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Measurement of return on capital employed in assessment of company's condition

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Abstract: The return on capital employed, as a financial ratio, is an important element of the assessment of the company's condition. It shows the benefits gained by company shareholders against the invested capital. It constitutes the basic reason for investing in a particular enterprise. Thus, it is an important diagnostic variable in the construction of a synthetic indicator of the company's financial standing. The aim of this article is to propose a universal, useful indicator of the profitability of capital which is fully relevant to the formulation of company condition assessment indicators. It is assumed that it should meet the following requirements: firstly, it should reflect the reality, rather than falsify it; and, secondly, it should refer to the return on the entire capital employed. The study has been conducted using the substantive analytical procedure as well as the empirical analysis based on ten companies listed on Warsaw Stock Exchange.

Keywords: return on capital employed, financial analysis, enterprise, synthetic indicator

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1. Introduction

Irrespective of the approach to the definition of the company's objectives, it can never be neglected that one of the company's business objectives is to guarantee satisfying profits to its investor (Sudoł, 1999, pp. 65–67). Among the basic investor's yield indicators there are those showing the return on capital employed (ROCE). That is why it seems justified

to analyze ROCE indicators in terms of their usefulness for the presentation of the analyzed problem. The ROCE is a diagnostic variable important for the construction of a synthetic indicator of the company's condition.

The aim of the article is to evaluate the ROCE indicators suggested in the relevant body of literature and to propose an alternative indicator. It will be used for the construction of a synthetic indicator of the company's condition in the assessment which takes advantage of the Multidimensional Comparative Analysis instruments.

The basic indicators of the return on capital employed (ROCE) include the return on equity (ROE) (Table 1). This financial ratio shows the employment of every element of own capital in the company's operating activity: elements contributed both directly, such as the share capital or the share premium account, and indirectly, i.e. retained profits or capital revaluations. It seems, *prima facie*, that this method of ROCE measurement is the best. It shows the employment of the entire equity and its returnability in profits. And, indeed, this is the case when the analyzed company is profitable year after year and when its equity remains constant or is growing. A problem emerges when the company starts suffering such substantial losses that its equity is marginal or even negative. In this situation the indicator may even lead to incorrect conclusions. When the equity is marginal not due to the fact that the company has been underinvested and uses mainly the foreign capital but rather as a result of the equity being decreased by cumulated losses, then the indicator will show artificially high positive values (in the case of profit) or negative values (in the case of loss), whereas in reality the company's profitability may be negligible. Having negative equity and increasing losses, the company will exhibit the ROCE measured in this way as positive and, what is more, the bigger the losses, the higher the indicator will be, so it will be interpreted as showing higher profitability.

Table 1. Indicators of return on capital employed proposed in economic literature

Author	Indicator	Formula	Marking
Sierpińska and Jachna (1994) Bednarski et al. (1996) Bednarski (2007) Jerzemowska (2004) Jerzemowska (2018) Nowak (2017) Gabrusewicz (2019)	return on equity	$ROE = Z_n / K_w$	(1)
Bednarski et al. (1996) Bednarski (2007) Jerzemowska (2004) Jerzemowska (2018) Nowak (2017) Gabrusewicz (2019)	return on share capital	$R_k = Z_n / K_p$	(2)
Bednarski (2007)	financial viability	$r_k = Z_n / S$	(3)
Tarczyński (2002)	hypothetical profit	$R_h = Z_n / (0{,}015K_w)$	(4)

W h e r e: Z_n—net profit, K_w—equity, K_p—share capital, S—number of shares.

Source: Authors' own elaboration based on: Bednarski et al., 1996, p. 80; Bednarski, 2007, p. 114; Gabrusewicz, 2019, pp. 258–259; Jerzemowska (ed.), 2004, p. 295; Jerzemowska (ed.), 2018, pp. 304–305; Nowak, 2017, pp. 221–222; Sierpińska, Jachna, 1994, p. 106; Tarczyński, 2002.

