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Editorial Words

Dear esteemed readers,

It is my great pleasure to welcome you to the latest edition of ASEJ, the academic journal that brings you the latest research in the fields of law, economics, logistics, finance, psychology, criminology, computer science, and security. This issue features a diverse range of articles from leading experts in these fields, showcasing their latest research and insights into current trends and challenges.

As we continue to face unprecedented challenges and rapidly evolving technological advancements, it is more important than ever to stay up-to-date with the latest research and trends in these fields. This issue of ASEJ offers valuable insights and perspectives that are essential for anyone seeking to stay at the forefront of their respective disciplines.

We would like to take this opportunity to express our sincere gratitude to the authors for their hard work and contributions to the advancement of knowledge. We would also like to acknowledge the invaluable support of the Bielsko-Biala School of Finance and Law for their continued commitment to publishing this journal, which serves as a platform for the exchange of the latest knowledge and insights.

Virtual reality (VR) technology has been advancing at a rapid pace, and with its growth come a range of challenges in various fields, including economics, law, security, and computer science. In the realm of economics, one challenge is determining how to integrate VR technology into existing business models. VR has the potential to revolutionize the way companies conduct business, but it also requires significant investment and infrastructure to do so. Additionally, there are concerns about how VR will impact the job market, as it could potentially eliminate the need for certain types of jobs while creating new ones in the VR industry.

In this issue, we also explore the growing significance of virtual reality in law, economics, finance, and security. As VR technology continues to evolve, it presents both opportunities and challenges in these fields. For example, in economics, VR has the potential to revolutionize the way businesses operate, but it also requires significant investment and infrastructure. In law, the use of VR raises important questions around data protection, privacy, and intellectual property rights. In finance, VR can be used to enhance customer experiences and provide new insights into investment opportunities. In security, VR presents new risks and challenges, such as ensuring the safety of users and protecting sensitive data from cyber threats.

We hope that this issue of ASEJ will prove insightful and informative for our readers, and we look forward to your feedback and contributions in future editions.

Sincerely,

Dr Muhammad Jammal
Editor of the ASEJ, Issue 4, Volume 26, 2022

Mergers and acquisitions on the example of the PKN Orlen in 2022

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Abstract— The acquisition of Lotos and PGNiG by PKN Orlen was one of the most complicated and politically controversial transaction on the Polish capital market. It was also one of the most important events on the M&A market in Poland. The idea of building a multi-energy company capable of resisting the Russian energy dictate, additionally intensified by the conflict in Ukraine, seems to be justified. However, it should not be a result of political reasons, but also a result of a responsible development strategy. Mergers and acquisitions as mechanisms of long-term management allow for the development of enterprises when other mechanisms are not optimal, and the strategy itself is implemented within the framework of long-term perspectives.

Keywords— mergers and acquisitions, energy, PKN Orlen, transactions, literature review.

I. INTRODUCTION

Nowadays, the increasing risk of running a business forces enterprises to take decisive management actions focused on strategic management and external development. External growth is based on cooperation with other enterprises and takes various forms. Mergers and acquisitions are forms of external development that aim to increase the company's importance on the market by increasing its profits. This type of development is an alternative to internal growth, which is aimed at developing and increasing the company's potential through investments (Smith, Reed Lajoux, 2012, p. 9). Most often they include tangible investments, creation of new production or service capacities. One of the most significant for the development of enterprises is the merger process. Its basic assumption is that in order for the acquisition of a given enterprise to make economic sense, it must lead to an increase

in the market value of the newly established entity.

The paper aims is to attempt to answer the questions: do the merger processes within the framework lead to the intended effects and promote the development of the entities? Is one of the premise of these actions to ensure energy security? The author adopts the thesis that the basic goal, which is also the result of entities is capital concentration.

As part of the considerations, the author reviewed the literature on mergers and acquisitions. Therefore, the author proposed the following research questions:

Q1. What type of motives stimulate entities to concentrate through M&A?

Q2. How have M&A deals affected the energy market in recent years?

