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Employing Metrics of Effectiveness in the Capital Structure Management of an Enterprise

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Abstract: Effectiveness metrics can be employed in the management of capital structure in an enterprise understood as a relationship between equity and liabilities on which interest is paid. In using the measures, it is possible to analyze and evaluate capital structure, and also to strive for its optimization. An optimal capital structure reduces the weighted average cost of capital, thus affecting the increase in the enterprise value. Determining capital structure is one of the elements involved in the finance strategy employed in an enterprise. The measures relating to capital structure that are most frequently applied include: measures based on the criterion of the value of equity, capital structure indicator, degree of financial leverage, return on equity and weighted average cost of capital. The paper's objective is to determine the relevance of effectiveness measures in the capital structure-shaping process. It is written drawing on specialist literature covering the topics discussed. Moreover, an analysis, in the form of a case study, is conducted with regard to selected enterprise effectiveness measures relating to determining capital structure. The said analysis is conducted based on the consolidated financial statement of Ursus S.A., a joint stock company, over the period of 2014-2016.

Key words: capital structure, enterprise effectiveness, effectiveness metrics, finance strategy

JEL Codes: G31, G32

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1. Introduction

In today's world, what conditions enterprises' success and competitive advantage is the effectiveness of activities they undertake. The very word 'effectiveness' is an ambiguous notion. In literature, a number of terms having a similar meaning is used: efficiency, performance,

productivity, profitability, cost-efficiency (Bielski, 2002: 54). Effectiveness is most commonly defined as an outcome of actions taken which is depicted through the relationship between effects obtained and outlays made (Stoner, 1994: 29-30). For an organization to function efficiently, it needs to apply systematically metrics so as to be able to measure its performance, with those metrics centering the enterprise's focus on effective activities, allowing for the evaluation of the extent to which the strategies adopted have been implemented, while helping to specify future directions. Adopting formalized rules on measuring, recording and analyzing effectiveness will enable one to detect irregularities within this area, it will show the existing reserves and capabilities in terms of improving activities, thereby contributing to an increase in the enterprise's value (Barbachowska, 2014: 45).

Determining capital structure is one of the major areas in terms of enterprise financial management. According to the theory of economics, an appropriate balance between equity and debt may have an impact in terms of minimizing the cost of capital used by an enterprise to finance itself, and thus it may increase its market value. It is therefore reasonable to deploy enterprise effectiveness measures in the process of capital structure management. Their deployment will allow for making decisions which, from the perspective of activities conducted by an enterprise, are rational and advantageous.

The aim of this paper is to determine the relevance of effectiveness metrics for the process of shaping the capital structure of an enterprise. The first section of the paper presents the concept and capital structure management process, as well as factors that exert influence on the structure. Next, the effectiveness metrics involved in determining capital structure are outlined. A case study illustrating the practical application of the metrics discussed concludes the paper. The analysis is conducted on the basis of a financial statement of a joint stock company, Ursus S.A. covering the period of 2014-2016.

2. Management of enterprise capital structure

The process of acquiring capital by an enterprise is accomplished in that the said capital is chosen while taking into account a variety of criteria, such as its availability, the cost of the capital that is being acquired or thus-related risk. This brings about the shape of capital structure which is characterized by a specific proportion of equity and debt. This relationship shows the enterprise's

level of debt (debt to equity ratio). The decisions affecting these proportions are amongst the major decisions made in terms of managing enterprise's finances.

In literature, a single uniform definition that would specify capital structure is lacking. Some see capital structure as being equivalent to the liabilities structure of the enterprise balance sheet, whereas others argue that capital structure is the same as the permanent capital structure (equity and long-term liabilities) (Szczepański, Szyszko, 2007: 332-333).

