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Stock market return and merger and acquisition activity in Poland

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Abstract

This article explores mergers and acquisitions trends in the Polish market in a period between 2019 and 2022, focusing on transactions exceeding one million dollars and their correlation with sector-specific stock market returns. The research reveals that the real estate sector, encompassing both development and property management, dominated M&A activity, comprising 25% of transactions in 2022. Significant positive correlations were observed between transaction volumes and average stock market returns, notably in sectors like real estate (R-Pearson = 0.75) and TMT (R-Pearson = 0.87). These findings indicate that sectors with higher returns attracted more M&A activity, reflecting investor confidence and strategic growth opportunities. Despite fluctuations in company valuations post-pandemic, the overall volume of M&A transactions continued to rise, driven by firms with strong cash reserves leveraging lower valuations for strategic expansions. The study anticipates sustained momentum in technology and real estate sectors, alongside emerging opportunities in energy and biotechnology, influenced by global trends and technological advancements. This research contributes valuable insights into the evolving landscape of M&A in Poland, highlighting sectoral attractiveness and strategic implications for investors and businesses.

Keywords

- rates of return
- stock market
- economic conditions
- mergers and acquisitions
- correlation

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Introduction

Processes of mergers and acquisitions (M&A) are increasingly playing a pivotal role in the Polish economy, becoming a key driver of market dynamics since 2019. The study focuses on sectors such as real estate, technology, and energy, which attract significant investor attention. The analysis demonstrates that these industries not only grow rapidly but also offer strategic opportunities for expansion and profitability. This confirms their attractiveness to companies seeking growth opportunities and access to new markets, resulting in an increase in both the number and value of M&A transactions conducted.

1. Literature review

1.1. The role of mergers and acquisitions in the economy

The development of the financial market has led to the increased popularity of consolidative processes related to mergers and acquisitions among enterprises. Before joining the European Union, Poland's economy, during its transformation, presented numerous barriers that hindered the influx of foreign investors into the country (Piasecka-Głuszak & Adamczyk, 2010, p. 278). Consolidation processes can be motivated by various factors. In recent years, the motives for consolidating Polish companies have evolved amidst a highly dynamic market as well as legal and geopolitical environment, focusing primarily on the strategic acquisition of resources from the acquired companies. These resources aim to provide flexibility in the face of significant events and crises, such as the pandemic and war.

From an economic perspective, mergers and acquisitions can be classified as:

- horizontal mergers or acquisitions: involve companies operating in the same economic sector,
- vertical mergers or acquisitions: involve companies that operate at different stages of the same value chain or in different, but complementary, sectors,
- other mergers or acquisitions (Maćkowiak, 2012, p. 120).

Analysing M&A transactions based on the adopted strategy criterion allows the identification of processes oriented towards:

- achieving economies of scale, primarily relevant to mature markets,
- streamlining, where the strategic assumption in such mergers is vertical integration; often occurs in industries such as the fuel sector,

- the concentration of resources and, consequently, increasing the value of the offering to the customer, thereby enhancing customer loyalty to the products and services of the acquiring company (Wnorowski, 2015, p. 14).

The primary drivers of mergers and acquisitions in the Polish market differ depending on the structure and objectives of the specific transaction. One universal factor in such processes is the acquisition of assets from the target company. Increasingly observed in the market are situations where the acquirer purchases only selected assets or a portion of the target company's assets, avoiding the assumption of the target company's liabilities. Consolidation processes are conducted with various benefits in mind for the companies involved. One of the main benefits is the ability to scale and grow the business, allowing the company to expand its market share and reach new customer segments. However, the analysis of the literature shows that the degree of profitability of M&A transactions is not always the same for both parties. Numerous market studies on the effects of mergers and acquisitions of public companies indicate a general trend where the greatest beneficiaries, in terms of value creation, are the acquired companies. Shareholders of these companies achieve higher additional returns compared to the shareholders of the acquiring companies (Perepeczo, 2011, p. 460).

Geographical expansion into new markets facilitates the adoption of new technologies, acquisition of talented employees from foreign markets and development of product portfolios, particularly crucial for companies providing IT solutions, such as software for production. Another motive for consolidating several companies is the optimisation of operating costs through the elimination of duplicated resources. Strategic motives include the pursuit of increasing added value and market share, as well as the elimination of unnecessary assets. Financial motives can involve the use of excess cash and an increase in stock value in the capital market (Maćkowiak, 2012, p. 121).

