

# ASSESSMENT OF THE FINANCIAL SITUATION OF COMPANIES LISTED ON THE WARSAW STOCK EXCHANGE

## OCENA SYTUACJI FINANSOWEJ SPÓŁEK NOTOWANYCH NA GIEŁDZIE PAPIERÓW WARTOŚCIOWYCH W WARSZAWIE

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**Abstract:** The aim of the article is to assess the financial situation of companies in the clothing and footwear sector listed on the Warsaw Stock Exchange in 2017. Firstly, financial ratios were calculated for each entity, the ranking was created and the companies were grouped in terms of their financial situation. In this way, a general picture of the competitive position of companies was obtained. The first group includes three companies with the best financial standing. They obtained the highest efficiency in the use of assets, as evidenced by the highest average values for the following stimulants: total assets turnover, current assets turnover and return on assets. Due to the fact that knowledge of financial ratios in the changing environment may be insufficient to assess the financial standing of enterprises, the weighted average cost of capital (WACC) with their components was calculated for them, which allowed judging the assessment of the structure of financing the operations of individual companies and the comparison with the financial situation determined on the basis of indicators. The best financing structure for their activities is held by companies that have been classified in high positions in a ranking based on financial indicators. However, there was one exception, which confirms the need to use different methods to assess the financial situation.

**Keywords:** financial situation, weighted average cost of capital, WACC, capital assets pricing model, CAMP

**Streszczenie:** Celem artykułu jest ocena sytuacji finansowej spółek sektora odzież i obuwie notowanych na Giełdzie Papierów Wartościowych w Warszawie w 2017 r. W pierwszej kolejności dla każdego podmiotu obliczono wskaźniki finansowe i utworzono ranking oraz pogrupowano spółki pod względem ich sytuacji finansowej. W ten sposób uzyskano ogólny obraz pozycji konkurencyjnej spółek. Do grupy pierwszej zostały zaliczone trzy spółki charakteryzujące się najlepszą sytuacją finansową. Uzyskały one najwyższą efektywność wykorzystania majątku, o czym świadczą najwyższe wartości średnie dla następujących stymulant: obrotowości majątku ogółem, obrotowości majątku obrotowego i rentowności majątku. W związku z tym, że znajomość wskaźników finansowych w zmieniającym się otoczeniu może być niewystarczająca do oceny sytuacji finansowej przedsiębiorstw obliczono dla nich średni ważony koszt kapitału WACC (Weighted Average Cost of Capital) wraz ze składowymi, co pozwoliło na ocenę struktury finansowania działalności poszczególnych spółek i porównanie z, określona na podstawie wskaźników, sytuacją finansową. Najlepszą strukturę finansowania swojej działalności mają spółki, które w rankingu utworzonym na podstawie wskaźników finansowych zostały sklasyfikowane na wysokich pozycjach. Jednak był jeden wyjątek, co potwierdza konieczność korzystania z różnych metod do oceny sytuacji finansowej.

**Słowa kluczowe:** sytuacja finansowa, średni ważony koszt kapitału, WACC, model wyceny aktywów kapitałowych CAMP

### Introduction

Decisions related to cooperation with, investment in or purchasing the shares of an enterprise begin mostly with collecting information about the firm and establishing its competitive position. Investors are on the lookout for information about the key financial indicators and about how sources of funds are leveraged, and compare the enterprise's business with others in the same sector. Such an assessment

is not always sufficient, but it does give an overall picture of how the entity operates. Establishing and understanding the financial indicators of public limited companies is not difficult, but determining their competitive position and calculating the cost of capital require definitively more effort and some complex computation.

Every person investing their funds in an enterprise or granting a loan to it counts on gaining benefits. From the point of view of the enterprise, the

earnings that the given investment brings to the owners and creditors are a cost, which is referred to as the cost of capital. The entity holding the capital must make a decision whether to spend it on their current needs, save it or invest the funds. Here, the cost of capital is the key parameter affecting such decisions. It can be described as the minimum benefit expected by the capital's owners depending on the risk they expose the capital to (Dudycz, 2005), or treated as the cost of missed opportunities. It is equal to the combined rate of return that the investors could expect from investing their funds in another company or other assets bearing a comparable risk (Szczepankowski, 2007).

