002	0.1056	0.3674
L	0.2147	1.0000	0.0001	1.0000	0.1465	0.0004	0.0002		1.0000	1.0000
M	1.0000	1.0000	0.1548	1.0000	1.0000	0.3049	0.1056	1.0000		1.0000
N	1.0000	1.0000	0.6110	1.0000	1.0000	1.0000	0.3674	1.0000	1.0000	

Source: Own preparation based on GUS (2010–2021).

**Table 7.**

Results of ANOVA Kruskal–Wallis test and *post-hoc* analysis for groups of enterprises, sectors due to IPFI variable (liabilities financialization)

Dependent: IPFI		Kruskal–Wallis ANOVA rank; IPFI (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=108)=42.01478 p=.0000				
	Code	N important	Sum Rang	Median Range		
C	101	12	582.00	48.50		
D	102	12	745.00	62.08		
E	103	11	436.00	39.64		
F	104	12	335.00	27.92		
G	105	12	550.00	45.83		
H	106	12	468.00	39.00		
J	107	7	540.00	77.14		
L	108	8	603.00	75.38		
M	109	11	579.00	52.64		
N	110	11	1048.00	95.27		

Dependent: IPFI		Value p for multiple (bilateral) comparisons; IPFI (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=108)=42.01478 p=.0000									
	C	D	E	F	G	H	J	L	M	N	
	R:48.500	R:62.083	R:39.636	R:27.917	R:45.833	R:39.000	R:77.143	R:75.375	R:52.636	R:95.273	
C		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0156	
D	1.0000		1.0000	0.3393	1.0000	1.0000	1.0000	1.0000	1.0000	0.5009	
E	1.0000	1.0000		1.0000	1.0000	1.0000	0.5966	0.6328	1.0000	0.0014	
F	1.0000	0.3393	1.0000		1.0000	1.0000	0.0428	0.0406	1.0000	0.0001	
G	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	1.0000	0.0070	
H	1.0000	1.0000	1.0000	1.0000	1.0000		0.4702	0.4926	1.0000	0.0008	
J	1.0000	1.0000	0.5966	0.0428	1.0000	0.4702		1.0000	1.0000	1.0000	
L	1.0000	1.0000	0.6328	0.0406	1.0000	0.4926	1.0000		1.0000	1.0000	
M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		0.0635	
N	0.0156	0.5009	0.0014	0.0001	0.0070	0.0008	1.0000	1.0000	0.0635		

Source: Own preparation based on GUS (2010–2021).



Table 8.
Results of ANOVA Kruskal–Wallis test and *post-hoc* analysis for groups of enterprises, sectors due to GO/OP variable (income financialization)

Dependent: GD/OP	Kruskal–Wallis ANOVA rank; GD/OP (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=119)=34.92896 p=.0001			
	Code	N important	Sum Rang	Median Range
C	101	12	796.00	66.33
D	102	12	709.00	59.08
E	103	12	895.00	74.58
F	104	12	851.00	70.92
G	105	12	701.00	58.42
H	106	11	583.00	53.00
J	107	12	307.50	25.63
L	108	12	1039.00	86.58
M	109	12	903.00	75.25
N	110	12	355.50	29.63

Dependent: GD/OP	Value p for multiple (bilateral) comparisons; GD/OP (Sheet1) independent variable (grouping): sector Kruskal–Wallis test: H (9, N=119)=34.92896 p=.0001									
	C	D	E	F	G	H	J	L	M	N
	R:66.333	R:59.083	R:74.583	R:70.917	R:58.417	R:53.00	R:25.625	R:86.583	R:75.250	R:29.625
C		1.0000	1.0000	1.0000	1.0000	1.0000	0.1730	1.0000	1.0000	0.4116
D	1.0000		1.0000	1.0000	1.0000	1.0000	0.7880	1.0000	1.0000	1.0000
E	1.0000	1.0000		1.0000	1.0000	1.0000	0.0229	1.0000	1.0000	0.0635
F	1.0000	1.0000	1.0000		1.0000	1.0000	0.0585	1.0000	1.0000	0.1516
G	1.0000	1.0000	1.0000	1.0000		1.0000	0.8950	1.0000	1.0000	1.0000
H	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	0.8860	1.0000	1.0000
J	0.1730	0.7880	0.0229	0.0585	0.8950	1.0000		0.0007	0.0191	1.0000
L	1.0000	1.0000	1.0000	1.0000	1.0000	0.8860	0.0007		1.0000	0.0024
M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0191	1.0000		0.0538
N	0.4116	1.0000	0.0635	0.1516	1.0000	1.0000	1.0000	0.0024	0.0538	