Q3. Have the M&A deals in the PKN Orlen Group made economic sense?

Q4. What are the positive and negative effects of M&A carried out by the PKN Orlen?

II. LITERATURE OF MERGER AND ACQUISITIONS

A development strategy should be a result of decision-making process of each company because it depends on the specific situation for future development. In order to achieve appropriate economic effect, the process of mergers and acquisitions must be properly thought out and carefully planned. From a short-term perspective, the merger lead to an immediate increase in the buyer's potential, but from a long-term perspective, the implementation of joint activities may bring additional benefits as well as threats that should be, at least partially, identified in advance. As already mentioned, mergers and acquisitions are the result of external growth



(Toborek-Mazur, Partacz, 2022a). A merger is a process that involves the establishment of a new company in place of existing entities. This is done by transferring the assets of the merging enterprises in exchange for shares in the newly established entity. The entire transaction usually takes place after prior agreement on the terms and form of the merger process. As a result, the merging entities lose their legal personality in favor of the new entity, which results in the deletion of the companies from the National Court Register.

By analyzing merger and acquisitions processes, it can be observed that the companies that carry out them often specialize in the same or a similar market field, and the size of their activities is very similar to each other (Toborek-Mazur, Partacz, Surówka, 2022).

Acquisitions are most often defined as a buyout and transfer of control by the acquirer to the acquiree. Thus, there are two entities between which there is a special transactional relationship. Acquisitions make it possible to expand the scope of the entity's operations not only in terms of territory, but also to provide new products and services. Most often, the acquiring company is a larger entity than the acquired one. One of the special features of a takeover is that the acquired entity retains its legal personality. On the other hand, the acquisition itself may take place as a result of, for example, the purchase of shares, privatization, lease, joint project of companies, purchase of liabilities, redemption of capital by a partner withdrawing from the company or participation in increased equity. A takeover can take place both in the case of the takeover of the entire enterprise, as well as its organized part or even selected assets. It is worth mentioning that also reverse takeovers occur in business practice (Świetla, Toborek-Mazur, 2020).

According to IFRS 3 (Annex B par. 19), a reverse acquisition takes place when the entity that issues the securities (from the legal point of view the acquirer) is identified as the acquiree (for accounting purposes). Conversely, the entity whose equity interests are acquired (legally the acquiree) is the acquirer for accounting purposes. It is worth emphasizing that the acquiree must meet the requirements of the project for accounting purposes (Świetla, Toborek-Mazur, 2020).

It is assumed that companies through M&A can choose between two alternatives: a friendly or hostile takeover (Frąckowiak, 2009, p. 37). The first of them are those that the management of the entity agrees to and it has voluntary character. It is a manifestation of the goodwill of all its participants and results from the strategy adopted by the parties. Hostile acquisition, referred to as predatory acquisition, consist primarily in the fact that the acquirer makes a takeover in a situation where the management board and shareholders of the acquiree are against it. This is an involuntary event and is characterized by the fact that the target company uses various defensive tactics that would lead to the acquirer abandoning its intentions. It is worth noting, however, that takeovers that initially qualified as hostile takeovers have a chance to turn into friendly takeovers when the management board approves them (Korpus, 2014, p. 35). Table 1 presents a summary of the most important types of mergers along with their brief descriptions.

TABLE 1. TYPES OF M&A

Type of M&A	Description
Concentric merger	It describes a situation when mergers are made by companies that are related to each other in geographical, technical or market aspects.
Conglomerate merger	Entities merging in this case are completely unrelated to each other.
Horizontal merger	Entities with a similar profile of activity take part in the merger. These are competing companies that specialize in producing similar products.
Vertical merger	A case in which entities belonging to the same production branch representing different levels of production.

Source: author's own studies.

III. MOTIVES FOR M&A

There are many motives that guide companies when deciding to merge. In these processes, both the seller and the buyer are characterized by the implementation of their own goals. The current market is full of diverse enterprises with multi-directional goals and development plans. Therefore, it is required that the analysis of the motives of enterprises is carried out considering different perspectives.