The aim of this paper is to attempt at assessing the financial situation of the clothing and footwear sector enterprises listed on the Warsaw Stock Exchange (GPW) in 2017 based on their financial indicators. A ranking of the companies was made, after which they were gathered in typological groups according to similarities between their financial situations. Also, the weighted average cost of capital (WACC), together with its components, was calculated.

## Literature review

Capital is therefore understood as comprising all the elements that are found on the liability side of the balance sheet and constitute a source of financing the assets gathered within the enterprise (Czekaj, Dresler, 2002). According to the source of capital, the following are distinguished (Bień, 2018):

- equity, originating from both external sources, i.e. contributed by the shareholders, and internal sources (mainly equivalent to the retained net profit),
- outside capital, taking the form of loans, credit facilities or other types of liabilities.

Having capital entails some costs to be borne by the enterprise. The cost of capital is a quantity characterizing both the structure of capital and the cost of its individual components. The following are some of the factors affecting the cost of capital (Iwin, Niedzielski, 2002):

- the risk related to making profit,
- the share of debt in the total capital structure,
- the financial situation of the enterprise,
- the opinion among investors.

The cost of capital is the price paid by the capital receiver for the possibility of using the capital and,

simultaneously, the rate of return for the capital provider (Sierpińska, Jachna, 2004). It can be defined as the total value required to cover the cost of debt and equity, as a ratio of expenditure on account of having capital to the market value of that capital, or as an average benefit from alternative investment opportunities characterized by the same risk (after: Batóg B., Batóg J., 2007). The methods for calculating the cost of capital are very diverse and are largely based on security valuation models in which the expected rate of return depends on the changing prices of shares, bonds and interest rate levels. Therefore, the cost of capital is a function of the prices in the capital market, the money market and the deposit and credit market (Michałak, 2014).

The Weighted Average Cost of Capital (WACC) measure is mainly used for (Szczepankowski 2007; Szczecińska, 2011):

- discounting cash flows planned to be gained from the investments undertaken by the enterprise,
- discounting the enterprise's average revenue and thus determining its corporate value using the discounted cash flows method,
- assessing the impact of the structure of capital on the corporate value,
- determining the lowest acceptable rate of return for new investment undertakings of the enterprise,
- calculating the indicator of the value created for the owners, being the economic value added.

## Methodology and theoretical basis

The studies performed for the purpose of this paper focused on 2017<sup>1</sup> and covered eighteen clothing and footwear sector companies listed on the Warsaw Stock Exchange. The choice of companies was dictated by the availability of appropriate data<sup>2</sup>. The information used for assessing their financial situations was procured from their annual accounts. The weighted average cost of capital, in turn, was determined on the basis of the rates of return on the shares of the individual companies and market portfolio established on the basis of weekly stock quotes.

The first part of the research involved calculating the key financial indicators. Only those indicators were deemed as diagnostic features that were capable of discriminating between the objects studied. In order for this to be established, the

<sup>1</sup> This was the last year for which complete input data were available at the moment of writing this article.

<sup>2</sup> The company Próchnik was excluded from the study because on 5 June 2018 the District Court for Łódź-Śródmieście in Łódź

announced its liquidation bankruptcy, the reasons for which were its financial problems faced in previous years (financial losses and negative equity values in 2016-2017). Próchnik had been one of the longest GWP-listed companies.

potential features were verified for their sufficient variability, as measured with the coefficient of variability (Nowak, 1990). The subsequent step entailed a comparison between the coefficients of variability with an arbitrarily assumed critical value  $v^*$ . In this study, it was assumed that  $v^* = 10\%$ . Those quantities for which  $v_j \leq v^*$  were excluded from the set of potential features. The next selection step involved limiting the features' excessive correlations. To this end, the parametric method proposed by Hellwig was used (Nowak, 1990). In this method, the **R** matrix of correlation coefficients between individual diagnostic features is used as the starting point. The  $r^*$  parameter, also referred to as the critical value of the correlation coefficient, with  $0 < r^* < 1$ , constitutes the classification criterion. The value of  $r^*$  may be selected by the researcher or determined formally. Out of the matrix of correlations determined for potential diagnostic features, central and isolated features were singled out, which then formed the final set of features to be used in the study.