In the aftermath of mergers or acquisitions, merged companies often leverage economies of scale in purchasing, production and distribution. Diversification of the product portfolio is another key driver, helping companies reduce the risk associated with operating in specific markets. Furthermore, unfavourable economic events, such as pandemics or wars, typically foster intensified M&A activity, as entities with significant market share and high cash reserves invest in the assets of financially distressed companies. These issues align with the topics described in the literature related to the creation of synergy effects as a result of mergers and acquisitions. These factors can be divided into two groups: operational, such as increasing sales revenue, reducing operating costs and enhancing the growth dynamics of the company, and financial, such as tax benefits, the utilisation of excess cash and reducing the cost of capital (Maćkowiak, 2012, p. 128). This trend has been observed in the Polish market in recent years.

Companies often strive to achieve synergy by integrating different types of activities into a single economic entity or in the form of a capital group. This is because the combined enterprise can gain access to resources and capabilities that it would not have had before merging or forming a new company (through a merger), such as a knowledge base, patents or licenses (Łojek & Toborek-Mazur, 2022, p. 61). The synergy effect means that companies that are capital integrated or organisationally integrated can generate greater value than separate economic entities. This value, which arises from the merger of companies, represents a real increase in wealth for shareholders (Maćkowiak, 2012, p. 126).

If a merger or acquisition is executed efficiently and effectively, it can bring value to the shareholders of both the acquiring and target companies in the form of increased stock prices, dividends expanded market share and investor interest. This strengthens the market competitiveness of the acquiring company, which gains new assets for future economic benefits. Acquiring a competitive company can reinforce and increase market position, making it easier to acquire new customer segments and expand into foreign markets. In the analysis of M&A transaction motives, it is important not to overlook strictly financial factors, such as the utilisation of internal surpluses or the reduction of capital costs. Every company aims to maximise profits while minimising the use of its own capital. This objective allows for the establishment of financial and technical foundations that are essential for the company's further development, especially in highly competitive markets or in unstable economic conditions (Łojek & Toborek-Mazur, 2022, p. 62).

In addition to the mentioned motivators of M&A processes, other factors include:

- convergence of technologically advanced industries,
- low technological capabilities and the need for improvement,
- adoption of a multinational or transnational strategy,
- supply of local companies, e.g. as part of privatisation programs,
- strengthening market position,
- interests in culturally and psychologically distant countries (Piasecka-Głuszak & Adamczyk, 2010, p. 278).

The creation of value for the target company's shareholders can also occur when a bank is involved in the transaction. The benefits or losses for the acquiring party are also ambiguous in the case of banks, which also applies to the outcomes of the transaction (Perepeczo, 2011, p. 460). Mergers and acquisitions also create strict financial potential related to the consolidation of capital and, consequently, gain new sources of financing needed for the development and implementation of new investment and research projects.

While enumerating the benefits of mergers and acquisitions, it is essential to acknowledge that these processes entail risks and do not always yield expected results. Therefore, it is crucial to conduct thorough preparation and analysis before commencing a transaction, as well as careful management of integration and resource consolidation after its completion. Contemporary mergers and acquisitions are more strategic than ever, with the potential for development being a decisive factor in the acquisition of a company, mainly derived from accumulated knowledge (Wnorowski, 2015, p. 17). Consolidation often involves industries in a growth phase, making it significant to examine rates of return from a specific market along with the number of mergers and acquisitions in the industry.

1.2. Current trends in the mergers and acquisitions market in Poland

According to reports prepared by Navigator Capital Group and Fordata, as well as a report by Grant Thornton (2023), the Polish market witnessed 341 disclosed-price M&A transactions in 2022, representing an increase of 18% compared to the previous year and surpassing the 300 transactions barrier for the first time since 2010. This record-high number of M&A transactions in 2022 indicates that challenges and unexpected situations in the market, such as the COVID-19 pandemic and the war in Ukraine, do not discourage investors from acquiring stakes in Polish companies. On the contrary, they seem to favour consolidation across different sectors of the economy.