At present, the leading concepts surrounding the process of forming capital structure of the enterprise are the static- tradeoff theory and pecking order theory (Myers Stewart, 1984: 575–592). In the static-tradeoff theory, the enterprise balances the benefits and costs arising from debts so as to be able to achieve the optimum in terms of capital structure. The main advantage of having debts is the so called tax shield with the cost, on the other hand, being the enterprise's possible bankruptcy. In the extended framework of the static-tradeoff theory, an enterprise seeks the optimum which is to level the marginal cost of debt with that of equity (Frydenberg, 2011).

According to the pecking order theory, investments are financed at first by internal funds such as retained profit, depreciation and revenues from selling short-term financial assets or other unnecessary items of wealth and only later they are financed by a new debt and new issues of equity (Pomykalska, Pomykalski 2007: 189).

For the purpose of this paper, one should assume that capital structure is the relationship between equity and liabilities on which interest is paid, defined as debt. There are numerous factors affecting capital structure. A division that is most commonly encountered is the division into macro- and microeconomic factors. The macroeconomic factors may include (Łach, 2012: 189):

- specificity of the line of business,
- tax system,
- monetary policy,
- legal determinants,
- economic situation,
- accepted accounting principles.

The microeconomic factors may, among others, include:

- size and organizational and legal form of the enterprise,
- availability of capital,

- the cost of capital,
- level of operational and financial risk,
- profitability,
- stability of sales,
- financial liquidity,
- management quality.

In making decisions as to the shape of capital structure, it is necessary to carry out within this scope an analysis concerned with maintaining appropriate relationships between equity and debt, in other words, determining the capital structure in a rational way. While making a decision as to the alternative - either choosing equity or debt – one should take into consideration the features attributed to the individual sources of funding (Bielawska, 2009: 81). For the enterprise's own capital, this pertains in particular to the following characteristics: financial stability, perpetuity in terms of the use of capital, guarantee to cover losses and debt, as well as security for claims. For borrowed capital, these characteristics include: flexible financing of undertakings, possibility to use financial leverage together with tax protection and maintaining control over the enterprise. Companies will therefore be interested in becoming more indebted so as to be able to increase their potential and take advantage of the effect of financial leverage, while on the other hand, they will ensure that an appropriate level of their equity is maintained, as it will protect the firm against losing its financial liquidity. One should, of course, bear in mind that for a company to be able to increase its value the requirement is to use effectively the capital acquired. An enterprise must manage the funds obtained in such a way as to be able to pay interest on debt and work out surplus for the owners (at least at the level they expect). The capital structure will also be determined by the enterprise's position on the market – new entities face bigger problems when trying to acquire external funds than stable and well-established firms. Therefore, in the case of the first ones, equity will be dominant in their capital structure, at least at the beginning of the development stage. It is worth emphasizing that the cost of capital is not the only factor that determines the choice of one structure of financing over another.

In the process of shaping capital structure, an enterprise should strive for the optimum. An optimal capital structure is such which brings about the balance between risk and profit, allowing for maximization of the firm's value. While creating optimal capital structure it is necessary to answer the question whether enterprise should be financed by borrowed capital and further, to what

extent it proves to be advantageous from the perspective of maximizing the firm's value, and at what point potential costs start outweighing potential income. The use of debt is linked to the use of the effect of tax shield. The level of the potential tax benefits linked to the interest rate on debt is dependent on tax rates and the amount of the operating result from which the financial costs are deducted. A target capital structure may change over time with the changing conditions, while determining capital structure always requires that appropriate balance be maintained between equity and debt. Optimal capital structure is not permanent in nature, since it changes depending on the existing internal and external conditions.

In the context of the discussion on shaping capital structure, what deserves attention is the research published in 2002 concerned with the factors involved in the choice of capital structure in enterprises operating on the European market. The objective of the research was to examine the relationship between the theory and practice in terms of how capital structure is being determined. It turns out that the paramount reasons for making a particular choice in terms of capital structure are enterprise financial flexibility¹ and creditworthiness assessment. Tax advantages relating to the use of debt are ranked only the third. The costs of financial uncertainty, which are a major factor in the theory of optimal capital structure, proved here to be of little relevance. Also, it is worth drawing attention to the equity valuation factor (possible overestimation or underestimation). The market price of stocks is of much lesser importance in choosing capital structure despite its exerting influence on the WACC (Szczęsny, 2014: 81).