The methods for ordering the set of objects may be divided into linear and non-linear ones. The former allow for establishing the hierarchy of the objects according to a specified criterion. The latter, though, are only used to indicate objects similar in terms of the values of their features (Panek, 2009). The linear ordering methods include, among others, synthetic value-based procedures that use model and non-model indicators (Grabiński, 1992; Pociecha et al., 1988). In the non-model methods, the synthetic value is a function of standardized values of the input variables. The model methods, on their part, resort to the concept of the model object, i.e. a model object carrying desired values of the input variables. The synthetic measure is constructed on the basis of a measurement of the distance between the observed object and the model object (Panek, 2009; Tarczyński, Łuniewska, 2006).

In this paper, a classical approach to the model method was used for constructing the taxonomic measure of development. The classical measure of development is based on standardized  $z_{ij}$  values of the diagnostic features, therefore (Nowak, 1990, cf. Bąk, Szczecińska, 2013):

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{S_j}, (i = 1, 2, \dots, n; j = 1, 2, \dots, m). \quad [1]$$

Subsequently, for each studied object its distance from the established model of development is determined along with the formula:

$$d_i = \sum_{j=1}^m |z_{ij} - \varphi_j|, (i = 1, 2, \dots, n), \quad [2]$$

whereas for the stimulants  $\varphi_j = \max_{i=1,2,\dots,n} z_{ij}$ , and for the destimulants  $\varphi_j = \min_{i=1,2,\dots,n} z_{ij}$ .

The synthetic measure of development is determined using the following formula:

$$\mu_i = 1 - \frac{d_i}{d_0}, \quad [3]$$

where:  $d_0 = \bar{d} + aS_d$ ,  $\bar{d}$  – mean value of  $d_i$ ,  $S_d$  – their standard deviation  $d_i$ ,  $a$  – a constant value determined according to the formula [4].

Using both the formula for calculating the synthetic measure of development and the information that the measure's values range between 0 and 1, the limit for the  $a$  constant was determined (Tarczyński, Łuniewska 2006)<sup>3</sup>:

$$a \geq \frac{d_{i \max} - \bar{d}}{S_d}, \quad [4]$$

where:  $d_{i \max}$  – maximum value of  $d_i$ .

The ordering of objects using the classical measure provides a basis for grouping the objects into four classes. The most popular classical grouping method is called "the three means method" (Nowak, 1990; cf. Szczecińska, 2018). The following formula is used to establish the groups according to this method:

$$\begin{aligned} \text{group 1: } & \mu_j \geq \bar{\mu} + S_\mu, \text{ group 2: } \bar{\mu} + S_\mu > \mu_j \geq \bar{\mu}, \\ \text{group 3: } & \bar{\mu} > \mu_j \geq \bar{\mu} - S_\mu, \text{ group 4: } \mu_j < \bar{\mu} - S_\mu, \end{aligned}$$

where:  $\bar{\mu}$  – mean value of the measure,  $S_\mu$  – standard deviation of the measure.

There are various methods for evaluating the cost of an enterprise's capital and its components provided in literature. More about the neoclassical theory of capital structure as a compromise between tax effects and costs of bankruptcy, as well as the methods for calculating the cost of capital, to be found in S. Ross' publication (2005). In this study, the weighted average cost of capital (WACC) was determined, WACC being a sum derived from the method of financing weighted by its share in the enterprise's liabilities (Wędzki, 2003):

$$WACC = k_E \times u_E + k_D \times u_D \quad [5]$$

where:  $k_E$  – cost of equity,  $u_E$  – share of equity in the enterprise's liabilities,  $k_D$  – cost of outside capital.

<sup>3</sup> Here,  $a \geq 2.89$ , which is why  $a = 3.0$  was accepted for calculating the synthetic measure of development.

Due to the specificity of the individual sources of funds, the cost of each liability component is calculated differently. Here, the cost of equity was evaluated using the CAPM method according to the following formula (Reilly, Brown, 2001; Amadi, 2010):

$$k_E = RFR + \beta \times (R_M - RFR) \quad [6]$$

where:  $RFR$  – risk-free rate of return,  $R_M$  – rate of return on market portfolio,  $\beta$  – the given company's equity beta.

