

Marek Masztalerz

Poznań University of Economics and Business, Poznań, Poland

e-mail: marek.masztalerz@ue.poznan.pl

ORCID: 0000-0003-3122-2717

PROFIT LEVELS AND PROFITABILITY RATIOS REPORTED IN THE COMMUNICATIONS OF PUBLIC COMPANIES

POZIOMY ZYSKU I WSKAŹNIKI RENTOWNOŚCI RAPORTOWANE W KOMUNIKATACH SPÓŁEK PUBLICZNYCH

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Summary: The purpose of the article is to identify the scope and to assess the quality of disclosures of profit levels and profitability ratios in the communications of public companies included in the WIG20 index. The research involved analyzing the content posted by companies on websites, such as financial statements, the annual report, chairman's letter to the shareholders, the presentation of results for investors, and financial highlights published directly on the website. In total, nearly 70 communiqués were analyzed. The descriptive analysis method, the comparative analysis and the induction method were used. As a result of the conducted research, it was determined whether and in which communications, and at which levels, the financial results and profitability ratios are reported and what is their frequency in the individual postings. The calculation formulas used between the companies were compared, the uniformity of the formulas used by each company in various messages was verified and their consistency with the reported numbers was checked.

Keywords: accounting communication, investor relations, reporting, profit, profitability.

Streszczenie: Celem artykułu była identyfikacja zakresu i ocena jakości ujawnień poziomów wyniku finansowego i wskaźników rentowności w komunikatach spółek publicznych wchodzących w skład indeksu WIG20. Badanie polegało na analizie zawartości komunikatów umieszczanych przez spółki na stronach internetowych, takich jak sprawozdanie finansowe, sprawozdanie z działalności, list prezesa do akcjonariuszy, prezentacja wyników dla inwestorów oraz dane publikowane bezpośrednio na stronie internetowej. Łącznie przeanalizowano blisko 70 komunikatów. Wykorzystano metodę analizy opisowej, analizy porównawczej i metodę indukcji. W wyniku przeprowadzonych badań określono, czy i w których komunikatach oraz na jakich poziomach raportowane są wyniki finansowe i wskaźniki rentowności oraz jaka jest ich frekwencja w poszczególnych komunikatach. Porównano stosowane formuły obliczeniowe

pomiędzy spółkami, zweryfikowano jednolitość formuł stosowanych przez każdą spółkę w różnych komunikatach oraz sprawdzono ich zgodność z raportowanymi wartościami.

Słowa kluczowe: komunikacja w rachunkowości, relacje inwestorskie, raportowanie, zysk, rentowność.

1. Introduction

Profit is widely recognized as the basic measure of a company's financial performance. Profit or loss is calculated, in general terms, as the difference between income and expenses. Depending on the scope of revenue, gains and expenses, the financial result (both in financial and management accounting) can be determined at various levels. For example, according to Polish accounting law, five levels of financial result are distinguished, i.e. gross profit, profit on sales, operating profit, profit before tax and net profit. In turn, the International Financial Reporting Standards (IFRS), due to the lack of the imposed profit and loss account model, do not mention specific levels of the financial result, which gives the entities reporting in accordance with IFRS a certain freedom in its presentation.

The research area in the article is an obligatory and voluntary disclosure of public companies applying IFRS in various communications, such as, for example, financial statements, the annual report or presentations of results for investors¹. The subject of the research is the reporting of profit(s) and profitability ratios.

The main purpose of the article is to identify the scope and assess the quality of disclosures of profit levels and profitability ratios in the communications of public companies. Achieving this goal requires answering the following specific research questions:

1. Which communications included information about the financial results?
2. What profit levels are reported in various communications?
3. Are the same profit levels recognized in various communications?
4. Which profit levels are most often reported in various communications?
5. Are profitability ratios presented in the companies' communications?
6. In which communications are profitability ratios placed?
7. Which profitability ratios are presented in various communications?
8. Which ratios are most often reported in various communications?
9. Are the same ratios included in various communications?
10. Are the calculation formulas of profitability ratios presented?
11. What formulas are used to calculate profitability ratios?
12. Are the ratios formulas uniform in the communications of the same company?
13. Are there any differences in the ratios formulas between companies?

¹ The details of the scope and methodology of the conducted research are described in Section 2.