The return on share capital (2) shows a direct scale of benefits for the provider of the capital gained thanks to the company's operating activity. At first sight, it seems the most universal illustration of the problem. However, it applies only to the share capital. Whereas equity also has some other components which are, in one way or another, always contributed by the owners. The share premium account is contributed together with the share capital as excess of the nominal share capital invested. Retained profits also count as the capital contributed by shareholders who thus refrain from taking dividends. The capital from valuation adjustment of assets shows the realignment of the capital value (through valuation adjustment of assets) with the current value of money. Indicator (2) completely disregards this part of the contributed capital. Siemińska (2002) also used this measure to assess the company's condition. For the purposes of fundamental analysis, it was also used by Krzysztof and Teresa Jajuga (Jajuga and Jajuga, 2015).

The indicator based on formula (3) seems to be the least useful. It informs about the profit from one share. In no way does it show benefits for the investor because shares may have various values, so they may reflect various amounts invested. Therefore, there is no relation between the profit and the invested amount and the indicator does not show the return on capital employed.

The hypothetical profit (4) is a kind of compromise between indicators (1) and (2). This indicator, in compliance with the assumptions, should show how much the real profitability exceeds the hypothetical, i.e. minimal, required return on capital employed.

2. Literature review

The measurement of the return on capital employed is a focus of both Polish and foreign economic literature. Publications of Polish authors (Sierpińska and Jachna, 1994; Bednarski et al., 1996; Jerzemowska et al., 2004; Bednarski, 2007; Nowak, 2017; Jerzemowska et al., 2018; Gabrusewicz, 2019) present calculation methods (Table 1) or applications of an individual indicator (assessment of the profit from the capital invested in the company). Foreign authors most often measure the return on capital employed according to formula (1). Only the net profit is sometimes replaced with the operating profit or with the profit before tax. For instance, Graham and King (2000) used the ROE as one of the measures for examining the relation between the carrying value and the market value of shares. In the assessment of the impact of the difference in the accounting standards, especially in the use of the accruals principle, on the financial analysis in international terms they employed the indicator of profitability proposed by Lainez and Callao (2000) and King and Langli (1998). Indicator (1) was used by Griffin and Zhu (2010) in the analysis of share repurchase records and share options. On the other hand, Hung (2001) used the ROE to find out how the accounting standards, particularly the use of the accruals principle, affect safeguards for shareholders. The financial ratio of the return on equity was also used by Rueschhoff and Strupeck (1998) in the analysis of differences between the American accounting standards and the standards applicable in thirteen countries examined by them. On the other hand, Brennan and Kraft (2018) used

it to assess the effects of financial decisions taken by managers in matters related to capital structure formation.

A fundamental source of profitability assessment is properly conducted accounting and proper financial reporting. Financial reporting and accounting has proved over time to be a powerful practice, which is embedded in an institutional context and shapes economic and social processes (e.g., Soll, 2015). Baker and Barbu (2007) indeed show that accounting has been an integral part of human civilization for 4000 years. Soll (2015) demonstrates the remarkable impact of accounting on the rise and fall of great nations. The founders of modern economic thought—from Adam Smith to Karl Marx—also considered accounting as essential to developing successful businesses and modern capitalism (Soll, 2015). Accounting affects a great variety of stakeholders: not only firms, investors, bankers, and auditors, but also ordinary citizens, employees, and states. Accounting serves as a basis to set the limit for distributable profits (Palea, 2015). Mainstream accounting research has mainly investigated financial accounting by focusing on the economic consequences for shareholders (Hopwood, 2009; Callen, 2015; Sikka, 2015; Wilkinson and Durden, 2015).