The beta is a standard systematic risk measure, as it ties market portfolio covariance with its variance. In practice, it reflects the variability of the given enterprise's share prices as compared to the variability of the entire index (Johnson, 2000). This indicator was calculated based on the following formula (Mayo, 1997, Ogier, Rugman, Spicer, 2004):

$$\beta = \frac{\text{cov}(R_{it}, R_{Mt})}{\text{var}(R_{Mt})} = \frac{\sum_{i=1}^n (R_{it} - R_i) \times (R_{Mt} - R_M)}{\sum_{i=1}^n (R_{Mt} - R_M)^2} \quad [7]$$

where:

$\text{cov}(R_{it}, R_{Mt})$  – covariance between the rate of return on the shares of the enterprise and the rate of return on market portfolio,  
 $\text{var}(R_{Mt})$  – variance of the rate of return on market portfolio,  
 $n$  – number of periods for which information is provided,  
 $R_{it}$  – rate of return on the  $i$  share in the  $t$  period,  
 $R_{Mt}$  – rate of return on market portfolio in the  $t$  period,  
 $R_i$  – arithmetic average of the rates of return on the  $i$  share,  
 $R_M$  – arithmetic average of the rates of return on market portfolio.

The beta expresses the correlation between a change in the price of the given enterprise's shares and a change in the value of the main stock index. If  $\beta > 1$ , this means that the price of the given enterprise's shares increases (decreases) faster than the stock index increases (decreases). If  $\beta < 1$ , this means that the change in the price of the given enterprise's shares is weaker than the change in the stock index, and thus the risk is lower. The third, and extreme, case is where  $\beta = 1$ . Here, the price of the given enterprise's shares changes at the same pace as that of the stock index, and the risk associated with investing in that enterprise's shares is equal to the average risk in the stock market (cf.: Reilly, Brown, 2001; Szczecińska, 2011).

The cost of outside capital is understood to quantitatively describe the relationship between the interest and other borrowing costs and the value of the outside capital raised, as adjusted by the quantity of the tax shield (tax savings) resulting from the borrower's expensing the interest and other borrowing costs. It is determined according to the following formula (cf. Szczepankowski, 2007):

$$k_D = r \times (1 - T) \quad [8]$$

where:  $r$  – interest rate on the debt,  $T$  – income tax rate (the basic corporate tax rate in Poland is 19%),  $(1 - T)$  – tax shield.

## Results and discussion

For the purpose of assessing the financial situation of clothing and footwear sector enterprises listed on the Warsaw Stock Exchange, financial ratios were calculated that constituted an input set of diagnostic features for the ordering and grouping of companies. That set included the following ratios:

- $X_1$  – current ratio,
- $X_2$  – quick ratio,
- $X_3$  – cash ratio,
- $X_4$  – debt ratio,
- $X_5$  – long-term liabilities to fixed assets ratio,
- $X_6$  – assets turnover ratio,
- $X_7$  – fixed assets turnover ratio,
- $X_8$  – current assets turnover ratio,
- $X_9$  – days sales of inventory,
- $X_{10}$  – days sales outstanding,
- $X_{11}$  – return on sales (ROS),
- $X_{12}$  – return on assets (ROA),
- $X_{13}$  – return on equity (ROE).

The ratios were calculated according to Bednarski L. (2007). When assessing these enterprises' ability to settle their current liabilities, wide variations among them can be observed. The coefficients of variability for the calculated liquidity ratios exceeded 200%. The largest problems with settling short-term liabilities in 2017 were demonstrated by four companies (Intersport, Prima Moda, Textilmarket, Protektor). Their current and quick ratios were lower than one.

The turnover ratios, also referred to as efficiency ratios, allow for assessing the effectiveness with which the given enterprise uses its resources. Their essence lies in analyzing the relationship between the dynamic value – the revenue from sales, and the static value expressed as an average balance of the resources. The higher current assets turnover ratio, the higher efficiency with which this type of resources are used (a stimulant). The companies analyzed herein differed significantly in respect of the values of the turnover ratios, which was confirmed by the high coefficients of variability amounting to 72% for the fixed assets turnover ratio, 48.6% for the total assets turnover ratio and 42.2% for the current assets turnover ratio. The highest efficiency in using their current assets in

2017 (with ratios exceeding 3) was demonstrated by four entities: LPP, Intersport, CCC and Textilmarket.

The debt ratio measures the share of outside capital in the financing of the enterprise's assets. The lower this ratio, the higher the entity's ability to repay its debts. It has the nature of a destimulant, i.e. the lower the value the better it is for the firm. For the analyzed group of clothing and footwear enterprises, this ratio was at an average level of 38%. The lowest levels of debt (below 10%) were demonstrated by three companies: Wistil, Sanwil Holding and Redan.