Notably, nearly three-quarters of transactions in recent years in the Polish market have involved industry investors, with the primary goal of achieving synergy effects and the long-term development of the acquired companies. Financial investors accounted for the remaining 20% of transactions. The average EBITDA of the target companies in M&A transactions in Poland in 2022 was PLN 10 million, with revenues at the level of PLN 90 million, confirming that small and medium-sized enterprises have been the most attractive targets for consolidation processes in the Polish market.

A noteworthy observation is the decrease in the average valuations of companies undergoing M&A processes in 2022 compared to the previous year. This trend is likely influenced by the situation on the Polish stock exchange and the consequences of the financial crisis, which may contribute to the decline in the value of assets of acquired companies. The popularity of flexible mechanisms for determining transaction prices, such as splitting the price into tranches and settling part of the price based on the future financial performance of the company, is directly linked to the decrease in average valuations.

Similarly, there is a growing emphasis on the responsibility of sellers for the compliance of business assumptions with applicable law (compliance) and social good (ESG). Investors pay particular attention to issues related to sanctions, anti-money laundering (AML) and environmental protection. In response to lessons learned from the early months of the pandemic, investors are now incorporating force majeure and material adverse change clauses into M&A transactions, ensuring flexibility in their commitments to close transactions in the event of unforeseen market events with a significant impact on their operations.

According to the M&A Index Poland report by Navigator Capital Group and Fordata (Navigator Capital Group & Fordata, 2023), global private capital reached nearly 2 trillion dollars in 2022, and it is estimated that with the end of the decade, the so-called “dry powder”, i.e. unallocated capital on the market, will constitute over 25% of the assets of private equity and venture capital funds. In 2022, there were 13 acquisitions in the Polish market involving private equity funds, representing an increase of 5 compared to the same period in 2021. Industries such as telecommunications, media, technology (TMT), real estate, as well as the energy sector were particularly attractive for such transactions.

Despite the challenging market environment, the increasing number of M&A transactions indicates positive perception of the Polish market by foreign investors, unaffected even by the ongoing armed conflict on the eastern border of the country. This is attributed to the faster development of Central and Eastern European countries compared to parts of Western Europe and the more attractive valuations of investment targets in these regions. Analysing the structure of investors in the Polish M&A market, private investors dominated among sellers, accounting for two-thirds of announced transactions, while the share of private equity and venture capital funds among buyers remained similar to the previous year, standing at 11%.

A study conducted by Grzegorz Bącal and Jarosław Bem revealed that in 2012, the largest share of all disclosed transactions (14.2%) involved the manufacturing sector, followed by the finance and insurance sectors, contributing to 10% of all transactions, and the TMT sector, which accounted for 8.8% (Bącal & Bem, 2014). Taking into account the current M&A market structure in Poland, it can be inferred that the trends observed in the early part of the last decade have been maintained, leading to increased investment attractiveness in the M&A market for companies in modern sectors of the economy.

Grant Thornton analysts, in their report covering the years 2017–2022, found that over 75% of all transactions in the M&A market concerned traditional industries, providing basic societal needs related to food production, cleanliness products, household goods, as well as infrastructure and industry (Grant Thornton, 2023). Investors still aim to acquire entities in traditional markets, where typically large and mature companies operate, providing synergies and expanding strategic options. The attractiveness of the Polish market increases further as production and labour costs in Poland remain lower than in Western European countries. However, the share of transactions in the TMT sector has been growing year by year. In 2017, there were 26 transactions in this sector, increasing to 54 in 2021 and further to 73 in 2022. Simultaneously, the consumer products sector saw the fewest transactions in 2022 since 2010. Similarly, the energy sector, including photovoltaic farms and wind energy, has gained increasing interest over the years, with transaction volume growing from 8 to 51 between 2017 and 2022.

In a report by Kochański & Partners focusing on the M&A market structure in the first half of 2019, 17 out of 62 transactions involved real estate and property development, making it the largest industry in the study, accounting for over 27% of all transactions (Kochański & Partners, 2019). Over 11% of deals were signed between entities in the IT sector providing e-commerce services and software production, and nearly 10% of transactions occurred in the medical and biotechnological industries. These findings align with trends from other reports and studies, emphasising the investment attractiveness of the IT and medical sectors.