Before choosing the purpose of the transaction, it should be carefully considered. The field of business management is constantly evolving, and only well-prepared companies can stay on the market. One of the basic tools that allows you to determine the path to success of an individual is the 4F concept (Kozina, 2011). This strategy considers the following factors:

TABLE 2. 4F CONCEPTS

Factor	Description
First	Means that the company must always be the first to react to changes, challenges and opportunities appearing in its environment.
Focus	Is characterized by the concentration of cooperation between economic entities on one or several market sectors.
Flexibility	Is understood as increasing the flexibility of integrated processes.
Fast	Means the company's ability to adapt entities and their processes to cooperation with other entities.

Source: author's own studies.

There is no single motive that companies follow. Due to the complexity of merger, it is most often a specific group of premises individually adapted to a given transaction. However, there is no doubt that a certain repeatable group of them can be identified between transactions. In the literature, you can find various ways of isolating and interpreting M&A motives (Machała, 2011, p. 187). One of the most detailed and at the same time the most extensive divisions is the model that assumes a division in terms of the party involved in the merger and acquisition process. It divides the motives between two groups, which are the buyer and the seller. In turn, these groups are divided into smaller subgroups, and within this division specific motives are listed. Table 3 presents a summary of M&A motives.

One of the important reasons for making mergers and acquisitions is the possibility of achieving synergy. Synergy in economics is a phenomenon involving the cooperation of two

or more enterprises in such a way that their joint activity brings better results than if they performed it separately.

TABLE 3. THE MOTIVES FOR MERGERS AND ACQUISITIONS FROM THE PERSPECTIVE OF THE BUYER AND THE SELLER

Type of motive	Buyer	Seller
Financial motives	Taking and earn extra cash; Cost capital reduction; Increasing creditworthiness.	Increasing the value of the company; Resignation from investments in order to save money or invest capital in another source of financing; Possibility of obtaining a new source of financing.
Strategic motives	Starting a business in another sector; Reducing or eliminating competition; Obtaining a dominant position on the market.	Establishing cooperation with new partners; Getting rid of non-complementary assets; Diversification of the product range.
Managerial motives	Prestige resulting from the success of the transaction; Gaining power and respect among other managers; Possibility to restructure a company.	Increasing a decision-making freedom; Simplification of the structure of the management process; Finding a new business partner.

Source: author's own studies.

Figuratively, it is assumed in the literature that synergy corresponds to the inequality $2 + 2 > 4$ (Toborek-Mazur, Partacz, 2022a). The topic of synergy also covers different types of situations and circumstances. This is often a critical issue in mergers and acquisitions as potential synergies provide rationale for these activities. Corporate decisions to divest resources, to switch corporate portfolios, or to restructure may be based on a synergy. Achieving relationships can present particular problems for multinational companies trying to coordinate production in different countries or transferring marketing concepts to different cultures (Świetla, Toborek-Mazur, 2021).

Additive synergy is a key ingredient in a properly conducted merger procedure because the added value created in this way, if it exceeds the acquisition costs, generates an increase in market value. Most often, this means that after a successful merger transaction, the new company obtains economically justified results manifested by higher revenues, lower operating costs, reduced financial costs as well as tax optimization (Toborek-Mazur, Partacz, 2022b).

The increase in revenues may be caused by many changes and new activities in the field of existing management. One example is the modification of the marketing department so that it brings better results. This is due to gaining knowledge and raising the level of work by observing the marketing department of the other company involved in this merger. Through cooperation, the weaker department can match the prosperous department in the future. Other activities that increase revenues may include resigning from a manager whose work does not bring the expected results (Toborek-Mazur, Partacz, 2022b). It can also be the improvement of distribution, storage, transport or retail chains by selecting the optimal solution based on the

previous experience of the entities involved in the merger. Another way to achieve this goal is to create a product that will have the characteristics of two or more existing products (Świetla, Toborek-Mazur, 2021).