Profitability ratios, according to the review of textbooks on financial analysis [Bednarski 2007; Dudycz 2011; Gabrusewicz 2014; Gołębiowski et al. 2014; Jerzewska 2013; Nowak 2017; Sierpińska, Jachna 2004; Waśniewski, Skoczylas 2004; Wędzki 2015], do not have a uniform composition and can be calculated in various ways². This lack of standardization results in the fact that the information about the level of a given indicator without a given calculation formula is useless. Therefore, as part of the article (apart from the issue of the profit levels in the companies' messages), an attempt was made to assess the quality of information on the profitability ratios through adopting two assessment criteria: placement (or not) of the ratios formulas and compliance of the formulas with the reported numbers.

The structure of the further part of the article is as follows. The methodology of the empirical research is presented in Section 2. The results of the analysis of the scope of profit level disclosures are discussed in Section 3. The results of the analysis of profitability ratios reporting are presented in Section 4 and the conclusions from the studies are included Section 5.

2. Research method

The first stage of the research procedure included the definition of the subject of research. The companies listed on the main market of the Warsaw Stock Exchange (WSE), included in the WIG20 index³, excluding financial institutions, were selected for the analysis. The choice of the research subjects was conditioned by three factors. First of all, they prepare financial statements according to IFRS and therefore do not use the financial reporting model imposed by the regulations. Secondly, the WIG20 index includes the largest and most liquid companies on the main market of the WSE, and, consequently, the companies that enjoy the greatest interest of stock exchange investors. Thirdly, financial institutions were excluded from the study due to the specificity of their operations and profit reporting. According to the adopted criteria, 14 companies were further examined⁴.

The second stage of the research procedure consisted in the gathering of research material. The choice of sources was determined by the adopted goal. For each of the 14 companies, their website was analyzed in the tab usually referred to as "investor relations" or "information for investors" and the following documents were downloaded (the abbreviations used in the tables and figures are in brackets)⁵:

² Masztalerz [2018], considering this as a communication barrier of the accounting language, analyzes syntactic problems concerning various financial indicators, including profitability ratios.

³ As of March 2019.

⁴ In the further part of the article, companies will be referred to using the abbreviations used on the WSE: CCC – CCC, CD Projekt – CDR, Cyfrowy Polsat – CPS, Dino Polska – DNP, Jastrzębska Spółka Węglowa – JSW, KGHM – KGH, LPP – LPP, Lotos – LTS, Orange Polska – OPL, Poland Grupa Energetyczna – PGE, PGNiG – PGN, PKN Orlen – PKN, Play – PLY, Tauron – TPE.

⁵ In some cases, some or all of the documents were contained in one PDF file under the heading "annual report" or "integrated report", but this is not relevant to the purpose of the research. In

- financial statements (FS),
- annual report (AR),
- presentation of the results for investors (PR),
- chairman's letter to the shareholders (CL).

In addition, financial highlights (FH), also referred to as “selected financial data” or “selected financial ratios”, placed directly on the website, i.e. in HTML and not in a separate file for download, were examined. For the sake of brevity, in the further part of the article, the sources analyzed will be referred to as “communications”.

The third stage of the research procedure included the content analysis of the collected material in order to obtain answers to the detailed research questions (indicated in the introduction). At this stage, first of all, the method of descriptive analysis and comparative analysis, as well as the method of induction, were used to generalize cognitive results.

3. Profit levels in the WIG20 companies' communications

As already mentioned, IFRSs do not impose a specific template of financial statements, which means that reporting entities in accordance with these standards are not obliged to disclose in the profit and loss account strictly defined levels of financial result (as is the case with entities reporting in accordance with Polish accounting law). Six different profit levels appeared in the analyzed messages, including⁶:

- 1) gross profit, gross profit on sales or gross margin, i.e. sales revenue less the cost of goods sold,
- 2) profit on sales or net profit on sales⁷, i.e. gross profit less sales, general and administrative expenses,
- 3) operating profit or EBIT (Earnings Before Interest & Tax), i.e. profit on sales adjusted for other operating income and expenses,
- 4) EBITDA (Earnings Before Interest, Tax, Depreciation & Amortization), i.e. profit on sales adjusted for other operating income and expenses⁸,
- 5) profit before tax, i.e. operating profit adjusted for financial revenues and costs,
- 6) net profit, i.e. gross profit less income tax.

It is worth noting that in individual entities, different levels of the financial results were presented in various messages. This is shown in Table 1.

principle, reports and documents for the year of 2018 were collected, and in a few cases – due to the unavailability of information during the study – for 2017. The study omitted the so-called current announcements of companies, as well as spreadsheets with financial data.