The profitability ratios point to an enterprise's ability to generate profit. The higher their levels, the better its financial situation, which is why all the ratios in this class are deemed as stimulants. The return on equity ratio describes the efficiency with which equity is invested. As in the market economy, equity can be earmarked for different undertakings, the assessment of its utilization in the given enterprise's business is of fundamental importance to the owner of that equity (Czekaj, Dresler, 2002). In 2017, three companies from the studied sector demonstrated a lack of profitability: Solar, Intersport and Interma Trade. The highest return on equity was observed for Textilmarket, which scored several times better than the other profitable companies.

The structures of liabilities of the studied companies differed widely. Among them were those that based their business mostly (at levels exceeding 90%) on equity (Wistil, Sanwil Holding, Redan), and those that used outside capital at levels exceeding 80% (Textilmarket, Intersport Polska). The outside capital structures of most of the companies were dominated by short-term liabilities, and in the case of seven companies the ratios of such liabilities to the overall outside capital exceeded 95%.

The assets of an enterprise reflect those components of its property that are used for income earning, i.e. making profit and satisfying the creditors' claims. The structure of assets constitutes that main factor affecting the enterprise's financial situation and position (Bednarski et al., 2003). A similarly substantial diversity can be observed in the studied enterprises' structures of assets. A prevailing share of fixed assets in the overall worth of assets was demonstrated by seven companies, with this ratio exceeding 70% for three of them (Wistil, Protektor, Vistula). The largest share of current assets in the asset structure (86%) in 2017 was observed for Solar Company SA.

In order to classify the clothing and footwear sector companies, the discriminatory properties of the diagnostic features were verified using the procedure referred to in the methods section. All the features accepted for the study were characterized

by considerable variability, with their coefficients of variability ranging from 42.2% to 529.9%. Additionally, they should be noted for demonstrating strong or very strong asymmetries.

Using Hellwig's parametric method allowed for the central and isolated features to be singled out, which then formed the final set of diagnostic features:  $X_3, X_5, X_6, X_8, X_9, X_{10}, X_{12}$ . Most of them were stimulants (features the high values of which are beneficial in terms of the essence of the phenomena studied herein), with only two (indexed as 9 and 10) being destimulants whose low values were desired.

The values of the synthetic variable (determined using the formulae 1 to 3) for the clothing and footwear companies listed on the Warsaw Stock Exchange, taking into account the accepted diagnostic features, are presented in Table 1.

**Table 1.** Linear ordering and grouping of the clothing and footwear sector companies listed on the Warsaw Stock Exchange in 2017

No.	Company	Measure value	Group
1	Textilmarket S.A.	0,2852	
2	LPP S.A.	0,2608	I
3	CCC S.A.	0,2499	
4	Intersport Polska S.A.	0,2273	
5	Monnari Trade S.A.	0,2148	
6	CDRL S.A.	0,2130	
7	Sanwil Holding S.A.	0,2083	II
8	Wistil S.A.	0,1881	
9	Wojas S.A.	0,1867	
10	Esotiq&Henderson S.A.	0,1866	
11	Bytom S.A.	0,1748	
12	Vistula Group S.A.	0,1730	
13	Prima Moda S.A.	0,1675	
14	Witchen S.A.	0,1642	III
15	Protektor S.A.	0,1492	
16	Interma Trade S.A.	0,1253	
17	Redan S.A.	0,1123	
18	Solar Company S.A.	0,0064	IV

Source: author's own study

Using the three means method, the set of companies was divided into four groups gathering objects demonstrating similar financial situations (Table 1). Group 1 included those enterprises whose synthetic measure value was higher than or equal to 0.2439. These were the three companies (17%) enjoying the best financial situation. They were characterized by the highest asset utilization efficiency, as proved by the highest mean values for the following stimulants: total assets turnover, current assets turnover and return on assets. Additionally, this group had the shortest average days sales outstanding ratio (approx. 2.5 weeks).

The second and largest group contained seven business entities (39% of the entire population). Its results as compared with the general mean values were good, as well, especially in respect of the efficiency of assets utilization and profitability. These companies enjoyed the highest mean value for the cash ratio. This meant that a large portion of their short-term liabilities could be settled without delay (immediately). Their average days sales outstanding ratio was one month.