The existing research on the transaction structure is also complemented by a report published by the consulting company KPMG, which shows that in 2022 there were over 340 M&A transactions (KPMG, 2023). There could have been even more such transactions, but naturally, some of them were not finalised, and the main reason for departing from the considered transaction was the seller's overly high expectations. However, the main investment motive for strategic investors is to acquire client portfolios, distribution channels as well as product/service portfolios. Among the other most frequently cited motives for merger and acquisition transactions by investors are cost synergies (28% strategic investors and 14% financial investors), business diversification (28%) and geographic expansion (28%). Also noteworthy is the fact that in the group of strategic investors, 16% of transactions amounted to sums exceeding PLN 500 million, and 24% up to PLN 100 million, while among financial investors, the largest group (43%) comprised investments worth less than PLN 100 million. The report also presents a group of economic sectors that are most attractive to investors in the mergers and acquisitions market. Among them, 47% of investors point to companies related to new technologies, 32% to healthcare, 32% to the e-commerce sector and IT companies, and 30% of investors are interested in renewable energy. According to the authors of the report in question, the value of the Polish capital transactions market in 2022 amounted to PLN 74.9 billion, and the annual value of private equity investments in Poland reached PLN 2.1 billion in 2022, which is 30% less than in 2021.

Similar research has also been conducted in foreign centres and published in their literature. Many authors have drawn interesting conclusions from their studies. Heater et al. (2021) confirmed the role of aggregated M&A activity in predicting future returns, in line with price reaction to improved macroeconomic outcomes resulting from such activity. Choi et al. (2020) examined the dynamics of M&A activity and sectoral efficiency. They confirmed a positive relationship between these variables, with M&A activity playing a key role in identifying industries with high potential. This study also focused on the correlation between M&A activity and financial performance at the industry level. Kellner (2024) examined the European mergers and acquisitions market from 2010 to 2021 in the context of reflecting the effects of these transactions on the stock prices of acquiring and acquired companies. The results of his study indicate a strong positive increase in the stock prices of target companies, but a minor reaction from the acquirer. Bos et al. (2018) analysed the oil stock market by examining the predictive ability of mergers and acquisitions (M&A) in relation to returns and volatility of oil. The authors indicate that M&A activity conducted by oil companies carries significant predictive power both in terms of oil profits and their volatility. Grigorieva (2020) focused her research on analysing M&A transactions in developed and emerging capital markets in the context of increasing efficiency. The results of the author's research indicate that in developed capital markets, shareholders of acquiring companies usually achieve slight profits in the short term, while in emerging economies, shareholders of these companies mainly benefit from merger and acquisition transactions.

When comparing the main motivators of mergers and acquisitions in the analysed period and in the earlier period, from the beginning of the 21st century, based on the cited literature, a fundamental difference between these factors on the Polish market should be indicated. In the first two decades of the current century, the aim of M&A processes was mainly to acquire a broader infrastructure and resource base in natural or human terms, as well as to combine capital to increase investment capabilities. In the current period, when most companies undergoing M&A processes are in a mature phase of their operations, the motivations for these transactions are based on reducing the cost of capital, acquiring new sources of funding and opening up to new markets to diversify operations.

2. Methodology

The subject of the study conducted in this article is transactions on the Polish M&A market in the years 2019–2022 with a disclosed value exceeding 1 million dollars. Such a criterion allowed for the analysis of transactions in a representative sample involving companies with a significant position in their industry and high asset value. In 2019, there were 95 transactions; in 2020, there were 77; in the following year, 72 transactions with a value exceeding one million dollars were recorded, and in 2022, there were 55 agreements in the examined sample. The study focused on the industry structure of these transactions and data on the profile of activities of the acquired companies, and the transaction volume based on the specified criterion was obtained from the EMIS DealWatch database. This information was compared with the rates of return on stock investments in companies from the respective sectors, which were obtained from the industry database on the Biznes Radar platform. To present the correlation between the volume of M&A transactions and the rates of return from a given sector, the Pearson correlation coefficient was calculated, based on which the statistical significance and strength of this correlation were determined.

3. Results and discussion

3.1. The industries structure of mergers and acquisitions transactions in Poland in the years 2019–2022

The first stage of the study, addressed in this article, involves identifying the main sectors with the highest number of mergers and acquisitions in the years 2019–2022 in the Polish market, as well as analysing the dynamics of changes between individual industries during this period. The analysed period encompassed numerous unforeseen yet impactful events on inflation levels and the situation of Polish entrepreneurs, including the COVID-19 pandemic and the outbreak of the war in Ukraine. For each year within the specified timeframe, M&A transactions that took place in the Polish market and had a value exceeding 1 million dollars were selected from the EMIS DealWatch database. The results of these studies, broken down by economic sectors and the number of transactions, are presented in Table 1.