Basing on the indicators of the company's financial condition, a synthetic indicator of the financial condition can be formulated by means of the Multidimensional Comparative Analysis instruments. Most frequently, it is constructed as a sum of standardized diagnostic indicators (Nowak, 1990; Tarczyński, 2002; Łuniewska and Tarczyński, 2006; Lisek and Luty, 2019). Variations in the construction may be due to a different selection of indicators, method of variable standardization, or possibly a different method of variable weighing. Moreover, Lisek (2014) proposed in his study an indicator of the company's financial condition which is the arithmetic mean of the standardized diagnostic variables. For the purposes of standardization the author uses the critical value: the upper limit in the case of the stimulant and the lower limit in the case of the destimulant.

3. Postulated indicator of return on capital employed

An indicator of the return on capital employed should satisfy two requirements. Firstly, it should reflect the reality, rather than falsify it; secondly, it should refer to the return on the entire capital employed. The indicator based on formula (1) after modification seems to be the most suitable here. The modification should eliminate the impact of unrelieved losses from the previous years. The indicator may be calculated according to the following formula:

$$ROE_M = Z_n / (K_w + |L| - Z_n) \tag{5}$$

where:
ROE_M—modified net return on equity
Z_n—net profit from the analyzed year
K_w—equity
L—cumulated uncovered losses.

The indicator based on formula ROE_M has two advantages. The denominator is not expressed by a negative value, as a result there are no flaws in indicators (1) and (4). Moreover, the current year's result, which after all is not the capital employed yet, is eliminated from the equity.

Indicator ROE_M applies to the entire capital employed, therefore it has all the advantages of indicator (1). Its negative value always shows the company's unprofitability, while its positive value proves the company's profitability. Thus, it is a universal indicator. It is worth highlighting that it indicates the return on capital not burdened with the current year's financial result. Therefore, it seems the best, universal indicator of the return on capital employed in the company.

4. Empirical example

The sample for measuring the profitability of enterprises with the use of the formulas presented in Table 1 and the proposed indicator according to formula (5) was based on purposeful selection. The sample group of companies included those listed on Warsaw Stock Exchange (GPW) which declare profit (SARE, WAWEL, Aplisens, Orlen, PGNiG) or which are in loss (ABM Solid, Interbud Lublin, Wikana), those which have positive equity (SARE, WAWEL, Aplisens, Orlen, PGNiG, Wikana) or negative equity (ABM Solid, Interbud Lublin).

The net result for most of the surveyed companies is generally stable over time. Only slight fluctuations can be observed. For three companies (Orlen, Interbud, ABM Solid) the financial result in one year is significantly different from that recorded in the other analyzed years. The equity of only the companies: Aplisens, SARE and Wawel systematically increases over time. For the remaining ones included in the survey, it usually remains at the same level in subsequent years. On the contrary, the core capital of most companies is stable in the years.

Table 2. Net profit, equity, share capital of companies, designations according to formula (5)

Company	Indicator	Year					
		2013	2014	2015	2016	2017	2018
ABM Solid	Z_n	727	2078	1346	1882	920	−7667
	K_w	−169,700	−167,622	−166,270	−164,542	−163,622	−171,133
	K_p	3412	3412	3412	3412	3412	3412
	S	7934	7934	793	793	793	793
Aplisens	Z_n	14,184	13,721	13,749	13,324	19,263	13,304
	K_w	117,113	119,340	131,745	142,391	148,324	157,568
	K_p	2647	2694	2641	2641	2626	2519
	S	13,237	13,470	13,203	13,203	13,130	12,593
Interbud Lublin	Z_n	−14,302	–25,865	6981	−29,736	−1607	−5007
	K_w	47,356	21,491	28,472	−1265	−2872	−7879
	K_p	702	702	702	702	702	702
	S	7016	7016	7016	7016	7016	7016