Source: Own preparation based on GUS (2010–2021).

Table 9.
Description of sectors (according to PKD classification)

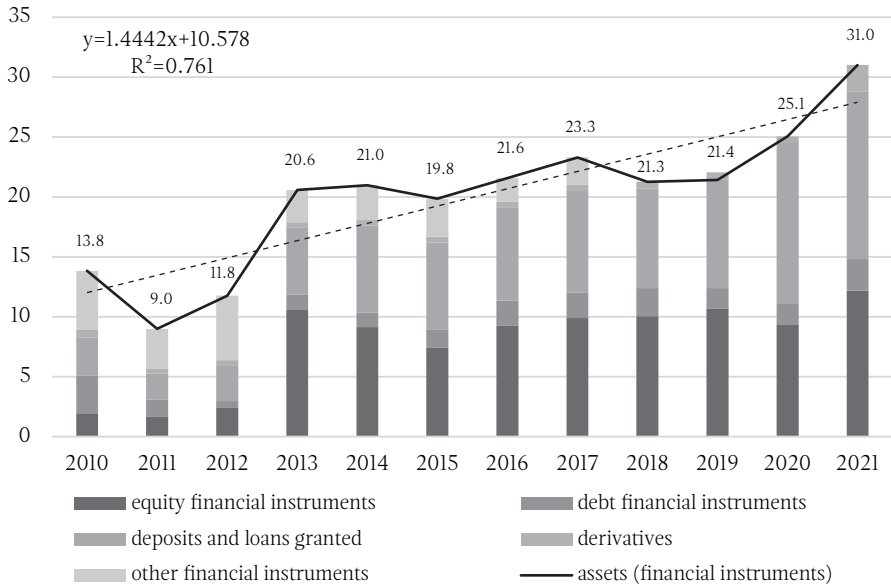
Code	Description
C	manufacturing
D	electricity, gas, steam, hot water and air conditioning production and supply
E	water supply; sewerage, waste management and remediation activities
F	construction
G	wholesale and retail trade; repair of motor vehicles and motorcycles
H	transport and storage
J	information and communication
L	real estate activities
M	professional, scientific and technical activities
N	administrative and support service activities

Source: Own preparation based on GUS (2010–2021).



Chart 1.

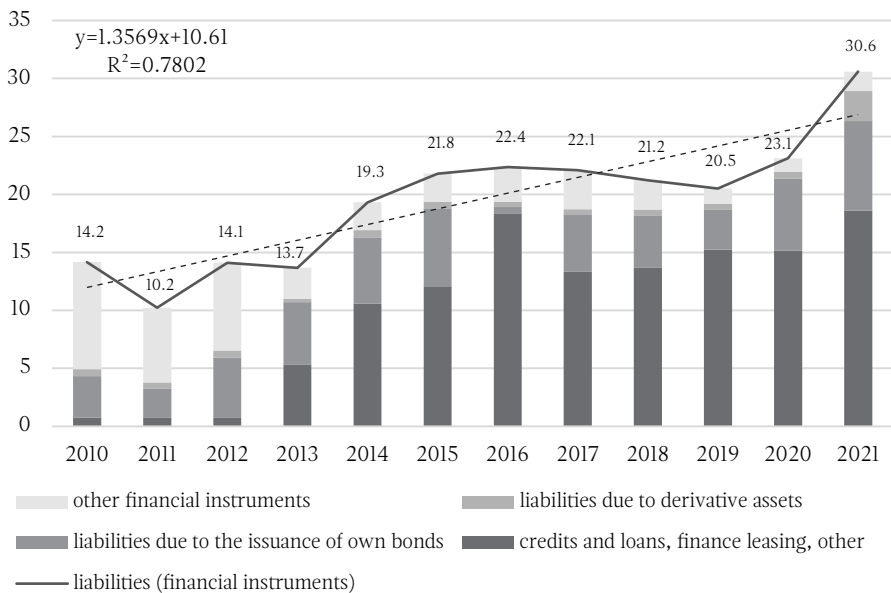
Indicators of financial assets (instruments) share in the company’s assets (IAFI) (%)