Table 1. Volume of M&A transactions with value exceeding 1 million dollars in Poland in 2019–2022

Industry	2019	2020	2021	2022
Medical	0	2	0	0
Industrial	5	12	4	5
Food	2	0	3	0
TMT	8	14	13	5
Energy	5	6	11	5
Financial	3	9	7	1
Construction	19	6	6	15
Logistics	0	1	1	0
Real estate rental	24	8	12	10
Others	29	19	15	14
Total	**95**	**77**	**72**	**55**

Source: own study.

The first observation that can be made is the total number of all transactions each year above one million dollars – it decreases each year, which may be a result of investors' concern and increased caution in the M&A market in Poland due to the pandemic and the outbreak of war on our eastern border. In 2019, this market condition favoured M&A transactions because the valuations of individual company stocks and industry indexes were rising, giving investors hope for further growth. Their enthusiasm was interrupted by the COVID-19 pandemic, which led to a decline in the value of company stocks and indexes, as well as reduced availability of capital that companies could allocate to further investments in assets of other entities. As a consequence, in 2022, there was a decrease of over 40% in the number of transactions compared to 2019.

From the analysis of the data in Table 1, it is evident that the most popular industries for investors in the context of M&A transactions are those related to real estate leasing, construction and broadly defined TMT services. In recent years, the real estate market has seen a steady increase in the value of properties and rental rates, convincing investors to acquire stocks of companies offering protection of capital against high inflation and a steady return in the form of dividends. Difficulties in the housing market related to the shortage of properties for potential buyers and various government programs primarily targeting young people looking to buy their first home have created an attractive time window for developers expecting high returns from their construction projects mainly related to building new residential blocks. Companies offering IT services, software production and IT infrastructure systems which automate business operation have also been frequent subjects of M&A transactions. This is not surprising because the IT industry is an attractive place for investors expecting a high level and regularity of cash flows from investments in a particular company. Moreover, this sec-

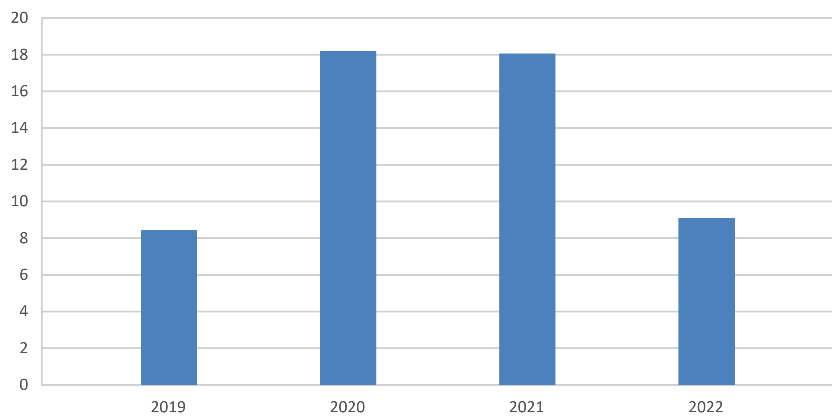

Figure 1. Share of the TMT sector in the total number of analysed transactions (in %)

Source: own study.

tor is in constant development and has a high potential for further growth due to the popularisation of IT services and the use of software for companies in various industries. The share of this sector in the total transactions in each year is presented in Figure 1.

As may be seen in Figure 1, the highest number of entities undergoing consolidation processes occurred in the year 2020, where 18% of transactions involved the acquisition of shares or taking control of companies providing IT services, software and telecommunications.

The next position in terms of the transaction volume was industrial production, including industrial processing, production of plastics and steel, furniture and window joinery, as well as household goods. With the increasing number of apartments on the market and newly constructed houses, industrial products necessary in the construction process and interior finishing exhibit high market demand. In the valuation reality of industrial companies, which are below the average in recent years, entities with a significant market share and high cash reserves invest in the assets of smaller companies showing considerable potential for further growth.

