

Financial Security Management of Purchasing Groups

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Abstract: - Optimization of financial resources and funding sources is a guarantee of financial security. Enterprises need financial resources to develop. The conditions of the pandemic, even more than regular competition, show the problems resulting from the lack of financial resources, and the lack of adequate financial reserves makes it difficult to start after lockdown. In recent years, SMEs have merged into multi-entity organizations to improve their financial security. These organizations are managed by specially created central units (purchasing groups). If the central units run into financial difficulties, numerous companies operating within purchasing groups will also be at risk. The aim of this article is to assess the approach to financial security of purchasing groups depending on the location of the central unit. The analysis was conducted on a group of 9 central units making up the largest purchasing groups in the construction industry in Poland. They were divided into two groups into internal and external central units. The conducted analysis identified financial security management strategies as quite risky, which requires some changes, which are presented in the article

Key-Words: - strategy, financial liquidity, financial security, management, purchasing group, central unit

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1 Introduction

In the pyramid of human needs, A. Maslow placed the safety needs right after the physical ones, which together are defined as basic needs. Other scientists have been proved that safety needs are even more important than physiological ones [1]. Therefore, a sense of security is essential to live and develop for every individual. This safety needs to include personal security, financial security, health and well-being. Moreover, according to A. Maslow needs can be identified as a state characteristic not only for a human being but also for a social group or society in general [2]. So in the bottom of pyramid of business needs the need for security can be also found. The functioning of enterprises in a changing and uncertain environment poses many challenges, whose meeting depends largely on the condition and financial capabilities of a given entity. This was particularly experienced by enterprises in recent months, when the lockdown and pandemic changed radically the conditions of functioning, verifying the existing development strategies. Therefore, the topic of financial security becomes of a particular interest to both practitioners and researchers in the field of management. Special attention is drawn to a specific form of inter-organizational cooperation, which are purchasing groups. They are a certain form of building the safety of its participants because they are created in response to external threats [3-5], and the cooperation of participants in the purchasing group increases the power of impact on the environment.

The aim of this article is to assess the approach to financial security of purchasing groups depending on the location of the central unit. The assessment was made on the basis of a comparison of two research subgroups: the first one consists of 3 purchasing groups with internally located central units, and the second research subgroup includes 6 purchasing groups whose central units are located externally. All surveyed entities are purchasing groups in the construction industry.

2 The idea and characteristics of financial security management

In general, the term security means a sense of certainty, peace, which can be used to describe a state of a person in which he feels free from threats. By definition, the simplest one defines security as a state of non-threat. This is the main condition for an individual to exist and develop. For people, security is one of the most important values. It is stability that guarantees no risk of losing valuable tangible and intangible assets - life, health, loved ones, place of residence, source of income, broadly understood assets, and financial liquidity. Thanks to security, an individual can develop and function in a given society. Therefore, shaping security by the state is one of its priorities, although the economic aspect is of significant importance in this area. It has an impact on most types of security, and especially on the level of financial security, which is a kind of an ability of the economic system to properly use internal development factors and international economic interdependence, so that its development is not endangered. The certainty of this development depends on many factors determining potential threats to financial security, while the desired minimization of these threats, as a rule, requires the recognition and determination of determinants constantly changing in time and space. Therefore, the problem of financial security management is gaining importance in this area. While financial security is a state that should be pursued while being aware that the absolute state will not be achieved after all, nevertheless strengthening it is considered the leading task of the state, which is obliged to create appropriate mechanisms enabling the proper implementation of this goal, which is associated with financial security management [6,7,8].

Currently, the perception of financial security covers various perspectives. There are differences, for example, in the micro and macro approach to the analyzed concept. Thus, the first of these approaches focuses on the security of individuals or communities, while the second covers the state in the international system along with foreign financial policy. In turn, the indicated complexity of financial security and its participation in all spheres of state and social life determine the introduction of a number of normative solutions and economic structures optimizing the desired state. In order to effectively manage financial

security, it is important to identify threats to this state. And so, threats to financial security that imply losses are phenomena and processes whose occurrence may, in particular, lead to an inhibition of economic development or a loss of development abilities, including, in particular, the loss of the ability to provide the necessary amount of goods and services. At the same time, financial security includes references, inter alia, to a number of areas of economic and social life together with their environment, thus the risks of a socio-economic nature are of significant importance, which are implied in particular by enterprises whose functioning includes material processes taking place, inter alia, in production, trade and transport, and their effect are products and services [9].