Source: Own preparation based on GUS (2010–2021).

Chart 2.

Indicator of financial passive (instruments) share in the total liabilities (IPFI) (%)

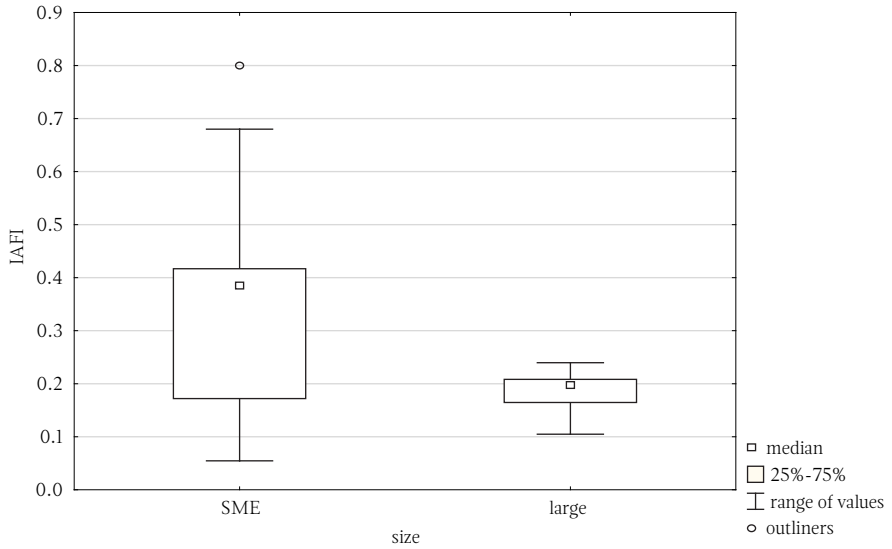


Source: Own preparation based on GUS (2010–2021).



Chart 3.

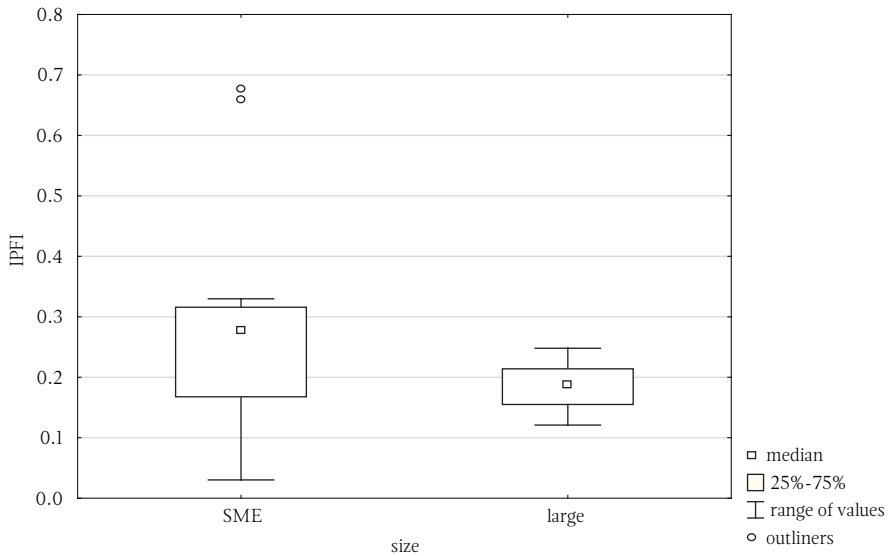
Box and whisker plot for comparisons of groups of large enterprises and SMEs based on IAFI indicator (asset financialization)



Source: Own preparation based on GUS (2010–2021).