The energy sector is also noteworthy in the analysis of the main industries undergoing consolidation processes in the Polish market in 2022. This is particularly important from the perspective of investors expecting high returns on investments in a given company. Polish entities implementing projects in the field of renewable energy sources (RES), energy infrastructure, installation of photovoltaic panels and heat pumps, as well as in the field of hydropower, are an attractive target for consolidation processes, confirming the findings of the conducted study. Figure 2 shows the share of transactions in the energy industry analysed in the years 2019–2022.

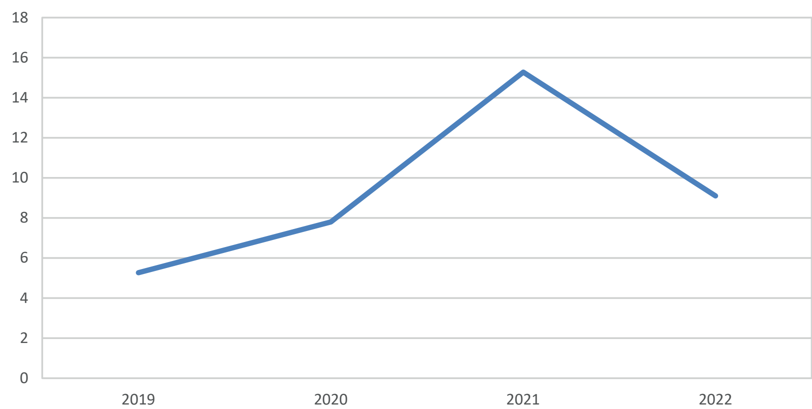

Figure 2. Share of transactions in the energy sector in the entire sample in 2019–2022 (in %)

Source: own study.

The largest share of transactions in the energy sector was recorded in 2021, when it reached 15%. In the following two years, this share decreased. However, due to strong emphasis by state and private institutions on the use of renewable energy sources, energy independence and gradual reduction in the use of fossil fuels for energy production, the number of transactions in the renewable energy sector and entities developing energy infrastructure should continue to grow steadily in the coming years, catching up with the level of consolidation in the TMT and real estate sectors.

Another noteworthy sector is the one related to medical services, innovations and biotechnology, where only 2 transactions exceeding one million dollars were recorded in 2020. This situation is surprising, taking into account market trends which see growth factors for medical and biotechnology companies in global indices in the coming years. One reason for this may be that this industry usually consists of start-up entities, whose value does not always exceed one million dollars for consolidation purposes. Additionally, the Polish biotechnological sector is not among the strongest, and the medical companies in Poland are not highly competitive globally at the moment, which may also impact the lower intensity of M&A processes in this sector. Similar to the TMT industry, the share of mergers and acquisitions in medical companies in the overall transaction volume should increase in the coming years due to global trends, which largely focus on health protection services, medical infrastructure, software and IT systems supporting the operation of healthcare facilities.

The category labelled as “Others” in this study mainly includes transactions in the automotive, fitness, financial intermediation and insurance industries. Figure 3 depicts the structure of the Polish M&A market in 2022, the last year of analysis, already in the post-pandemic period and after the outbreak of the war in Ukraine.

The analysis of the above chart reveals that transactions in the construction sector constituted 25% of the total in 2022, meaning that every fourth recorded transaction involved a merger or acquisition of shares between developers undertaking residential and independent block construction projects. Consolidations of companies managing packages of residential or commercial properties accounted for 18% of the transactions. The sectors described above, which ranked in terms of transaction frequency, including industrial production, TMT and the energy industry, each represented 9% of the total analysed transactions.

According to the presented analysis, potential investors seeking to acquire assets in other companies in Poland are focusing on industries benefiting from a good real estate market, such as residential housing developments, single-family homes and office buildings. Additionally, companies involved in renting these properties to individual and institutional clients are experiencing rapid growth. Software development companies, encompassing telecommunication services, new technologies and a variety of IT services, including software production and