Taking the above into account it can be concluded that the issues of financial security management should be considered both from the perspective of the functioning of public sector entities, as well as private sector entities, especially private companies. As part of the free market, these are the entrepreneurs running a sole proprietorship or operating in the form of commercial companies that are an example of private entities determining the desired financial effect, and one of the solutions optimizing this process is, for example, their association in purchasing groups.

Financial security is considered as a component of economic security, although it can often be treated as its synonym [10,11]. Literature study lets us formulate a few statement regarding the concept of "the company financial security" [2]:

- ✓ company financial security is a component of its economic security;
- ✓ it is a process that ensures the protection of financial interests of the company;
- ✓ it is one of the factors of company growth and its stability;
- ✓ it can be characterized by a combination of quantitative and qualitative indicators that should have the appropriate threshold to determine the level of security.

An assessment of financial security will allow the company to minimize the threats of financial instability and increase the safety of its existence.

Today, in the time of COVID-19, central banks are introducing *quantitative easing*. Quantitative easing, also known as monetary easing, is one from non-standard instruments of central banks, which is of an emergency nature and should only be used in an extraordinary situations. The time of COVID-19 is precisely the emergency that has just led to quantitative easing, which, like the interest rate cut, is a supply stimulus, meaning it leads to an increase in the amount of money in circulation. Its task is to stimulate the economy, increase consumption and investments of enterprises. Such a situation takes place when interest rates are at a low, often close to zero level, in order to ensure easy capital acquisition (through low interest rates), to ensure the functioning and development of enterprises.

During COVID-19, the NBP introduced extraordinary measures, i.e. the QE mechanism to purchase treasury bonds. The extraordinary measures introduced by the National Bank of Poland are in line with the decisions taken by the largest central banks in the world in recent days. The US Federal Reserve lowered the interest rate to virtually zero and launched an asset purchase program (QE), the same was done by the European Central Bank announced that it would "reprint" a billion euros to buy financial assets.

In Poland, in the case of financial security of enterprises, such a policy should be assessed positively today. Enterprises in Poland were additionally flooded with money from various protective shields, which allowed them to maintain financial liquidity and financial security.

During COVID-19, the stock exchange value of Polish banks fell by over 50%. As there was a gradual recovery, the surprising cut in interest rates triggered another wave of sell-offs on Polish bank shares. The protective shields introduced by the government resulted in a reduction in the number of loans granted. Today it is difficult to get a loan in Poland, it is a problem for both entrepreneurs and banks. The situation of the banking sector as a result of the introduction of protective shields and interest rate cuts is very difficult. Time will show whether all these activities have improved the financial security of the banking sector, enterprises and consumers.

3 Principles of organization of purchasing groups

A significant impact on the financial security of enterprises, especially those from the SMEs group, is sharply visible in the time of the COVID-19 pandemic. Without state assistance and various types of financial support programs for enterprises, many of them would not survive the difficult first half of 2020. In Poland, some SMEs combine and operate within multi-entity organizations to secure a strong position in the market. In purchasing groups. Thanks to cooperation in purchasing groups, its members can increase their financial security. The literature on the subject provides a lot of information on the operation and functioning of purchasing groups or other multi-entity organizations, it broadly discusses the classifications of purchasing groups, as well as identifies the benefits that companies operating in purchasing groups obtain [12-16]. Nevertheless, the literature shows a lack of studies on the approach to financial security management in central units managing a purchasing group.

The essence of the functioning of purchasing groups is the use of collective purchasing power in order to obtain a discount [17-20]. The purchasing group consists of cooperating enterprises that jointly control and improve the material, information and cash flows from suppliers to final recipients, and a separate central unit is responsible for the implementation of the objectives of this cooperation system [21]. The head office unit represents the purchasing group in negotiations with contractors, which is sometimes the reason why it is referred to as the purchasing group.