The reduction of operating costs may be the result of, among other things, the fact that the new unit resigns from double departments, such as: accounting, IT, human resources or distribution. The phenomenon of economies of scale also influences the reduction of costs. This means that the larger the size of the company, the lower the unit cost, because the total cost is spread over a larger number of units produced. Another reason is the reorganization of the way resources are used and, as in the case of an increase in revenue, the dismissal of an employee whose employment is not profitable for the company (DePamphilis, 2017, p. 84).

Analyzing the motives of energy companies, it can be stated that a significant part of the above-mentioned premises is repeated. However, changes in the energy system are closely related to ensuring energy security, understood as a guarantee of energy supplies. A defined as the system's resilience to exceptional and unpredictable events that may threaten the physical integrity of energy flows or lead to unstoppable increases in energy prices regardless of economic grounds. It is part of the national security system, because reliable and constant access to energy sources, at the costs possible to be borne by society, is an important element of any modern economy (Toborek-Mazur, Wojcik-Jurkiewicz, 2022). This is confirmed by the energy crisis caused by the war in Ukraine.

Ensuring the stability of the energy sector is crucial from the perspective of state management, as it is an element of critical infrastructure. Recent events in Ukraine and Russia's gas blackmail against European Union countries indicate the sensitivity of the energy sector in Poland. Thus, attempts to create a multi-energy concern capable of functioning in an uncertain competitive environment, in the absence of external support and difficulties on the market (e.g., instrumental policy of Russian Gazprom) seem to be justified from this point of view.

IV. M&A TRANSACTIONS WITHIN THE PKN ORLEN GROUP

The numerous crises that have taken place in recent months have been a serious wake-up call to the world. Enterprises around the world are adapting to change by shifting environmental, social responsibility and corporate governance (ESG) issues from the periphery of strategic focus to the core. They recognize ESG as a driver of value creation.

The PKN Orlen Group is one of the largest multi-energy concerns in Central and Eastern Europe (Toborek-Mazur, Wójcik-Jurkiewicz, 2022). The multi-industry character results from the activities carried out on many markets, e.g., biofuels, electricity, heat, petrochemicals or exploration, extraction and processing of crude oil and retail sales. The company has been listed on the Warsaw Stock Exchange since 1999. The PKN Orlen Group manages six refineries in Poland, the Czech Republic and Lithuania, and conducts mining operations in

Poland and Canada. Its consolidated sales revenues reached PLN 131.5 billion in 2021.

Pursuing external growth strategies within the group, subsequent mergers and acquisitions are carried out. The process of finalized mergers in 2022 began four years ago with the signing of a letter of intent with the State Treasury, which holds a 53.19% of Lotos. Subsequently, on July 14, 2020, the European Commission issued a conditional consent to the acquisition of Grupa Lotos. In May 2021, PKN Orlen, Grupa Lotos and the Ministry of State Assets signed another agreement on the structure of the group of companies, which includes: PKN Orlen, Lotos and PGNiG.

In order to implement the demands of the European Commission, in January 2022, the management board of PKN Orlen decided to conditionally sell 417 Lotos service stations to the Hungarian concern MOL and a 30% stake in the Gdańsk refinery to Saudi Aramco (Toborek-Mazur, Partacz, Surówka, 2022).

Table 4 presents the capital structure of the new entity after the mergers of Orlen, Lotos and PGNiG, assuming that the price per share will be approximately PLN 75.

TABLE 4. PKN ORLEN STRUCTURE AFTER ALL BUSINESS COMBINATIONS.

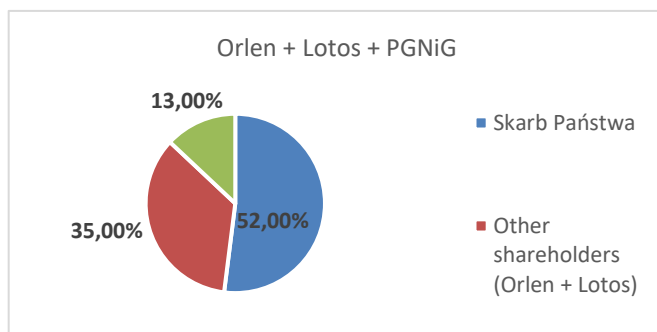
Orlen + Lotos	PGNiG	Combined company
47 bln ZŁ	34,7 bln ZŁ	87 bln ZŁ

Source: author's own studies based on Kwestarz, 2022.