3. Enterprise effectiveness metrics

Effective functioning of enterprises represents one of the key issues addressed in the field of finances, economics and management sciences. Effectiveness ensures that enterprises can survive, which is the key requirement in the implementation of other aims such as growth, development, maximizing managers' benefits or creating market value, so important nowadays. From the enterprise's point of view, key is economic effectiveness defined as the relationship between the outcome and outlays made to achieve that outcome. The level of economic effectiveness is

¹ Financial flexibility is interpreted as the enterprise's capability to adapt to the fluctuating market conditions.

therefore of interest for both external and internal stakeholders. Hence using economic effectiveness as a guideline, it being the basis for decision-making, constitutes a necessary condition in terms of their survival and development, as well as maximization of their owners' benefits (Wrzosek, 2005: 459). This refers, too, to the decision made while choosing the sources used for financing the enterprise's activity and determining its capital structure.

Effectiveness is a measure denoting the rationality of enterprises' activity and it is related to their capability to raise their market position and improve financial results. The research on effectiveness is predominantly concerned with analyzing the outcome achieved at specific outlays or using outlays in order to achieve the set outcome. If outlays and outcome can be expressed in measurable units, having them compared enables one to obtain an effectiveness indicator which allows for making an evaluation by making a comparison, for example, to a specific baseline level, plan or effectiveness of other units. Thanks to this, we can identify areas needing improvement, define lines of activity, monitor progress. Effectiveness in economic terms can be measured by applying methods based on a ratio analysis. Three groups of indicators for measuring effectiveness can be distinguished (Jaki, 2012: 149):

- a) accounting-based indicators,
- b) financial indicators,
- c) market indicators.

The indicators based on accounts are the most common form of measuring effectiveness in the ratio analysis. With effectiveness viewed as the relationship between revenues and costs, they focus predominantly on measuring profit at different levels of the financial result, relating it to the size of capital employed and the value of assets. The second group encompasses financial indicators, which are based on cash flow as the main evaluation parameter. The last group, market indicators, allows the effectiveness to be evaluated from the shareholders' point of view. This is an evaluation that is conducted from outside. Market estimation of equity takes into account each time historical financial results, the current situation and predictions as to the enterprise's future, hence it is considered to be the most objective evaluation.

Amongst the groups of indicators listed above there are also indicators related to capital structure. They allow effectiveness to be measured within this scope. This provides the basis for the management staff to be able to make rational decisions when choosing sources of financing and achieving an optimal capital structure.

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Ratios for measuring effectiveness which can be used to determine capital structure, including their characteristic features are presented in the table below.

Table 1. Effectiveness metrics linked to capital structure.

Accounting-based measures	EBIT	Earnings Before Interest and Taxes	The profit before paying interest and taxes. With the help of EBIT, one can compare the results of different enterprises over different periods. It is possible because EBIT does not take into account market interest rates, the degree of financial leverage used by firms and tax burdens.
	DFL	Degree of Financial Leverage	An indicator to measure the size and strength of the financial leverage impact.
	ROE	Return on Equity	The measure of effectiveness in terms of the use of equity. This ratio describes the size of net earnings per average unit of equity that was employed in the company.
	EPS	Earning per Share	It defines the size of net earnings per share. It enables one to assess possible benefits to be gained by the shareholder both as dividend and increase in a market share, which is dependent on the earnings generated by the company in relation to one share.
	D/E ratio	Capital structure indicator /debt-to-equity ratio	It defines the proportions between liabilities and equities
	E/D ratio	Equity-to-debt ratio	It represents the relation between equity and debt
Financial measures	WACC	Weighted Average Cost of Capital	It represents the lowest possible rate of return on investment, specifies the target rate of the planned actions aimed at creating an optimal capital structure.
	FCFE	Free Cash Flow to Equity	The calculation of free cash flow is helpful while evaluating the effectiveness of decisions that are being made.
	NPV	Net Present Value	A method for evaluating the effectiveness of material investments. The NPV value depends on the level of discount rate (e.g. capital cost). This ratio is future-oriented, therefore the evaluation poses a risk.
Market measures	VCI	Value Creation Index	It show the relation of return on equity to its cost. The rate of return on equity should be higher than its cost.
	EVA	Economic Value Added	This measure says whether a particular firm creates value for owners. An increase in the enterprise's value occurs when in the course of the current and investment activity the rate of return on invested capital is higher than the cost of acquiring and using this capital.