⁶ The provided level names come from the analyzed messages. The author grouped them according to the criterion of information content of a given profit level.

⁷ In one of the surveyed companies, reported profit on sales was in fact a gross margin.

⁸ Discrepancies in the determination of EBITDA will be discussed later in the article.

Table 1. Profit levels reported in the WIG20 companies' messages

Specification	CCC	CDR	CPS	DNP	JSW	KGH	LPP	LTS	OPL	PGE	PGN	PKN	PLY	TPE
Financial statements														
Gross profit	•	•		•	•	•	•	•		•		•		•
Profit on sales						•								
Operating profit (EBIT)	•	•	•	•	•		•	•	•	•	•	•	•	•
EBITDA											•			
Profit before tax	•	•	•	•	•	•	•	•		•	•	•	•	•
Net profit	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Annual report														
Gross profit	•	•		•	•		•	•				•		
Profit on sales					•	•	•							
Operating profit (EBIT)	•	•	•	•	•		•	•	•	•	•	•	•	•
EBITDA	•		•	•	•	•		•	•	•	•	•	•	•
Profit before tax	•	•	•	•	•	•	•	•			•	•	•	•
Net profit	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Presentation of the results for investors														
Gross profit	•	•		•			•							
Profit on sales														
Operating profit (EBIT)	•	•		•	•		•	•	•	•	•	•	•	
EBITDA	•		•	•	•	•		•	•	•	•	•	•	•
Profit before tax	•			•	•		•							
Net profit	•	•		•	•	•	•	•	•	•	•	•	•	•
Financial highlights on the corporate website														
Gross profit				•	•									
Profit on sales														
Operating profit (EBIT)	•	•	•		•		•			•		•		•
EBITDA	•	•	•	•	•	•			•	•		•		
Profit before tax	•	•	•		•									•
Net profit	•	•	•	•	•	•	•			•		•		•
Chairman's letter to the shareholders														
Gross profit														
Profit on sales														
Operating profit (EBIT)														
EBITDA			•	•		•		•	•			•		•
Profit before tax														
Net profit			•		•		•						•	•

Source: own study.

The most frequently reported level of the financial result was net profit, which is not surprising. It is worth noting, however, that EBITDA enjoys the greatest popularity in the chairman's letters to the shareholders, which half of the surveyed entities included in the statement. The frequency of profit levels in various communications of the surveyed companies in synthetic terms is presented in Table 2 and Figure 1.

Table 2. Frequency of the profit levels in the WIG20 companies' communications

Profit level	FS	AR	PR	FH	CL
Gross profit	71%	50%	29%	14%	–
Profit on sales	7%	21%	–	–	–
Operating profit (EBIT)	93%	93%	79%	57%	–
EBITDA	7%	86%	86%	64%	50%
Profit before tax	93%	86%	29%	36%	–
Net profit	100%	100%	93%	71%	36%

Source: own study.

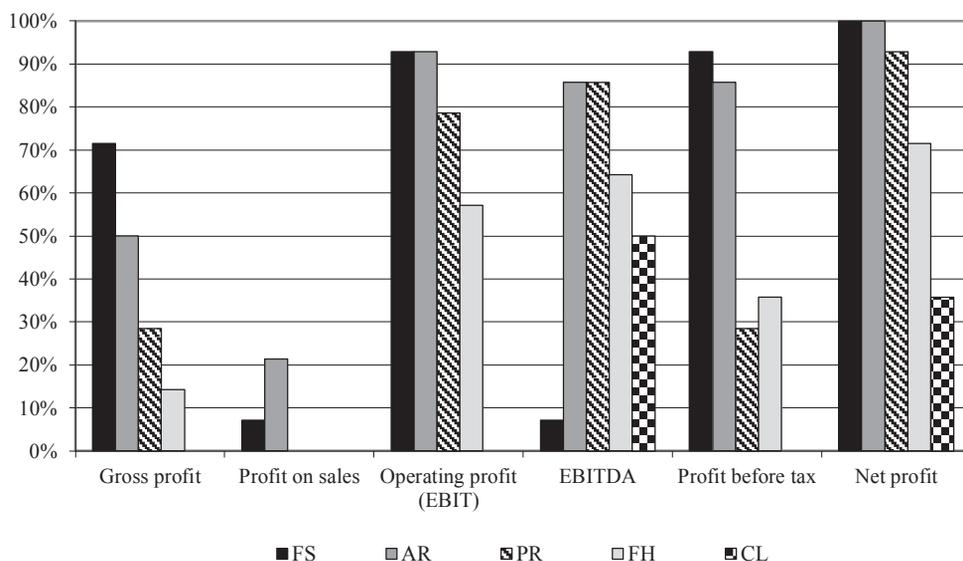


Fig. 1. Frequency of the profit levels in the WIG20 companies' communications

Source: own study.