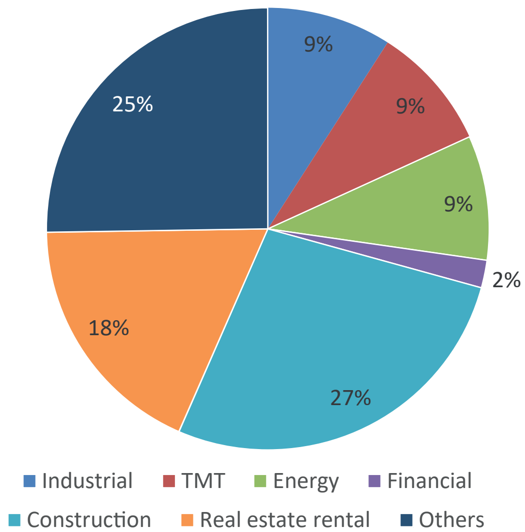

Figure 3. Industry structure of the Polish M&A market in 2022

Source: own study.

artificial intelligence, are also rapidly expanding and becoming primary targets for consolidation processes in the Polish and global markets.

Analysing the results of the study, one notable aspect is the high participation of transactions in sectors of the traditional economy, including industrial production and services. Poland is still a developing market, and the dynamics depend on economic conditions. Therefore, manufacturing companies related to the steel industry, production of plastic elements, windows and roofing still demonstrate high growth potential in the long term, attracting investors acquiring stakes in consolidation processes.

Analysts predict that in the coming years, transactions in traditional economy sectors will gradually decrease in favour of knowledge-based economy sectors such as TMT. The sector related to medicine and biotechnology may gain importance in terms of transaction volume due to global trends, Poland's demographic situation, an ageing population and advancements in clinical and laboratory research.

In conclusion, the findings from the research align with qualitative information regarding the attractiveness of sectors based on trends from reports and articles addressing investment potential in these industries. To determine whether the number of merger and acquisition transactions is indeed correlated with the investment attractiveness of a sector, an analysis of the correlation between the number of transactions and stock market returns in a given sector was conducted.

3.2. Correlation of M&A transaction volume in a given sector with stock market return rates

The chart below illustrates the total transaction volume during the analysis period in a given sector and the average rate of return from the stock index of a given sector between 2019 and 2022. This data was used to calculate the Pearson correlation coefficient for each analysed industry.

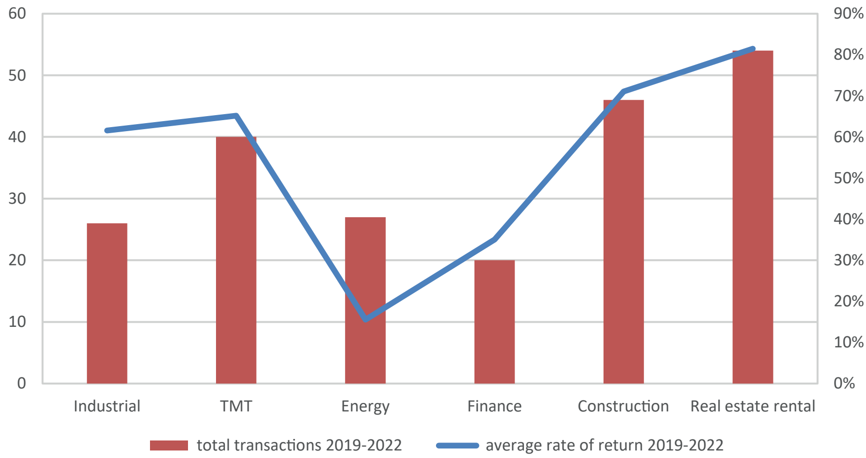

Figure 4. Total transactions and average rate of return of the given industry index in 2019–2022

Source: own study.

As we can see in Figure 4, the highest average rate of return during the study period were recorded for companies involved in real estate rental and construction. Additionally, these companies experienced the highest number of M&A transactions. Based on the graphical analysis of the chart's layout, it can be concluded that there is a positive correlation between the indicated variables. The exact value of this correlation was determined in the subsequent stage of the study.

Table 2 presents the Pearson correlation coefficient (R-Pearson) between the number of M&A transactions in the Polish market during the study period and the rates of return from the index of a given sector.

