



SEGMENTED REPORTING AND ITS CHANGES AS A RESULT OF THE COVID-19 PANDEMIC IN THE CONSTRUCTION AND REAL ESTATE INDUSTRY

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Abstract

This paper analyses the impact of the COVID-19 pandemic on segment reporting in the construction and real estate sector in Poland. The study includes an analysis of the financial statements of companies listed on the Warsaw Stock Exchange in 2019 and 2023. The study results indicate that the COVID-19 pandemic did not cause fundamental changes in the structure of the reported operating segments of the surveyed companies (segmentation by business line still dominates), but it reduced the scope of disclosed financial results. In some cases, a reduction in the number of reported segments was observed, which could be a response to changing market conditions. The study results highlight the flexibility of segment reporting and its ability to adapt to global crises. Although the pandemic did not lead to significant changes in accounting regulations, it forced the adaptation of management strategies to new economic realities.

SPRAWOZDAWCZOŚĆ W UKŁADZIE SEGMENTOWYM I JEJ ZMIANY NA SKUTEK PANDEMII COVID-19 W BRANŻY BUDOWNICTWA I NIERUCHOMOŚCI

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Słowa kluczowe: segmenty operacyjne, pandemia COVID-19, MSSF 8, sektor nieruchomości, sektor budownictwa.

Abstrakt

Niniejsza praca analizuje wpływ pandemii COVID-19 na sprawozdawczość segmentową w sektorze budownictwa i nieruchomości w Polsce. Badanie obejmuje analizę sprawozdań finansowych przedsiębiorstw notowanych na Gieldzie Papierów Wartościowych w Warszawie w latach 2019 oraz 2023. Wyniki badania wskazują, że pandemia COVID-19 nie spowodowała fundamentalnych zmian w strukturze wykazywanych segmentów operacyjnych badanych przedsiębiorstw (nadal dominuje segmentacja po linii biznesu), jednak wpłynęła na zmniejszenie zakresu ujawnianych wyników finansowych. W niektórych przypadkach zaobserwowano redukcję liczby raportowanych segmentów, co mogło stanowić reakcję na zmieniające się warunki rynkowe. Wyniki badań podkreślają elastyczność raportowania segmentowego oraz jego zdolność do dostosowania się do globalnych kryzysów. Choć pandemia nie doprowadziła do istotnych zmian w regulacjach rachunkowości, wymusiła adaptację strategii zarządzania do nowych realiów gospodarczych.

Introduction

Accounting is most often considered taking into account its two aspects: financial and management accounting. Today, however, these two areas are intertwining, which affects the area of information processing in the accounting process. Segmented reporting is an example of changes in reporting caused by the increasing complexity of modern organizations and information enforced by managers and external stakeholders across facilities (e.g., distribution channels, departments) (Nita, 2015, p. 288).

The COVID-19 pandemic has had a significant impact on the global economy, including the construction and real estate sectors. One of the areas that has changed significantly is financial reporting, in particular in the context of segment reporting. Segment reporting is a key element of financial

transparency, enabling stakeholders to better understand the operational structure and financial performance of companies.

The purpose of this paper is to analyze changes in segment reporting in the construction and real estate sector in Poland, with a particular emphasis on the impact of the COVID-19 pandemic on these changes. The audit includes an analysis of the financial statements of companies listed on the Warsaw Stock Exchange in 2019 and 2023.

International Financial Reporting Standards in the context of operating segments (IFRS 8)

For investors, one of the most important aspects in financial reporting is segment information. This is justified given the complexity and heterogeneity of listed companies. Thus, segment information provides an understanding of corporate business models and economic dynamics (Veron, 2007, p. 4). The purpose of IFRS 8 is to isolate the financial information held, the effects of which are checked by the entity's CODM (the Chief Operating Decision Maker), which evaluates the company's performance and resource allocation (Alanezi *et al.*, 2016, p. 137).

IFRS 8 focuses on the principle that an entity discloses such information that will be used to assist users of its financial statements in assessing the type and financial effects of the entity's business activities (Official Journal of the European Union, IFRS 8, 2008).

The presentation of financial data by segment is also influenced by the degree of diversification of sales markets or the variety of products offered. Moreover, even when segments are identified, companies do not always fulfill their reporting obligations under IFRS 8, as indicated by the authors of the article, who compare such enterprises as GK Tarczyński S.A. and GK Makarony Polskie S.A. (Daniłowicz & Gierusz, 2023, p. 180).