Orlen	Z_n	618,000	−4,672,000	1,048,000	5,364,000	6,102,000	5,434,000
	K_w	23,135,000	16,302,000	17,846,000	22,168,000	27,565,000	31,634,000
	K_p	1,058,000	1,058,000	1,058,000	1,058,000	1,058,000	1,058,000
	S	428,000	428,000	428,000	428,000	428,000	428,000
PGNiG	Z_n	1,688,000	1,895,000	1,472,000	2,576,000	2,034,000	3,289,000
	K_w	22,969,000	23,780,000	23,738,000	25,228,000	26,033,000	28,833,000
	K_p	5,900,000	5,900,000	5,900,000	5,900,000	5,778,000	5,778,000
	S	5,900,000	5,900,000	5,900,000	5,778,000	5,778,000	5,778,000
SARE	Z_n	26	571	583	1439	173	1067
	K_w	2965	3584	9955	10,941	11,114	12,167
	K_p	222	222	222	229	229	229
	S	2216	2216	2216	2292	2292	2292
Wawel	Z_n	80,467	88,035	92,868	85,086	113,322	77,256
	K_w	372,172	429,356	491,578	550,308	630,704	670,238
	K_p	7499	7499	7499	7499	7499	7499
	S	1500	1500	1500	1500	1500	1500
Wikana	Z_n	−12,048	−13,620	−3159	−3048	−2916	−97
	K_w	42,133	40,852	38,051	35,149	32,233	32,137
	K_p	33,533	40,030	40,030	40,030	40,030	40,030
	S	167,666	167,666	20,015	20,015	20,015	20,015

W h e r e: Z_n—net profit, K_w—equity, K_p—share capital, S—number of shares, Z_n, K_w, K_p—thousands PLN, S—thousands of shares.

S o u r c e: Authors' own elaboration based on GWP, 2013–2020.

Table 3. Cumulated undivided losses markings according to the formula (5)—thousands PLN

Company	Year					
	2013	2014	2015	2016	2017	2018
ABM Solid	−252,749	−252,022	−249,944	−248,598	−246,715	−245,796
Aplisens	0	0	0	0	0	0
Interbud Lublin	32,692	18,391	−7474	−30,230	−30,230	−31,837
Orlen	20,064,000	20,059,000	14,656,000	14,846,000	18,925,000	23,718,000
PGNiG	13,627,000	14,420,000	15,144,000	11,829,000	16,451,000	17,074,000
SARE	0	0	−575	13	13	−1

Wawel	−181	−181	−181	−181	−181	−181
Wikana	−40,577	−52,625	−66,245	−69,404	−72,452	−75,367

S o u r c e: Authors' own elaboration based on GWP, 2013–2020.

Table 4. Indicators of return on capital employed of selected companies in 2018

Company	Indicator				
	(1)	(2)	(3)	(4)	(5)
ABM Solid	0.045	−2.247	−9.668	2.987	−0.093
Aplisens	0.084	5.281	1.056	5.629	0.092
Interbud Lublin	0.635	−7.132	−0.714	42.366	−0.173
Orlen	0.172	5.136	12.696	11.452	0.207
PGNiG	0.114	0.569	0.569	7.605	0.129
SARE	0.088	4.659	0.466	5.846	0.096
Wawel	0.115	10.302	51.504	7.684	0.130
Wikana	−0.003	−0.002	−0.005	−0.201	−0.001

S o u r c e: Authors' own elaboration.

Indicator (1) for companies: Orlen, PGNiG, Aplisens, WAWEL, SARE, has similar values to those calculated according to formula (5). It applies to the profitability of the entire capital, i.e. it can be said that in standard cases it is a good measurement of the return on capital employed. Unfortunately, a problem appears when the case is not a standard one. First and foremost, it refers to the company with negative equity. In this case, ABM Solid is not profitable. However, due to negative equity, the indicator has the positive value, informing of the alleged profitability of the company and its good financial condition. But, as a matter of fact, in the analyzed year the company is not profitable. Similar situation is observed in the case of Interbud Lublin. Thus, indicator (1) is a good measurement instrument, but not a universal one. It presents a false picture of the company's condition when the company has negative equity.