The central units that have the key impact on the finances of all units operating within purchasing groups, regardless of their type (traditional, internet, industry, multi-sector). Figure 1 presents an example of the functioning of an industry purchasing group, which works very effectively compared to multi-industry groups [21].

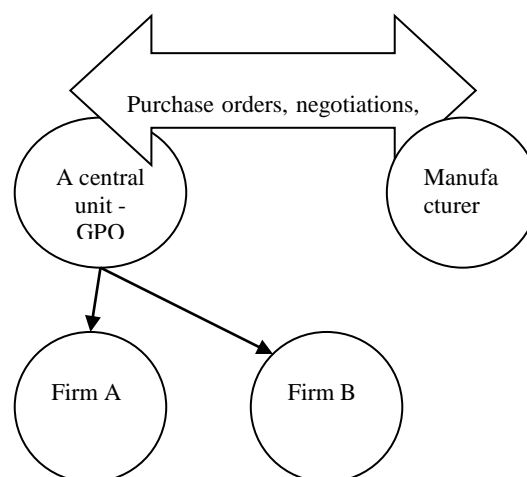


Fig.1 A diagram of the functioning of the purchasing group

Source: Zimon, G. Organization of Transport in a Commercial Enterprise Operating in a Branch Purchasing Group, *Estudios de Economía Aplicada*, 2018, vol. 36-3, 2018, pp. 811-824.

Figure 1 shows that the central unit is a specially created company that is not directly related to any enterprise operating in the purchasing group. Its tasks include negotiating with the manufacturer, purchasing and organizing the delivery of goods to individual companies.

The central unit can be associated with the participants of the purchasing group in two ways. The first seems to be the best when the purchasing group's central unit operates on a non-profit basis and is set up by companies operating within the purchasing group. They are shareholders/owners of a specially created company referred to as a purchasing group, and each member of the group has the same voting power, regardless of whether it is a large or small enterprise, and decide to the same extent about the functioning of the central unit. Such central unit is referred to as internal. This solution is beneficial for the group members because the central unit does not have to earn enough to be maintained. The second important argument in favor of such a solution is the fact that it is easier for companies to control such a central unit.

The internal central unit can be created as a separate functioning unit, but another solution is also possible (figure 2). Companies that try to form a purchasing group develop the group's central unit within the selected group

company. Then a special cell is created, referred to as the central unit or GPO.

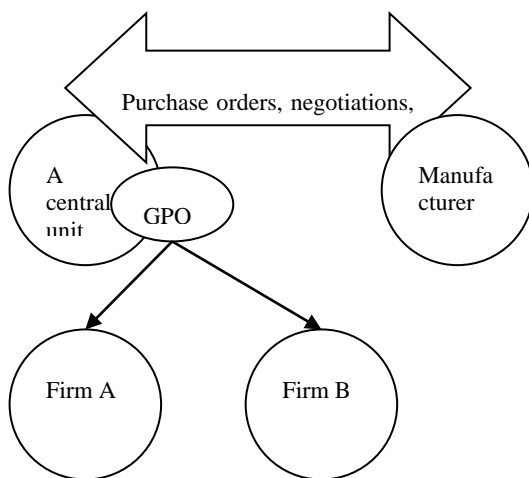


Fig.2 A diagram of the functioning of a purchasing group with a central unit within the company forming the GPO.

Source: own study.

This pattern of functioning seems to be the cheapest solution for participants operating in a purchasing group. However, from the point of view of the functioning of the enterprise within which a special unit is separated, referred to as the central unit (GPO), it may be burdensome and at the same time costly. The managers of the enterprise with the central unit can put pressure on it in order to obtain even greater benefits. Therefore, it is definitely the best solution to create a separate company by enterprises operating within a purchasing group. The second option of linking with participants in a purchasing group is to create an external central unit. The external central unit (foreign) invites interested units to cooperation and manages the organization of purchases. The disadvantages of this type of operation are the costs that the participants have to bear and the inability to control the activities of the central unit. It may operate according to its own guidelines and rules, where, for example, it will pay the greatest attention to the suggestions of the largest entities consisting of the group

4 Research group and methods

The research presented in the article was carried out on a group of 9 central units forming purchasing groups in the construction industry in Poland. They were divided into two groups. The first group consists of 3 companies, the central unit of which is an internal company, established by group participants. The second group consists of 6 external central units. These are the oldest and largest purchasing groups in Poland operating in the construction industry and today they gather 548 SMEs. In the analyzed period, their revenues constitute from 90 to 95% of the total revenues of all industry purchasing groups operating in the construction industry.