It should be mentioned that EBITDA is derived from the American accounting tradition and is not regulated by IFRS (of which the reporting entities are perfectly aware and usually explain this in the notes to the financial statements or other communications). In financial statements, this measure appears only once in the

researched companies, but in the other communiques it has a very high turnout, which indicates that it is perceived as a measure important for the assessment of profitability.

In literal terms, EBITDA means the financial result before interest, tax, depreciation and amortization, and can be determined by adjusting the operating profit for depreciation and amortization. However, the analysis of the formulas used by companies from the WIG20 index indicates that most of the surveyed companies include additional components in the calculation of EBITDA, as presented in Table 3.

Table 3. Additional components (adjustments) of the EBITDA

Code	Impairment of fixed tangible assets	Impairment of fixed intangible assets	Impairment of other fixed assets	Liquidation of fixed assets	Other adjustments
CPS	•	•		•	
KGH	•	•	•		
OPL	•	•	•		•
PGE	•	•	•	•	•
PGN	•	•			
PKN	•	•	•		•
PLY					•
TPE	•	•	•		

Source: own study.

It should be added that some of the surveyed companies present in their communications two EBITDA measures, the first of which is referred to as “reported EBITDA” (calculated as operating profit plus depreciation and amortization), and the second – as “adjusted EBITDA”, “standardized EBITDA” or “clean-up EBITDA” (i.e. calculated using all adjustments adopted in a given company, including adjustments for the result of one-off events), or as “repeatable EBITDA” (adjusted for the effects of one-off events).

4. Profitability ratios in the WIG20 companies’ communications

Eight different profitability indicators appeared in the companies’ communications, including the gross margin (profitability at the gross profit level), operating profit margin (at the level of operating profit or EBIT), EBITDA margin, return on sales (ROS), return on assets (ROA), return on equity (ROE) and return on average capital employed (ROACE) and profit before tax margin. It should be added that in individual companies indicators were presented in various communiques. The places of publication of these indicators in the surveyed entities are presented in Table 4. The last line shows the percentage of companies that have included the profitability

ratio in at least one posting. The highest frequency is shown by the classic indicators from the Pont du model (ROE, ROA, ROS) and the EBITDA margin.

Table 4. Place of publication of profitability ratios

Code	Gross profit	EBIT margin	EBITDA margin	ROS	ROA	ROE	ROACE	PBT margin
CCC	PR	FH	FH, PR	–	–	FH	–	–
CDR	–	–	–	–	–	–	–	–
CPS	–	–	AR, FH, PR	FH	FH	FH	–	–
DNP	–	–	AR, FH, PR	–	–	–	–	–
JSW	–	AR	AR, PR	AR, FH	AR, FH, PR	AR, FH, PR	–	–
KGH	–	–	–	–	–	–	–	–
LPP	AR, PR	AR, PR	–	AR	AR	AR	–	–
LTS	–	AR	AR	AR	AR	AR	AR	–
OPL	–	AR	AR, PR	–	–	–	–	–
PGE	–	–	AR, PR	AR	–	AR	–	–
PGN	–	–	–	AR	AR, FH, PR	AR, FH, PR	–	–
PKN	–	–	–	–	AR	AR	AR	AR
PLY	–	–	AR, PR	–	–	–	–	–
TPE	–	AR	AR, FH, PR	AR, FH	FH	AR	–	AR
% of companies	14%	43%	64%	50%	57%	71%	14%	14%

Source: own study.

Individual profitability ratios had a different frequency in different communiques. In the financial statements only the gross profit margin appeared (and only in two companies), while in the annual reports all of the eight mentioned indicators were present, while the EBITDA indicator was dominant, which was also the most frequently reported measure in the presentations of results for investors. A synthetic list of the popularity (frequency) of profitability ratios in the cross-section of communiques is presented in Table 5.