As shown in Table 4, the increase in Orlen's capitalization after the planned mergers will amount to PLN 87 billion. It should be added that on the day of the announcement of the merger plan, PGNiG share price increased by 15%.

The acquisition of PGNiG by PKN Orlen, after the earlier takeover of Lotos, is another step on the way to building a multi-energy concern that is to compete effectively on the global market and respond to the challenges of the energy transformation. The State Treasury will have a much stronger position in the new entity than in the current Orlen. Today, his share in the Plock company is 27.5 percent. After the merger with Lotos is finalized, it will increase to 35.7 percent, and after the merger with PGNiG - to 52 percent. Figure 1 presents the shareholding structure of Orlen, Lotos and PGNiG.

FIGURE 1. PKN ORLEN SHAREHOLDER'S STRUCTURE AFTER ALL BUSINESS COMBINATIONS.

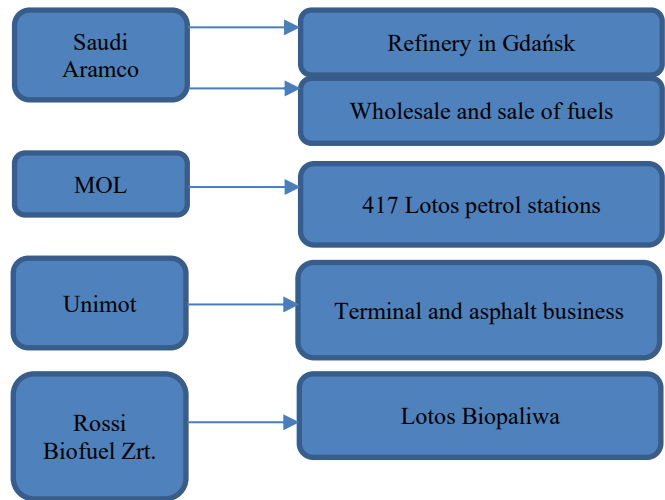


Source: author's own studies based on (Furman, 2022)

In March 2022, the Polish Office of Competition and Consumer Protection issued a positive decision regarding the

merger of PGNiG and PKN Orlen, provided that a remedy in the form of a commitment to sell control over the subsidiary Gas Storage Poland (GSP) to an independent investor is performed within 12 months of the merger date. At the same time, PGNiG and PKN Orlen undertook to conclude an agreement for a period of at least 10 years entrusting GSP or its legal successor with the duties of the gas fuel storage system operator owned by the entity established as a result of the merger of PGNiG and PKN Orlen (Lewicka, 2022).

FIGURE 2. ORLEN'S PARTNERS IN THE ACQUISITION OF LOTOS.



Source: author's own studies based on Kwestarz, 2022.

Figure 2 presents the structure of the partners participating in the Orlen acquisition along with their assets. As part of the transaction, Saudi Aramco undertook to supply crude oil, while as a result of cooperation with MOL, Orlen is to receive 144 stations in Hungary and 41 in Slovakia.

The Lotos Group and PKN Orlen, agreed on a merger plan. It assumes the takeover of all Lotos assets by the Plock concern in exchange for its newly issued shares. The share exchange parity is also given. It was agreed that the shareholder of Grupa Lotos, in exchange for the shares held in the company, will receive newly issued shares of PKN Orlen in the ratio of 1:1.075.