The profitability of capital expressed by indicator (2) is free from the flaws characterizing indicator (1). Equity must always be positive (at least in the case of the capital company), so the indicator will always be positive for a profitable company and negative for an unprofitable company. However, it applies only to a part of the equity. In the case of half of the examined companies the share capital does not make even 10% of the equity. Therefore, the indicator ignores an immense part of the capital employed (mainly in the form of the share premium account or retained profits), sometimes yielding artificially high values.

Indicator (4) is practically identical with indicator (1). The only point of difference is that the equity in the denominator is substituted with 0.015 of that capital, being the critical value of return on capital at the time of indicator formulation. It has all the flaws of indicator (1).

Indicator (3), like indicator (2), is free from the flaws of indicator (1). As mentioned earlier, it does not apply to the value of the capital but rather to the number of shares, which may vary in the company and the number of shares does not reflect the amount of capital invested. This indicator may be used by the investor to analyze the ratio of the market value to the profit rather than to assess the company's financial standing.

In standard cases, indicator (5) only slightly deviates from indicator (1). However, in the case of ABM Solid Company and Interbud Lublin it correctly illustrates their huge unprofitability of capital. Thus, the indicator has all the advantages of instrument (1) and is much more universal.

The capital profitability measure is an important diagnostic variable taken into account in assessing the condition of companies, in particular when we compare them. Thus, the way it is defined has a significant impact on the correctness of the information contained in the synthetic measure.

The condition of companies was analyzed with the following indicator (Lisek, 2014):

$$m = \frac{1}{4}\left(\frac{X_1}{0{,}03} + \frac{X_2}{0{,}018} + \frac{X_3}{1{,}00} + \frac{1{,}2}{X_4}\right) \tag{6}$$

where:

m—company's condition evaluation

X_1—return on assets (ROA): the ratio of the company's net profit to the value of its assets; informs about the company's capacity to generate profits and about the asset management effectiveness

X_2—net return on equity: defined by one of formulas (1)—(5); shows how much profit was made by the company from the equity

X_3—quick liquidity: the ratio of the value of the company's current assets reduced by inventories to the value of the company's current liabilities; shows what possibilities there are to settle the current liabilities with the most liquid company assets

X_4—general level of debt: the value of the company's total liabilities to its total assets; describes in general the financing structure of the company's assets.

Indicator m is the arithmetic mean of the standardized diagnostic variables, whereby the standardization involves:

– in the case of the stimulants—division of the value of the diagnostic variable by the critical value, i.e. the lower limit of the diagnostic variable;
– in the case of the destimulants—multiplication of the inversed value of the diagnostic variable by the critical value, i.e. the upper limit of the diagnostic variable.

Owing to the method of variable standardization, indicator m shows directly if the analyzed company is in good or bad condition, rather than showing only its relative rank in the group of analyzed companies. The neutral value of this indicator equals one. If, for a particular company, the indicator is higher than one, it means that the company is in good condition; if the indicator is lower than one, the company is in bad condition.

This is due to the fact that there are usually no cumulative losses, and total equity changes in a manner correlated with the share capital. However, this usually happens. In a particular enterprise, there may be negative equity due to accumulated losses and then other measures of capital profitability, except for the formula (5) lead to erroneous conclusions.

Table 5. Pearson's linear correlation coefficient between measures of capital profitability of selected companies in 2018

		Indicator				
		(1)	(2)	(3)	(4)	(5)
Indicator	(1)	1.000	−0.559	−0.050	1.000	−0.521
	(2)	–	1.000	0.718	−0.559	0.840
	(3)	–	–	1.000	−0.049	0.464
	(4)	–	–	–	1.000	−0.521
	(5)	–	–	–	–	1.000

S o u r c e: Authors' own elaboration.

Table 6 presents synthetic indicator *m* in different variants (according to formulas (1)–(5), respectively) for variable X_2.