The formulas of indicators adopted in individual companies were consistent, i.e. irrespective of the place of publication, the indicators were calculated in the same way. Although PGE does not provide the formulas used, the figures presented in different places are identical, so one can conclude that uniform calculation principles have been applied. The comparison of the formulas, however, shows that there are differences between the methods of calculating indicators in the surveyed companies. First of all, in the formulas of ROA and ROE ratios, almost all companies refer net

Table 5. Frequency of profitability ratios by place of publication

Ratio	FS	AR	PR	FH	CL
Gross profit margin	14%	7%	–	–	–
EBIT margin	–	36%	7%	7%	–
EBITDA margin	–	57%	57%	29%	–
ROS	–	43%	–	21%	–
ROA	–	36%	14%	29%	–
ROE	–	50%	14%	29%	–
ROACE	–	14%	–	–	–
PBT margin	–	14%	–	–	–

Source: own study.

profit to the assets or equity as of the end of the year, whereas in LPP the year average numbers are taken into account. PKN also applies average values, but only for the ROACE ratio (average capital in the denominator). Secondly, when calculating all profitability ratios, PKN has adjusted the numerator (operating profit, profit before tax or net profit) for impairment losses of non-current assets recognized in profit or loss. Thirdly, in the calculation of the ROACE ratio, companies define capital employed as the sum of equity and net debt, whereby net debt, understood as financial liabilities (loans and bonds) minus cash and cash equivalents, includes, in the case of LTS, liabilities due to leasing, whereas in the formula used in PKN these liabilities are ignored. Fourthly, there are significant syntactic differences in the EBITDA profitability calculation related to the determination of the formula numerator, i.e. the EBITDA, which is reported by the companies on a voluntary basis and in accordance with arbitrarily adopted rules (this is not subject to the IFRS regulations).

5. Conclusion

As a result of the research, the answers to all the research questions were obtained and the main goal was – in the author’s opinion – achieved. It was determined that information about the financial results is presented not only in the financial statements, but also in other communications. Six levels of profit and eight profitability ratios were identified in the companies’ communiques. It was observed that the EBITDA is the most popular financial performance measure (apart from the financial report, obviously, where net profit is most frequently reported). The analysis of the calculation formulas showed that for some indicators there are significant differences in the methods of calculation between the surveyed companies, and it was also found that within one entity, the indicators are calculated according to the same principles. It is

also worth adding that all surveyed companies provided (although not in all the communications) the formulas used for the indicators, and also made correct calculations (i.e. in line with the declared formulas).

The study has some cognitive limitations. First of all, the survey is limited to the largest companies. Secondly, some undoubtedly interesting issues were not examined, e.g. the motives and determinants of placing specific measures of profit and profitability in the communications or the reasons for the differentiation of the scope of disclosures in individual communications. It was also not examined whether the reporting of profit and profitability is not imprinted with impression management, i.e. creating the company image desired by the management by means of techniques such as selectivity, thematic and syntactic manipulation, performance comparison or visual manipulation (see [Masztalerz 2016]). These issues undoubtedly constitute an interesting direction for further research.

Bibliography

- Bednarski L., 2007, *Analiza finansowa w przedsiębiorstwie*, PWE, Warszawa.
- Dudycz T., 2011, *Analiza finansowa jako narzędzie zarządzania finansami przedsiębiorstwa*, Wydawnictwo Indygo Zahir Media, Wrocław.
- Gabrusewicz W., 2014, *Analiza finansowa przedsiębiorstwa. Teoria i zastosowanie*, PWE, Warszawa.
- Gołębiowski G., Grycuk A., Tłaczała A., Wiśniewski P., 2014, *Analiza finansowa przedsiębiorstwa*, Difin, Warszawa.
- Jerzemska M., 2013, *Analiza ekonomiczna w przedsiębiorstwie*, PWE, Warszawa.
- Masztalerz M., 2016, *Kreatywna sprawozdawczość 2.0 – czyli o zarządzaniu wrażeniem w raportach*, Studia i Prace Kolegium Zarządzania i Finansów SGH, nr 152, pp. 41-51.
- Masztalerz M., 2018, *Komunikacja w rachunkowości – aspekty językowe*, Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu, Poznań.
- Nowak E., 2017, *Analiza sprawozdań finansowych*, PWE, Warszawa.
- Sierpińska M., Jachna T., 2004, *Ocena przedsiębiorstwa według standardów światowych*, Wydawnictwo Naukowe PWN, Warszawa.
- Waśniewski T., Skoczylas W., 2004, *Teoria i praktyka analizy finansowej w przedsiębiorstwie*, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.
- Wędzki D., 2015, *Analiza wskaźnikowa sprawozdania finansowego według polskiego prawa bilansowego*, Oficyna Ekonomiczna Wolters Kluwer, Warszawa.