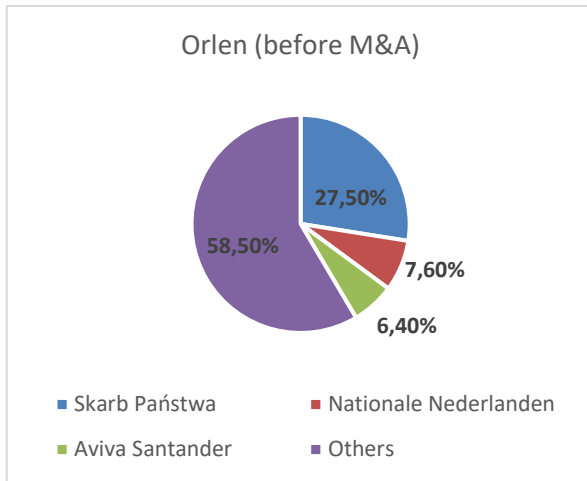
The number of granted shares will be a natural number, and in exchange for unallocated fractions of merger shares, Grupa Lotos shareholders will receive additional payments on the terms set out in the merger plan (Kakowska-Mehring, 2022).

In Lotos, the State Treasury held 53.19% before the takeover, and as a result of the exchange of shares, after the merger of the two entities, it holds 35.66% of Orlen's shares. This transaction strengthened the position of the State Treasury. Although the government had previously sold some of the shares to state-owned entities: PKO BP and PZU, reducing its stake to 31.1% in recent days (Frączyk, 2022).

In July and August 2022, PKN Orlen merged with Lotos and PGNiG. On August 1, 2022, the merger was entered into the register. As a result of the acquisition, Grupa Lotos was deleted from the register (Kiewlicz, 2022). The merger, as announced in the announcement, was carried out by transferring all the

assets of Grupa Lotos, including all rights and obligations (assets and liabilities) of Grupa Lotos - the acquired company, to the acquiring company. At the same time, the share capital of the company was increased through the issue of merger shares, which will be issued to the shareholders of Grupa Lotos. In connection with the merger, the share capital of PKN Orlen was increased from PLN 534 million 636 thousand to PLN 326.25 to the amount of PLN 783 million 59 thousand. PLN 906.25 (BI, 2022). Figures 3-5 show the percentage share of shareholders before and after the merger of Orlen and Lotos.

FIGURE 3. ORLEN BEFORE M&A

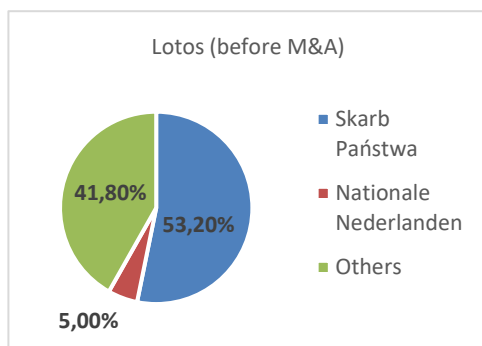


Source: author's own studies based on Kakowska-Mehring, 2022.

By analyzing figures 3-5, it should be stated that the shareholding structure of the companies before and after the merger is definitely different. As a result of this transaction, the share of the State Treasury in relation to PKN Orlen after the merger increased, while the level of shares held by other entities, both Orlen and Lotos, was maintained. The direct effect of the merger of PKN ORLEN and Grupa LOTOS is an increase in investment outlays, acceleration of the implementation of the most profitable projects, greater energy independence of Poland and stable fuel supplies to all customers.

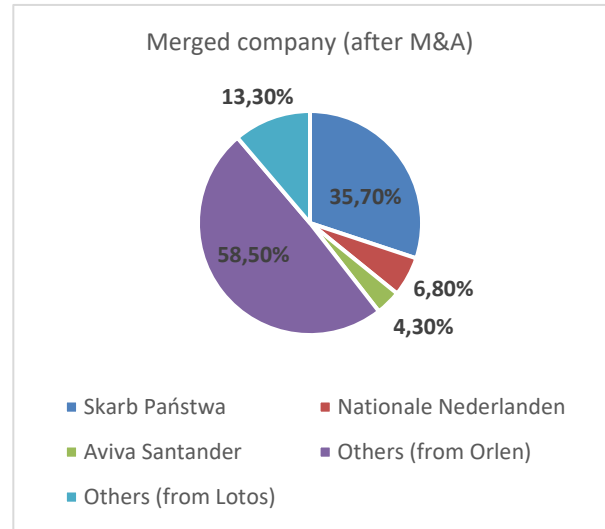
All the presented transactions are aimed at increasing the energy security of the State Treasury. And by increasing the capital shares of the State Treasury, both direct and indirect, it can be considered that it has been achieved.