IFRS 8 has changed the perception of segmental reporting from a risk-based and return-based approach to a management approach. This requires information to be presented from the perspective of management, which is highly controversial in the international and EU context (Aboud *et al.*, 2019, p. 101). Concerns about importing IFRS 8 into EU law; indicated the impact of moving away from a system that clearly shows the definition and reporting of segments by listed EU companies (Aleksanyan & Danbolt, 2015, p. 47).

The principles that characterize IFRS 8 are, among others, indicating the CODM, the main entity making operational decisions (Tsai *et al.*, 2020, p. 3). Disclosing segment information in accordance with the internal reporting structure means that IFRS 8 uses a management approach (Rufino, 2022, p. 1006).

Impact of the COVID-19 pandemic on the financial reporting of entities

The COVID-19 pandemic has undoubtedly had a widespread and multidimensional impact on the operation of individuals. It is a crisis that has threatened the continuity of operations. This makes it all the more difficult for the management boards of companies to correctly present the entity's condition in the financial report in such a way that is understandable to stakeholders. The pandemic period was characterized by uncertainty and volatility of the economic environment, which posed a challenge not only for the previously mentioned management board, but also for statutory auditors verifying the entity's reports (Chrostowska, 2023, p. 12).

The Accounting Standards Committee responded to the needs of the companies by formulating recommendations intended to assist in the preparation of financial statements during the pandemic. Their purpose was to support the recognition of the effects of the pandemic in accounting records and financial statements based on seven key areas: the going concern assumption, prudent measurement of assets and liabilities, valuation of products under unused production capacity, recognition of support received under the anticrisis shield, inventory-taking, the management report, and the recognition of additional operating costs caused by the pandemic (Appendix to Resolution No. 13/2020 of 10 December 2020).

Depending on the industry or country in which the entity operates, the consequences of the impact of COVID-19 on financial reporting vary. The pandemic has led to the phenomenon of "freezing" economic activities due to disorientation and uncertainty in an unusual situation, an international crisis. This also resulted in disorganization in the area of reporting the entity's activities: a broken document circulation cycle, a change in the working time of accountants or difficult supervision and provision of data on economic events. In the first stages of the pandemic (2019), financial statements were delayed due to a backlog of accounting and arrears in the preparation of balance sheets (Bartoszewicz *et al.*, 2021, p. 74). Paradoxically, one of the biggest crises, which was the COVID-19 pandemic, which reached its peak in 2020, did not increase the intensity of work on the unification of international accounting and the introduction of new regulations. In recent years, only a few new IFRS standards have been created, some of which have a narrow area of impact (industry standards). The difficult situation of entities reporting their activities and their results has halted the development of reporting. It was stated that accounting regulations are already demanding and extensive, so the introduction of new ones will hinder the operation of enterprises. Moreover, the new financial reporting requirements, with companies fighting to maintain sales profitability and financial liquidity, will only result in the allocation of additional resources

to observe and implement these standards, which in turn will not help entities in the already difficult operating conditions (Gierusz, 2023, p. 33).

Research conducted in 2025, comparing the presentation of operating segments in the consolidated financial statements of companies listed in sWIG80 in 2019 and 2023, indicated a decrease in the number of entities disclosing this information in the year following the COVID-19 pandemic. Nevertheless, greater interest was observed in the disclosure of intersegment revenues and revenues from external customers. As the authors of the article suggest, this may result from pressure exerted by investors or from the need for internal control (Dynowska & Wrona, 2025, p. 60, 61).

Research methods

The research is based on the analysis of data from financial statements of listed companies operating in the construction and real estate sector. The main research method was content analysis, which allowed systematic processing of the information contained in financial reports.

The study was carried out on the basis of the data contained in the financial statements for 2019 and 2023. The adopted time range of the research allowed the identification of changes in segmented reporting before and after the outbreak of the COVID-19 pandemic.

The research sample covered all companies in the construction and real estate sector listed on the Warsaw Stock Exchange in 2019 and 2023. Therefore, the study included 71 enterprises meeting the above criteria.

The study took into account variables such as the number of operating segments, the identification of key customers, as well as the division of revenues and profits by segments. This analysis allowed us to assess how the COVID-19 pandemic has affected the way information is reported and disclosed in this sector.

Characteristics of the research objects

The analysis includes companies diversified in size and financial results. The table below shows a comparison of the companies key financial data of the surveyed in two different periods: 2019 and 2023. Data analysis allows for the evaluation of changes in the financial structure of the surveyed entities.