Chart 4.

Box and whisker plot for comparisons of groups of large enterprises and SMEs based on IPFI indicator (liability financialization)

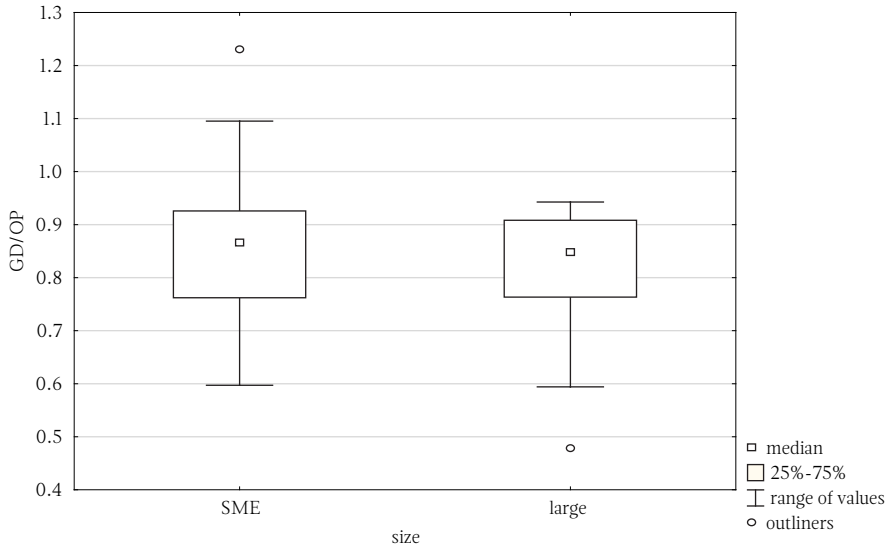


Source: Own preparation based on GUS (2010–2021).



Chart 5.

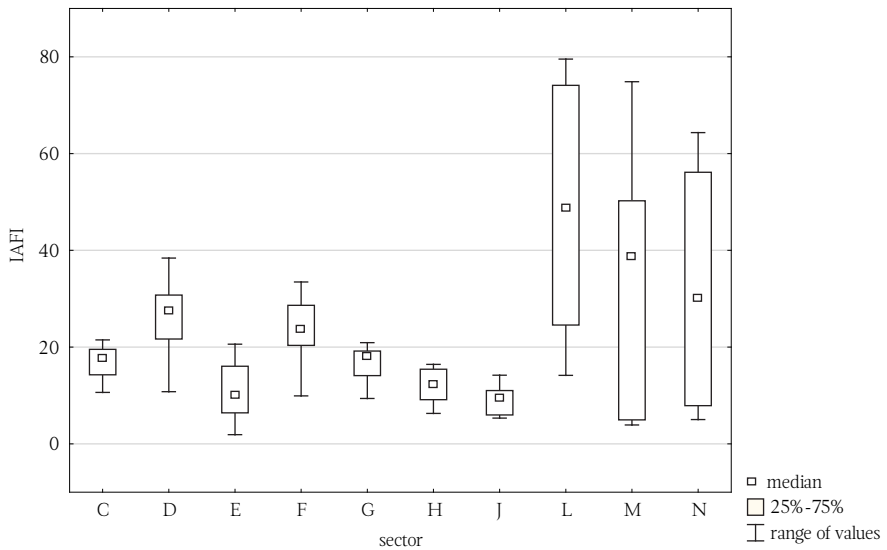
Box and whisker plot for comparisons of groups of large enterprises and SMEs based on GO/OP indicator (income financialization)



Source: Own preparation based on GUS (2010–2021).