Table 6. Synthetic indicator (*m*) for selected companies in 2018 with net return on equity calculated from formulas (1)–(5), respectively

Company	Value of indicator *m*				
	(1)	(2)	(3)	(4)	(5)
ABM Solid	−1.368	−20.467	−82.311	23.148	−2.518
Aplisens	8.621	51.929	8.621	54.824	8.686
Interbud Lublin	4.445	−60.288	−6.798	352.198	−2.291
Orlen	3.635	45.004	108.005	97.635	3.931
PGNiG	3.446	7.239	7.239	65.868	3.569
SARE	1.930	40.028	5.079	49.919	2.000
Wawel	4.598	89.489	4.598	67.674	4.723
Wikana	0.853	0.858	0.838	−0.799	0.871

S o u r c e: Authors' own elaboration based on GWP, 2013–2020.

The value of the synthetic indicator of the company's condition (*m*) based on the return on capital calculated from formula (1) is only insignificantly different from the indicator based on the return on capital calculated from formula (5) (Table 3). The synthetic indicators based on the indicators of return on capital calculated from formulas (2)–(4) are significantly different from the ones based on formulas (1) or (5). However, in non-standard cases the differences are substantial. In the case of ABM Solid the synthetic indicator based on the calculation of the return on capital from formula (5) is almost twice as high as the one based on the calculation of the return on capital from formula (1). On the other hand, the analysis of Interbud based on indicator *m* in one situation (when the return on capital is based on formula [4]) points to its

excellent condition and in another situation (when X_2 is based on formula [5]) demonstrates its poor financial standing. Taking into consideration the colossal loss and very negative equity, it is obvious that the correct conclusions can be drawn from the calculations based on formula (5).

Positions of the companies vary in rankings (Table 7) based on synthetic indicator *m* with the defining variants of X_2, which is demonstrated by the estimated correlation coefficients of the ranks by Spearman (Table 8).

Table 7. Positions of companies by synthetic indicator *m* calculated from net return on equity defined by formulas (1)–(5), respectively

Company	Ranking				
	$R_{(1)}$	$R_{(2)}$	$R_{(3)}$	$R_{(4)}$	$R_{(5)}$
ABM Solid	3	8	7	1	7
SARE	5	5	3	4	4
Interbud Lublin	8	7	8	7	8
Wikana	7	6	6	8	6
Wawel	1	2	2	5	1
Aplisens	2	1	5	3	2
Orlen	4	3	1	2	3
PGNiG	6	4	4	6	5

S o u r c e: Authors' own elaboration.

In ranking (1) the third position is occupied by AMB Solid and in ranking (3) the first position is occupied by the same firm, the company which is classified on much lower positions in the other rankings. Remarkably, Orlen has an exceptionally low position in ranking (1). Regardless of the ranking, high positions were taken by Orlen and Aplisens. However, middle in the rankings are SARE and PGNiG. The last positions in the ranking are occupied by Interbud Lublin and ABM Solid.

Table 8. Correlation coefficient of ranks by Spearman for particular rankings

		Ranking				
		$R_{(1)}$	$R_{(2)}$	$R_{(3)}$	$R_{(4)}$	$R_{(5)}$
Ranking	$R_{(1)}$	1.000	0.794	0.733	0.830	0.879
	$R_{(2)}$	–	1.000	0.842	0.564	0.937
	$R_{(3)}$	–	–	1.000	0.636	0.903
	$R_{(4)}$	–	–	–	1.000	0.636
	$R_{(5)}$	–	–	–	–	1.000

S o u r c e: Author's own elaboration.

The following rankings are significantly correlated (*p values* < 0.05) (Kukuła, 1998, p. 190): $R_{(1)}$ and $R_{(4)}$, $R_{(2)}$, and $R_{(5)}$ as well as $R_{(3)}$ and $R_{(5)}$ (Table 8). It proves that in the comparative analysis of companies the method of definition of return on capital plays an important role.