Purchasing groups are created by companies representing the SMEs sector. This sector plays an important role in the national economy. The share of small and medium-sized enterprises in the total number of enterprises is significant - it amounts to as much as 99.8%, and this sector generates almost half of the Polish GDP (49.1%) and creates jobs for 68% of the total number of people working in the enterprise sector [22]. Companies from the SMEs sector perform many important functions in the economy and have an impact on the economic, social and political processes of modern economies [23,24].

The contribution of the construction industry to the creation of Poland's GDP is significant (in 2014 it was 6.7%), and the importance of the industry for the economy is relevant because its condition has an important impact on the development of other industries [25]. The data presented by Euler Hermes show a significant drop in the sales dynamics of construction works in 2018 [26], and the indicator of the general climate of the economic situation in the construction industry in June 2020 was -29.9, where for comparison, in the same a month earlier, it was at the level of 7.8 [27], which means that entrepreneurs from the construction industry have a very negative opinion of the economic situation in their industry. Taking into account the presented facts, the Authors pose the following question: what approach to financial security management is used by the analyzed central units, which are indirectly responsible for the financial situation of SMEs forming purchasing groups.

The analyzed enterprises were divided into two research groups due to the location of

the central unit: internal or external. The internal central units are companies established by participants of a given purchasing group. The external central units are companies which themselves invite companies to act together.

Financial security of SMEs has been defined as optimization of financial resources and financing sources ensuring the functioning of the enterprise in the current period. In order the units can function without problems, they must have adequate financial liquidity, profitability and diversify the sources of financing their activities. The analysis was carried out with the use of selected financial indicators, which will allow comparing the approach to financial security of purchasing groups where the central unit is located internally and those purchasing groups where the central unit is located externally.

The financial security of the surveyed entities was assessed in the following areas: financial liquidity, profitability, diversification of financing sources, structure of current assets and management efficiency. Financial liquidity is an ability to settle current liabilities. In order to avoid financial bottlenecks, the central unit must have financial resources. In turn, profitability has a significant impact on building equity, i.e. the safest sources of financing that strengthen the company foundations. Lack of profitability in the long term leads to its bankruptcy. On the other hand, the diversification of the sources of financing will allow assessing whether the financing of assets is based on equity or external sources of financing, and whether long-term or short-term liabilities prevail in the liabilities of central units. Financial security requires diversifications of financing sources of companies'.

The next step to determine financial security is the analysis of the structure of current assets. One should have as many ingredients that can be liquefied quickly. The last step of the analysis is the comparison of business management efficiency indicators, here the indicators of the turnover of receivables from customers in days and liabilities to suppliers in days were selected.

The analysis was conducted on the basis of the financial statements of enterprises for the period 2016-2019. Selected statistical methods were used for the research. Basic statistical

tools were also used, such as: arithmetic mean (\bar{x}), median (Me), standard deviations (s), maximum value (max) and minimum value (min).

5 Results

The first stage of the research was an analysis of financial liquidity. For this purpose, the indicators related to financial liquidity were used. Table 1 shows the results of the current financial liquidity ratios.

Table 1. Analysis of the current financial liquidity in 2015-2019.

Current liquidity ratio	\bar{x}	Me	s	min	max
Internal central units	1.2	1.2	0.07	1.0	1.4
External central units	1.3	1.2	0.09	1.0	1.6

Source: own study.

Low financial liquidity was observed in both groups of enterprises. These results are a warning to managers as they need to systematically control revenues and expenses. The low financial liquidity is confirmed by the cash conversion cycle in days (CCC) ratios, in Table 2.