Group 3 included six enterprises that, when compared to the other groups, were characterized by the highest days sales of inventory ratio of 216 days on average, and worse average profitability ratio values than groups 1 and 2. Their days sales outstanding ratios amounting to an average of 18 days were assessed as a positive factor.

The last group comprised two companies that were unprofitable in 2017. Their synthetic measure values were below 0.1220. They had the lowest assets utilization efficiency ratios and the highest days sales outstanding ratios (of over 2.5 months).

The calculation of the cost of capital began by determining the beta for each enterprise using the formula (7). This coefficient is a standardized measure of systematic risk and has numerous practical applications (Duliniec 2001, Szczecińska 2011). Rates of return on the shares of the individual companies and market portfolio<sup>4</sup> were determined on the basis of weekly stock quotes for 2017 (<https://www.bankier.pl>, accessed 16.03.2019). The mean rate of return on market portfolio was 0.8264. The values of mean rates of return on the shares and the beta coefficients are shown in Table 2.

For nine of the companies, the beta (or  $\beta$ ) was lower than one (though not negative) and, therefore, the risk related to investing in their shares in the year concerned was lower than the mean risk present in the GPW-listed clothing and footwear sector companies' stock market. However, in the case of eight entities their beta was negative, which meant that their rate of return on the shares behaved in opposition to the changes in the stock index rate. Only in one case – that of LPP – was the  $\beta > 1$ , meaning that its shares carried a higher risk than the mean risk in the stock market. This enterprise's share price responded approx. 1.2 as strongly as the market portfolio to the factors affecting the level of the systematic risk independent of diversification of portfolio composition.

**Table 2.** Mean rates of return on the shares of the individual companies and their beta values in 2017

Company	Mean rate of return on the shares	The beta
Bytom S.A.	0,2226	0,1437
CCC S.A.	0,6619	0,8055
CDRL S.A.	0,0615	-0,2256
Esotiq&Henderson S.A.	2,0236	-0,2193
Interma Trade S.A.	-3,6239	-0,9353
Intersport Polska S.A.	0,5528	0,2832
LPP S.A.	1,1218	1,2340
Monnari Trade S.A.	-0,2631	0,2952
Prima Moda S.A.	1,3029	-0,2292
Protektor S.A.	0,4993	0,0535
Redan S.A.	-1,5050	-0,1130
Sanwil Holding S.A.	0,7414	0,0616
Solar Company S.A.	-0,2220	0,1199
Textilmarket S.A.	-1,5653	0,2509
Vistula Group S.A.	0,5758	0,1506
Wistil S.A.	-0,4573	-0,0174
Witchen S.A.	0,1958	-0,1154
Wojas S.A.	-0,1844	-0,0562

Source: author's own study based on weekly share prices of the individual companies derived from weekly stock quotes (<https://www.bankier.pl>, accessed: 16.03.2019).

The cost of the studied enterprises' equity (Table 3) was estimated using the CAPM method according to the formula (6). The risk-free rate of return was determined based on the mean 1-year treasury bond yield in 2017 and amounted to 1.537%<sup>5</sup>. The mean rate of return of the WIG clothing sector index in 2017 was 0.8264. Due to the differences between the beta coefficients and the rates of return on market portfolio calculated for each of the companies, the costs of equity assumed a mean value of 1.4783%. The highest cost of equity was observed for Interma Trade, and the lowest for LPP S.A.

PLN credit interest rates are dependent on the WIBOR (Warsaw Interbank Offer Rate)<sup>6</sup> value and individual banks' margins. This way the costs are established that borrowers are to bear in return for the money borrowed from the financial institutions. Most often, the following two values are taken into account when calculating the costs of credit: WIBOR 3M (with the rate updated every three months) and WIBOR 6M (with the rate updated every six

<sup>4</sup> Here, the WIG-odzież (WIG-clothing) index is assumed as the rate of return on market portfolio.

<sup>5</sup> Mean value calculated on the basis of „Dane historyczne rentowności obligacji skarbowych z okresu 01.01.2017-31.12.2017”,

<https://pl.investing.com/rates-bonds/poland-1-year-bond-yield-historical-data>, (accessed: 30.03.2019).