If we assess the condition of companies in 2013–2018 using the measure, when we define the net return on equity ratio according to formula (5), we note that with the exception of 2014, Aplisens is the highest classified company, i.e. a company characterized by high profitability, high liquidity and low debt. Companies with a stable position, such as Orlen, PGNiG and Wawel, occupy high positions in the surveyed years. On the contrary, the rankings close Wikana, ABM Solid and Interbud Lublin companies, which had financial problems in the examined years.

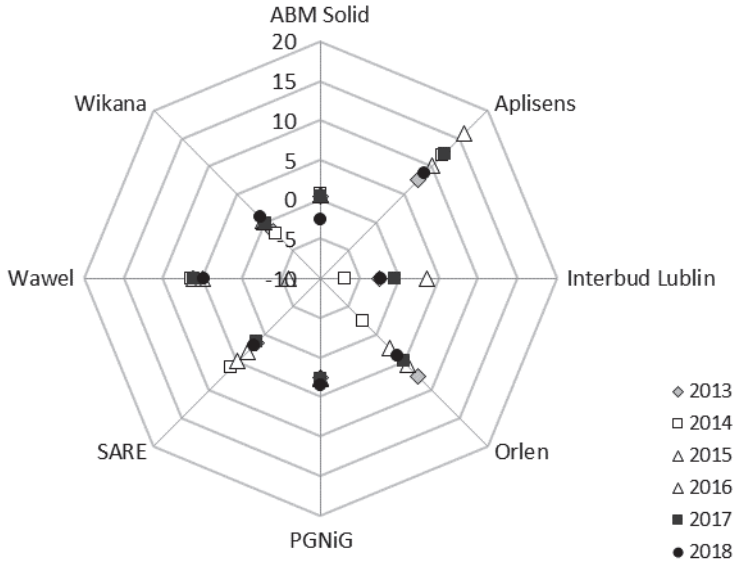

Figure 1. Measure values in 2013–2018

N o t e: The net profitability of the criteria sets is defined according to formula (5).

S o u r c e: Authors' own elaboration based on GWP, 2013–2020.

5. Conclusions

The indicator of return on capital employed calculated as a ratio of the net profit to the equity is a useful instrument, although only if there are no significant cumulated losses. However, it is not useful if the equity is negative. On the other hand, the profitability of share capital cannot be applied to the entire capital. What seems to be the best indicator is the return on equity adjusted by the undivided result from the previous years and the current year's result. This indicator applies to the entire capital employed, therefore it has all the advantages of the ROA indicator. Its positive value means that the company is profitable and its negative value shows that the company is unprofitable. It illustrates the return on the company's capital not

burdened with the current year's financial result. Therefore, it seems the best, universal indicator of the return on capital employed in the company.

By the same token, it seems justified to use the return of capital defined in this way in the construction of the synthetic indicator of the company's condition.

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Pomiar zyskowności kapitałowej jako element oceny kondycji finansowej przedsiębiorstwa

Abstrakt: Pomiar zyskowności kapitałowej przedsiębiorstwa jest ważnym elementem oceny jego kondycji. Odzwierciedla korzyści udziałowców firmy od jednostki zainwestowanego kapitału. Stanowi podstawową przesłankę do inwestowania w przedsiębiorstwo. Tym samym jest ważną zmienną diagnostyczną w konstrukcji syntetycznego miernika kondycji finansowej firm. Celem artykułu jest zaproponowanie uniwersalnego, użytecznego miernika zyskowności kapitałowej, w pełni przydatnego do konstruowania miary oceny kondycji przedsiębiorstw. Zakłada się, że powinien on spełniać następujące postulaty: po pierwsze, dawać prawdziwy obraz sytuacji, nie zafałszowywać go, a po drugie, odnosić się do rentowności całego zainwestowanego kapitału. W pracy zastosowano metodę analizy merytorycznej, a także analizę empiryczną na przykładzie ośmiu spółek notowanych na Giełdzie Papierów Wartościowych w Warszawie (GPW).

Słowa kluczowe: rentowność kapitałowa, analiza finansowa, przedsiębiorstwo, miara syntetyczna