Table 2. Analysis of the cash conversion cycle in 2015-2019.

CCC	\bar{x}	Me	s	min	max
Internal central units	11.0	9.0		9.0	12.1
External central units	4,2	4.1		3.0	6.0

Source: own study.

In order to extend the analysis of financial liquidity, also the quick ratio was used. The detailed calculations are presented in Table 3.

Table 3. Analysis of quick financial liquidity in 2015-2019.

quick ratio	\bar{x}	Me	s	min	max
Internal central	1.11	1.1	1.2	1.0	1.3

units					
External central units	1.08	1.07	1.1	1.0	1.2

Source: own study.

Based on Table 3, it can be concluded that the exclusion of inventories resulted in a slight decrease in financial liquidity. Therefore, they must constitute a small share in the structure of current assets. This can be confirmed by the analysis of the structure of current assets, which was another element of the analysis. The first element that was analyzed were short-term receivables. Table 4 presents their share in the structure of total assets.

Table 4. Share of short-term receivables in the structure of current assets in 2015-2019.

Share of short-term receivables in the structure of current assets	\bar{x}	Me	s	min	max
Internal central units	0.88	0.88	0.02	0.80	0.91
External central units	0.83	0.81	0.03	0.78	0.87

Source: own study.

It can be seen that the largest share in the structure of current assets are short-term receivables. The function of central units is the purchase and quick resale of goods to the participants of the purchasing group of purchased goods and materials. That is why such a high result of short-term receivables in the structure of current assets. Inventories constitute a low result in the structure of current assets. As confirmed by the results of Table 5.

Table 5. Share of inventories in the structure of current assets in 2015-2019.

Share of inventories in the structure of current assets	\bar{x}	Me	s	min	max
Internal central units	0.11	0.10	0.03	0.11	0.18
External central units	0.15	0.12	0.05	0.09	0.22

Source: own study.

The last element analyzed were short-term investments. Their share in the structure of current assets is minimal. The central units of purchasing groups make payments immediately, which results in a low level of cash. Thanks to quick payment settlements, they have an opportunity to obtain additional discounts, which will increase profitability. The details are presented in Table 6.

Table 6. Share of short-term investments in the structure of current assets in the period 2015-2019.

Share of short-term investments in the structure of current assets	\bar{x}	Me	s	min	max
Internal central units	0.01	0.01	0.02	0.01	0.05
External central units	0.03	0.03	0.03	0.01	0.07

Source: own study.

Profitability is another area under analysis. Profitability ratios are very low. The details are presented in Table 7.

Table 7. Return on sales analysis in 2015-2019.

ROS	\bar{x}	Me	s	min	max
Internal central units	0.003	0.003	0.01	0.002	0.005
External central units	0.001	0.001	0.01	0.001	0.008

Source: own study.

Tables 8, 9, 10 present the results of management efficiency indicators. Table 8 presents the receivables turnover ratios in days.

Table 8. Average results for the short-term receivables turnover ratios in days for the period 2015-2019.

Short-term receivables turnover in days	\bar{x}	Me	s	min	max
Internal central units	52	50	11.4	43	64
External	77	76	7.3	70	83

central units					
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Source: own study.

The analysis of the results of short-term receivables turnover in days should be compared to the short-term liabilities turnover in days. The results of the rotation of short-term liabilities in days are slightly lower than the receivables turnover ratios. This is not good news for managers, they need to have a reserve of funds to pay their liabilities on time. Fortunately, the difference is several days, and therefore the cash in the company shown in Table 6 can be kept low. The detailed results of the rotation of short-term liabilities in days are presented in Table 9.

Table 9. Average results for the short-term liabilities turnover ratios in days for the period 2015-2019.

Short-term liabilities turnover in days	\bar{x}	Me	s	min	max
Internal central units	49	48	10.8	40	61
External central units	73	76	6.7	66	80

Source: own study.