The structure of the companies analyzed companies in terms of the presented variables remained relatively stable in the compared years. However, there is a slight upward trend in the number of companies in the ranges with higher revenues and assets. This may indicate an increase in the scale of operations of some companies.

Table 1

Characteristics of the analyzed companies in 2019 and 2023

Category	2019		2023	
	Number of companies	% of companies	Number of companies	% of companies
Value of revenues (PLN thousand)				
up to 500	7	10	5	7
500 – 1,000	0	0	2	3
above 1,000	64	90	64	90
Value of assets (PLN thousand)				
up to 500	4	6	0	0
500 – 1,000	0	0	0	0
above 1,000	67	94	71	100
Earnings per share (PLN)				
below 0	8	11	21	30
0 – 5	53	75	40	56
5 – 10	7	10	4	6
over 10	3	4	6	8
Net profit (PLN)				
below 0	8	11	19	27
0 – 50	4	6	0	0
50 – 100	0	0	0	0
over 100	59	83	52	73

Source: own elaboration based on the companies' financial statements for 2019 and 2023.

The companies presented are mostly profitable, and the average value of earnings per share remains at a similar level, indicating that profitability remained at a similar level before and after the COVID pandemic. Furthermore, the table above indicates the dominance of companies with higher revenue and asset values.

On the basis of the data presented in the table, it should be stated that the surveyed companies indicate relative financial stability and the dominant group are big companies.

Research results

In 2019, 10 of the 71 analyzed companies (10%) did not apply operating segment reporting. In 2023, this percentage increased by only 1 percentage point.

The most commonly used model for reporting operating segments remains segmentation by business line. In 2023, 72% of companies (51 out of 71) applied it, representing an increase of 6 percentage points compared to 2019. The dominance of this approach indicates that enterprises focus on their core areas of activity, which improves reporting transparency and allows for better alignment of operational strategies with the specific characteristics of the markets in which they operate.

Geographical segmentation was applied by 5 companies (7%) in both 2019 and 2023, indicating the stability of this model.

The mixed model, combining segmentation by business line and geographical criteria, was applied by 4 companies in 2023, representing a decrease compared to 2019. This solution enables a more detailed presentation of results taking into account both product and the geographical diversification of business activities simultaneously.

Table 2

Segment reporting in the analysed companies

Year	Segmentation model	Number of companies	Share % of companies
2019	Line of business	47	66
2023	Line of business	51	72
2019	Geographic	5	7
2023	Geographic	5	7
2019	Mixed	9	13
2023	Mixed	4	6

Source: own elaboration based on the companies' financial statements for 2019 and 2023.

An analysis of changes in the number of operating segments disclosed by selected companies in 2019 and 2023 provides interesting conclusions about management strategies and adaptation to changing market conditions. In particular, attention was paid to changes in the number of segments, revenues, non-current assets, earnings per share (EPS), and net financial result.

Changes in the structure of the companies operating segments of the analysed in the period 2019–2023 revealed several important trends. In 19.72% of cases (14 of 71 companies), a decrease in the number of operating segments in 2023 compared to 2019. In this group, the number of segments presented ranged from 0 to 5, while the scale of reduction amounted to between 1 and 3 segments.

Among the 14 analyzed companies, 6 increased their revenues in 2023 compared to 2019. In turn, eight companies recorded an increase in the value of assets in 2023, and five of these cases concern the same entities that reported revenue growth. Similarly, in terms of net financial result, 6 companies achieved a higher result in 2023 than in 2019. Among them, five simultaneously recorded an increase in the value of assets or revenues.

The conducted analysis indicates that, among the entities that reduced the number of presented operating segments, approximately half did not experience negative financial consequences from this change.

In turn, an increase in the number of reported operating segments was observed in 19.72% of the analysed companies (14 out of 71 entities). The number of segments in the period 2019–2023 ranged from 0 to 8, while the increase in 2023 compared to 2019 was between 1 and 3 new segments.

Among the 14 analysed companies, 11 recorded revenue growth and 10 reported a higher value of assets in 2023 compared to the prepandemic period. Despite the predominance of entities characterised by improvement in the indicated categories, only six companies achieved a higher net financial result in 2023.

Meanwhile, in most of the analyzed companies (60.56%, that is, 43 out of 71 entities), the number of reported operating segments remained unchanged. The lack of changes in the segment structure may indicate relative operational stability and the absence of significant strategic transformations in these enterprises during the analysed period. The Table 3 presents changes in the number of operating segments.