In each subsequent year of the analysis, which was the subject of the study, the companies most frequently involved in M&A processes represented the real estate sector, with particular emphasis on development companies and companies managing rental properties. A strong correlation has been observed between the attractiveness of this industry for investors and the level of rates of return from

Table 2. Correlation coefficient between transaction volume and rates of return from the index of a given sector in 2019–2022 on the Polish market

Industry	R-Pearson
Broad market	0.89**
Industrial	0.62**
TMT	0.87**
Energy	0.16**
Finance	0.77**
Construction	0.84**
Real estate rental	0.75**

** p-value < 0.05.

Source: own study.

this index – in 2022, the average rate of return from the index of development companies was 29.9%, and for companies renting real estate – 31%; outside the TMT sector, it was the highest level of rates of return from industry indexes analysed in this study in 2022. When interpreting the data in Table 2 above, what is noteworthy is the high value of the correlation coefficient between the volume of all transactions above 1 million dollars and the rate of return from the entire market index; it indicates a strong interdependence between these two variables from the perspective of the overall market, without dividing into individual sectors. M&A market activity and its intensity are a direct consequence of companies' ability to generate high and regular cash flows and increase their value; hence, such a high level of this dependency indicates rates of return from the shares of these companies as one of the main factors that investors pay attention to when assessing the profitability of M&A processes. Similarly, a high level of the studied correlation coefficient, indicating a significant and strong dependency, was also noted for the TMT and construction sectors. It is de facto a confirmation of the observation of market analysts who, due to the increasingly wider application of artificial intelligence and implemented housing programs, see companies from these two sectors of the economy as attractive investment entities with high potential for further growth in value. Throughout the study period, the industrial sector, i.e. the branch of the traditional economy, whose index also showed steady returns, presented a high share in the total number of transactions – in 2021, it was even 38%. The exception to the rule described above is the energy sector; in 2021, there were 11 transactions involving companies from this industry, the most in the analysed period, and in 2020, there were 6 such transactions, even though the rate of return on the index was negative in both years (–20.1% and –12.8%, respectively). In 2022, however, despite the average rate of return on this index above 6%, influenced by the widespread use of heat pumps along with photovoltaic panels, as a step towards increasing energy independence and moving away from the use of fossil fuels, there was no increase in the number of transactions; on the contrary, there was a decrease of over 100% (from 11 in 2021 to 5 in 2022). This inversely proportional regularity in transactions and rates of return of the energy companies index is confirmed by the relatively low level of the Pearson correlation coefficient compared to other analysed industries, which indicates a low level of dependency between the two analysed features in the conducted correlation analysis.

The analysis of the above dependencies, which they represent, confirms, in principle, a directly proportional relationship between rates of return from a given sector and the volume of M&A transactions in those industries, and the thesis that the most attractive entities in the M&A market are companies whose share value is increasing, contributing to higher rates of return from the index of a given sector. The analysis of the Pearson correlation between the rates of return on the industry index and the number of M&A transactions in a given industry was 0.70, indicating a significant relationship of moderate strength between the phenomena described in this subsection.

Conclusion

In the Polish mergers and acquisitions market, records in the volume of completed and disclosed transactions, both in terms of quantity and value, are broken year by year. Even though in 2022 valuations of acquired companies fell below the average of the previous years, the increasing number of transactions indicates a good financial condition of Polish companies, both on the acquirer's side, which has high cash reserves to purchase assets of other companies, and on the target side, where businesses have developed enough to be attractive to larger entities in their sector. The high cash reserves, often used to acquire stakes in other companies, may result from financial shields received in high value by large companies during the COVID-19 pandemic and surpluses retained in companies in the years 2016–2019, when the Polish market experienced a good economic boom and many companies significantly improved their financial results. These factors contribute to the post-pandemic years when company valuations are lower; larger entities can acquire smaller players in their industries, counting on economic recovery and the continued ability of these companies to generate high profits and cash flows. Many industry leaders, such as Orlen acquiring Lotos, engage in consolidation processes to achieve synergy and scalability in their business and gain new customer segments. The structure of M&A transactions in the Polish market from 2019 to 2022 aligns with global trends, with a particular focus on companies in the field of new technologies, IT services and those leveraging artificial intelligence. Real estate management companies are also emphasised, benefiting from favourable market conditions. Based on the analysis presented in this article and observations of the development trends in the Polish market, further growth in the significance of the mentioned sectors in terms of investment attractiveness is anticipated. Additionally, the author foresees significant consolidation potential for energy companies, those involved in defence and military equipment, as well as companies providing services based on artificial intelligence, which have the opportunity to revolutionise the Polish and global markets similarly to the impact of the Internet.

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