The low share of inventories in the structure of current assets is confirmed by the fast rotation of inventories in days. As mentioned before, the central unit buys the goods to sell them quickly. In the case of internal central units, there are purchasing groups that have their own warehouses and buy goods with a surplus in order to sell them to group members later with a higher margin. This results in higher sales profitability and higher inventory turnover ratios in days, which is confirmed by the results in Table 7 and 10.

Table 10. Average results for inventory turnover ratios in days for the period 2015-2019.

Inventory turnover in days	\bar{x}	Me	s	min	max
Internal central units	6.8	6.4	1.4	3.0	9.1
External central units	1.5	1.0	0.7	1.1	2.0

Source: own study.

The last stage of the analysis is the debt analysis and the structure of liabilities.

Table 11 shows the average results of the coverage of equity by liabilities. It is clearly visible that the level of equity is low and liabilities are several times higher than equity.

Table 11. Average results of the coverage of equity with liabilities for the period 2015-2019.

Equity coverage with liabilities ratio	\bar{x}	Me	s	min	max
Internal central units	4.9	5.1	1.6	4.2	6,2
External central units	12.1	11.1	3.3	9.1	18.4

Source: own study.

Table 12 below shows the results of the total debt ratio. It is clearly visible that over 80% of assets are financed from foreign capital.

Table 12. Average results of debt ratios for the period 2015-2019.

Total debt ratio	\bar{x}	Me	s	min	max
Internal central units	0.82	0.83	0.01	0.79	0.85
External central units	0.94	0.93	0.01	0.90	0.99

Source: own study.

Therefore, the share of liabilities in financing the activity is very large. In the analyzed central units, long-term liabilities appear only in one case. This fact should be assessed negatively. Thus, short-term liabilities in most cases constitute 100% of external capital. Therefore, the last element of the research was the analysis of the structure of short-term liabilities. Details are presented in Table 13.

Table 13. Structure of short-term liabilities in the analyzed enterprises

Structure of short-term liabilities	Internal central units	External central units
Obligations to suppliers	78%	93%
Credits	14%	2%
Others	8%	5%

Source: own study.

Diversification is very important as managers have several policy options related to the selection of funding sources. In the analyzed companies, the companies using the internal central unit manage and distribute sources of financing much better. Liabilities to suppliers are the cheapest source of financing but relying only on this source is very risky. Businesses should use bank loans, both short-term and long-term. Today, during COVID-19, it is very visible, the mere use of a trade credit is definitely not enough. Relying only on supplier obligations may result in a chain reaction and bottlenecks in many companies

5 Conclusion

The central units of purchasing groups are responsible for the financial condition of many enterprises. Their financial condition should, therefore, be at a high level. The analysis carried out does not indicate this. Both groups of enterprises have low financial liquidity and profitability. Certainly, the level of financial liquidity should be higher. While in the internal central units, in the event of a shortage of funds, participants in the purchasing groups may replenish them through additional contributions or payments. They finance their own unit that they have created.

If the central unit is an external company, this is not possible. A fairly low profitability for an internal CPU is natural. It was created so as not to earn. It possibly earns a surplus of ordered goods from their own warehouse, which is confirmed by the results in Table 6. In the case of external central units, low profitability proves the weakness of these groups.

The results of the turnover ratio of short-term receivables and short-term liabilities should also be assessed negatively. Faster rotation of short-term liabilities requires having free financial resources. Internal central units have lower results of the turnover ratios. Faster rotation indicates the use of additional discounts, which translates into higher profitability.

Summing up, the results of the analyzed central units indicate the need to increase financial liquidity. The rotation of receivables from recipients should be shortened so that this period is shorter than the

results of the rotation of liabilities in days. This mechanism would release financial resources allowing to finance liabilities and improve financial liquidity. Central units should also seek long-term sources of funding. Today, however, it will be very difficult during COVID-19 since banks in Poland are not interested in granting bank loans with low interest rates. In the future, central units should increase the share of loans in the structure of external capital in order to expand the diversification of financing sources. The structure of liabilities should include long-term loans, which practically don't exist. Changing a portion of short-term loans to long-term ones would certainly have a positive impact on the results of financial liquidity ratios

The measures presented will certainly improve the financial security of the central units, which at the moment should be at a low level.

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**Contribution of individual authors
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