Table 3

Number of operating segments of the analyzed companies in 2019 and 2023

Number of segments	2019		2023		Dynamics 2023/2019
	Number	%	Number	%	
No segments	3	5%	3	5%	0%
1 segment	16	23%	22	31%	+37.5%
2 segments	27	38%	18	25%	−33.3%
3 segments	12	17%	13	18%	+8.3%
4 segments	6	8%	8	12%	+33.3%
more than 5 segments	7	9%	7	9%	0%

Source: own elaboration based on the companies' financial statements for 2019 and 2023.

The data presented in Table 3 indicate the relative stability of the overall structure of the number of segments in the companies. Most companies operate in 1 to 3 segments. Moreover, it should be noted that there have been isolated cases of companies that have a large number of segments, which indicates a very

complex organizational structure. However, it is important that a significant number of companies maintain a constant level of the number of segments, proving that the diversification strategy is maintained. The structure of the companies surveyed in terms of operating segments is subject to minor changes but primarily focuses on striving to optimize their operations to adapt to changing market conditions.

Changes in the structure of operating segments and key financial ratios in 2019–2023 reflect various management strategies and adaptation of companies to changing market conditions. Analyzing changes in the number of segments and their impact on financial results, it can be seen that increasing and decreasing the number of segments can lead to an improvement in financial results, depending on the adopted management strategy and adaptation to market conditions. These results underscore the importance of strategic decisions regarding segment structure in the company's context of the management and its financial results.

The analysis of the dynamics of changes in segment reporting indicates that the number of companies reporting one or four segments has increased, while the number of companies reporting two segments has decreased. The categories "no segments" and ">5 segments" have remained unchanged. This may indicate a simultaneous tendency to simplify reporting in some companies and expand it in others, in response to changing market conditions.

The conducted analysis showed that in all companies analysed where a CODM (Chief Operating Decision Maker) was identified, this function was performed by the management board. Therefore, the number of CODMs depended on the size of the management board and was most frequently (30%) made up of three members (see Tab. 4).

Table 4

Number of the company's Management Board of the analyzed companies

Number of board members	Number of companies	Share % of companies
0	15	21%
1	13	18%
2	14	20%
3	21	30%
4	5	7%
5–7	3	4%

Source: own elaboration based on based on the companies' financial statements for 2019 and 2023.

Most often, companies surveyed have a three-person board, which also acts as CODM. This indicates the optimal size of the board, which allows for effective decision making. Moreover, a significant number of companies with boards of one or two members can also be observed. The study of the size of the management

board allows for a depiction and better understanding of the management structure in the audited companies. The results show flexibility in selecting the appropriate size of the management board, which was adapted to the individual needs of a given company.

Conclusions

The purpose of the study was to analyze changes in segment reporting in the construction and real estate sector in Poland, with particular emphasis on the impact of the COVID-19 pandemic on these changes. The audit included an analysis of the financial statements of companies listed on the Warsaw Stock Exchange in 2019 and 2023. The research conducted showed that the COVID-19 pandemic had a differentiated impact on segment reporting in the construction and real estate sectors. In most cases, the structure of the segments remained stable, which may indicate the operational stability of the companies. However, significant changes have been observed in the disclosure of financial results, which may be the result of companies adapting to changing market conditions.

Furthermore, the following conclusions can be drawn regarding the changes in segment reporting as a result of the Covid-19 pandemic:

1. Changes in operating segment reporting observed in 28 companies were twofold in nature. An increase in the number of segments (e.g., from 1 to 5 or from 2 to 3) may indicate a tendency toward business diversification and more detailed reporting. In contrast, a reduction in the number of segments (e.g., from 3 to 2 or complete abandonment of their presentation) may suggest business consolidation and simplification of the management structure.

2. Regardless of the direction of changes in the reporting structure, the companies majority of the analysed recorded improvements in financial indicators, including growth in revenues and the value of fixed assets. The positive trend may indicate that managerial efficiency and operational development are important determinants of financial performance, regardless of the degree of business segmentation.

3. Both maintaining a stable segment structure and expanding it showed a positive correlation with increases in net profit and revenues. This implies that the key factor influencing the improvement of financial results is the effective implementation of the strategy and operational efficiency of the enterprises, rather than merely the number of reported operating segments.

The results of the survey highlight the importance of flexibility in financial reporting in the face of global crises and the need to adapt management strategies to dynamically changing market conditions.

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