<sup>6</sup> WIBOR – the interest rate at which banks provide loans to other banks, set at 11:00 am every working day.

months)<sup>7</sup>. As for the amount of margin, this depends on the purpose of the credit, the borrower's own contribution, and their credibility and individual standing. For the purposes of this paper, the cost of outside capital was calculated using the mean WIBOR 3M rate for 2017, i.e. 1.7298%<sup>8</sup>, expanded by the estimated credit margin<sup>9</sup> and multiplied by the tax shield – according to the formula (8). For the studied enterprises, this cost amounted to approx. 3.0211%. Subsequently, using the formula (5), the weighted average cost of capital was calculated for each company (Table 3). The lowest WACC values (below 1.6) were observed for three companies (LPP, Sanwil Holding and Wistil), which meant that their choice of outside capital structure was better. On these grounds, it can be concluded that their corporate value was higher than that of the other studied companies. These companies were also characterized by good financial standing (group 1 and group 2).

**Table 3.** Cost of equity, the weighted average cost of capital (WACC) and the typological groups of companies in a similar financial situation in 2017, constructed on the basis of the taxonomic measure of development

Company	Cost of equity	WACC	Group
Bytom S.A.	1,4349	2,0528	III
CCC S.A.	0,9647	2,3358	I
CDRL S.A.	1,6973	2,3982	II
Esotiq&Henderson S.A.	1,6928	2,2831	II
Interma Trade S.A.	2,2016	2,3891	III
Intersport Polska S.A.	1,3358	2,7208	II
LPP S.A.	0,6602	1,5643	I
Monnari Trade S.A.	1,3272	1,8291	II
Prima Moda S.A.	1,6999	2,5319	III
Protektor S.A.	1,4990	2,1344	III
Redan S.A.	1,6173	1,7360	IV
Sanwil Holding S.A.	1,4932	1,5727	II
Solar Company S.A.	1,4518	1,6327	IV
Textilmarket S.A.	1,3588	2,7685	I
Vistula Group S.A.	1,4300	1,6806	III
Wistil S.A.	1,5493	1,5776	II
Witchen S.A.	1,6190	2,0364	III
Wojas S.A.	1,5770	2,3193	II

Source: author's own study.

<sup>7</sup> Cf. „WIBOR – od niego zależy Twoja rata”, <http://www.wibor3m.pl/>, (accessed: 25.03.2019).

<sup>8</sup> The data used for calculating the mean WIBOR 3M came from the Money.pl website, <https://www.money.pl/plieniądze/depozity/zlotowearc/>, (accessed: 01.03.2019).

## Conclusions

Systematic financial situation assessments are a fundamental source of information required when making executive decisions. Beside comparisons over a period of time, particular benefits are gained from spatial comparisons as they allow for establishing the enterprise's competitive position. This paper assessed the financial situation and clothing and footwear sector companies listed on the Warsaw Stock Exchange in 2017. The ranking of the companies and their grouping provided an overall picture showing which of them were in a better financial situation than others. The results of the ordering were affected by both the choice of the indicators assumed in the study and the taxonomic method applied and, therefore, it should be noted that different ordering and grouping results in respect of the phenomenon studied herein might be obtained if a different set of diagnostic features and another method were used.

The knowledge of the key financial indicators and their utilization in making the right executive decisions within a dynamic environment might not be sufficient. Therefore, this study also included an analysis of the structure of capital and its cost for the studied group of companies. Based on the gathered information, the levels of equity and outside capital used for financing the enterprises' businesses were estimated. In the studied group, the debt level ranged between 2% and 85%, although only in the case of three of them was the ratio of outside capital to the overall capital employed to finance the companies' operations lower than 10%.

Our analysis of the weighted average cost of capital showed that the best business financing structure was demonstrated by those companies that were placed high in the ranking developed on the basis of financial indicators. There was, however, one enterprise (Textilmarket S.A.) that while taking the top position in the ranking had a very high share of outside capital in the total value of liabilities and was therefore characterized by the highest WACC. This confirms that an enterprise's financial situation should not only be assessed by focusing on its financial indicators, but also by resorting to a more detailed study. Given the above, it is important that during the decision-making process continuous studies should be carried out and the changing conditions monitored both by the executive staff and the potential investors.

<sup>9</sup> The credit margin for 2017 was assumed at the estimated level of 2 percentage points.

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