Chart 6.

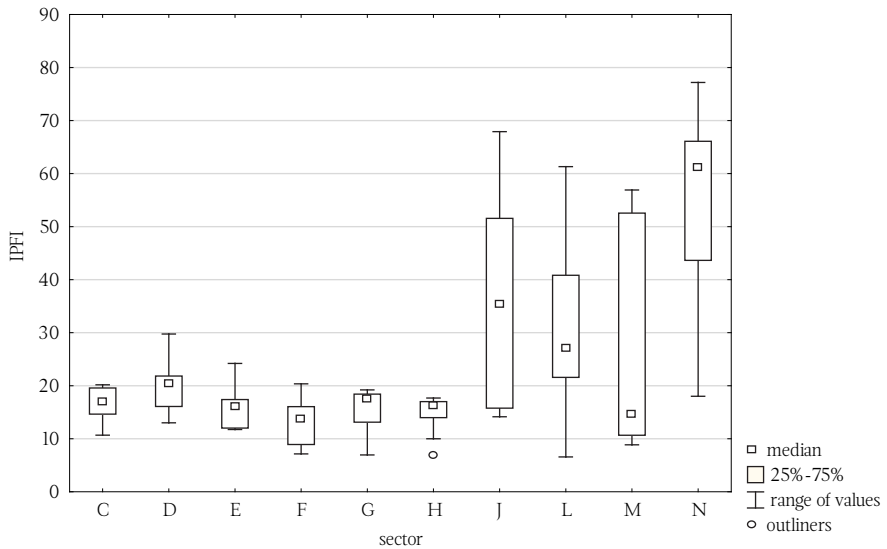
Box and whisker plot for groups enterprises sectors based on IAFI indicator (assets financialization)



Source: Own preparation based on GUS (2010–2021).

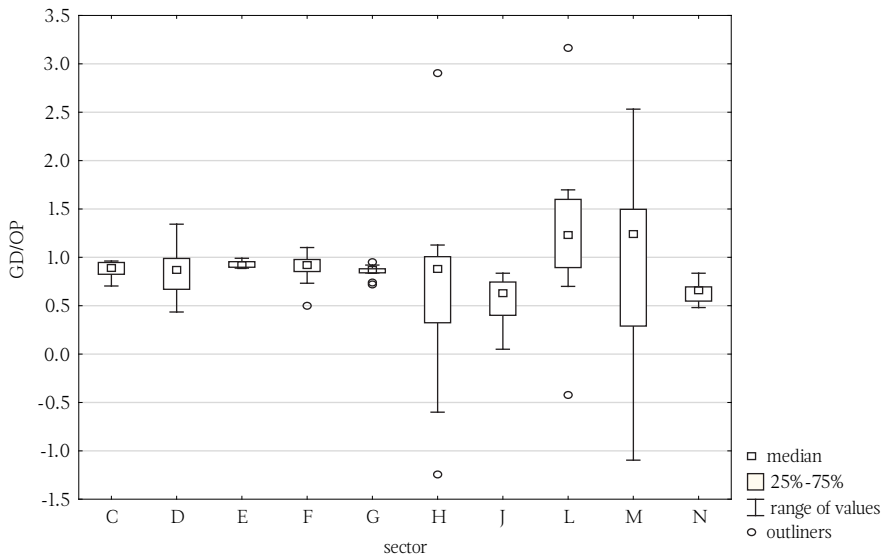


Chart 7.
Box and whisker plot for groups enterprises sectors based on IPFI indicator (liabilities financialization)



Source: Own preparation based on GUS (2010–2021).

Chart 8.
Box and whisker plot for groups enterprises sectors based on GO/OP indicator (income financialization)



Source: Own preparation based on GUS (2010–2021).