FIGURE 4. LOTOS BEFORE M&A



Source: author's own studies based on (Kakowska-Mehring, 2022)

FIGURE 5. MERGED COMPANY AFTER M&A



Source: author's own studies based on Kakowska-Mehring, 2022.

V. CONCLUSIONS

The Polish energy market has undergone significant ownership transformations in recent years. The merger of PKN Orlen and Lotos is one of the largest projects carried out in Central and Eastern Europe. It results from the need to build and strengthen a multi-energy concern. It is important not only from the point of view of Poland, but also the neighboring countries, i.e., the Baltic States - Lithuania, Latvia and Estonia, as well as the Czech Republic and Slovakia. Answering the first question, it can be said that there are many motives for mergers and acquisitions. Nevertheless, they are adapted to the specificity of the sector within which capital is concentrated. At the same time, one should always remember about the general premises contained in the source literature.

Answering the second question, it can be noted that transactions within the PKN Orlen Group significantly influenced the structure of the energy market in Poland. The acquisition of Energa, Lotos and the planned takeover of PGNiG are the next steps on the way to concentrating this sector, whose guiding idea is to build energy independence. The concentration made the market more closed, but at the same time less fragmented (Q2). The mergers made by PKN Orlen are intended to strengthen the gas, fuel and energy market in Poland, allow for increased investment opportunities and improve the negotiating position of the strengthened concern.

Answering the third question, it is worth remembering that the concentration process within the PKN Orlen Group has not yet ended, so it is difficult to predict the final results of the merger. The PKN Orlen Group points to stable supplies of energy resources, increased energy security of Poland and the region of Central and Eastern Europe, increased investment opportunities, implementation of operational synergies and diversification of the product range. From this point of view, it seems to be a justified transaction (Q3). The increase in capitalization to the level of approx. PLN 87 billion after all

mergers is also one of the premises suggesting the potential success of the transaction. Undoubtedly, the idea of creating a multi-energy company capable of resisting the Russian energy dictate, especially in the context of recent political events, seems to be justified, but one must not forget about the fluctuation of management. Among the potential threats faced by state-owned companies is the instability of management. It results from the aforementioned fluctuation of management as part of the change of authority (new authority = new priorities = new staff). Therefore, it does not facilitate decision-making, and the volatility of the adopted strategies may cause disturbances in the proper management of the enterprise (Toborek-Mazur, Partacz, Surówka, 2022). Nevertheless, the construction of a strong multi-energy concern fits in with the idea of building energy independence of Poland and the entire region of Central and Eastern Europe. It seems to be justified insofar as the potential adverse impact of changes caused by the war in Ukraine on the energy market could threaten energy stability. However, it should be remembered that the management of such a complex multi-energy system requires the coordination of many activities and should not be implemented only for short-term political purposes. Such management requires educated and experienced managers.

Mergers and acquisitions should be assessed not only in the short-term, but above all in the long-term perspective. Currently, high margin ratios are noticeable on the petrochemical and refining markets, but it is not known how long this trend will continue in the future. Another issue is the availability of crude oil from other sources to such an extent that it will fully replace Russian supplies. PKN Orlen's strategic partner, Saudi Aramco, undertakes to cover 45% of the demand for this raw material in Poland, the Czech Republic and Lithuania. At the same time, as part of the transaction, he will receive a block of shares in the Gdańsk refinery. This may be perceived as a risky investment due to the importance of diesel and jet fuel production by the refinery and potential control by this foreign entity. In the face of the war in Ukraine and the need to regionalize the supply of energy resources, securing own supplies and production seems to be crucial. Therefore, the assessment perspective of the PKN Orlen Group requires further research (Q4).

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