Source: self-reported data based on Pomykalska, Pomykalski, 2007:88-89; Szczepański, Szyszko, 2007:417; Sierpińska, Jachna, 2007:108,476-477; Micherda 2012: 268-269; Motylska-Kuźma, Wieprow, 2013:92-93, 170-171.

Accounting-based indicators draw on historical data, which is the source of their being so commonly employed. Financial statements of enterprises are documents which are publicly available, standardized, and, in many cases, their reliability is approved by an independent auditor. Unlike the measures whose nature is that of a forecast, the data included in the financial statements are reliable information. Financial and market indicators are based on cash flows, as the main evaluation parameter. By definition, this group of indicators eliminates the shortcomings present in the accounting-based indicators and which refer to the application of different accounting principles and methods for the valuation of assets and liabilities. In the vast majority, the financial and market indicators find their practical application in the evaluation of individual enterprises, provided that more specific information than that included in financial statements is available. That is why their use is much less common than that of the accounting-based indicators (Wilczyński, 2014: 3-6).

4. Application of effectiveness metrics in capital structure management

The decisions on the choice of the sources of financing and determining capital structure must be made in an informed way and based on rational foundations. Thus, every decision should be subject to an assessment that ensures its evaluation from the perspective of its impact on the financial situation and the value of the firm. These evaluations should be made applying an *ex ante* approach, that is, at the stage when the decision is being made, and *ex post*, that is, during the final evaluation of their effectiveness. The basic tool used in these evaluations is the financial analysis, which uses specialized financial indicators allowing for examining the effectiveness of financial decisions and for making rational choices (Wasyłkowska, 2013: 364). The indicators that are most likely to be used in the management of capital structure include (Micherda et al., 2010: 211-214):

- indicators based on equity ownership criterion,
- capital structure indicator,
- self-financing indicator.

The indicators based on equity ownership reflect capital structure as the share of equity in the total capital and the share of debt in the total capital. These indicators inform about the proportions of equity and that of debt in the total capital and are usually expressed as percentage. Considering

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capital structure in these terms should be linked to economic risk involved in the line of business an enterprise pursues.

The level of the capital structure indicator reflects debt to equity ratio. The lower its level the greater financial independence of an entity. A growing level of this ratio requires the analysis of the impact of debt on the firm's financial situation. This pertains, in particular, to analyzing the cost of capital at its specific structure and determining possible benefits linked to the enterprise's increased value. If operating profit (EBIT) is sufficiently high as to enable the enterprise to take advantage of the positive effect of financial leverage, then a too low level of the ratio implies a less than effective enterprise management. A too high level, on the other hand, may signal excessive debt.

The level of the self-financing indicator (equity-to-debt ratio) should be higher or at least equal unity, since it is assumed that the situation where equity outweighs debt provides an enterprise not only with financial independence and liquidity, but it also manifests a safe financial management. However, it should be noted that if there exists a conducive environment for making investments, a conservative capital structure management may result in the loss of economic advantages which an enterprise might have otherwise gained by investing the borrowed capital on the capital market (Micherda et al., 2010: 211-214).

Besides the aforementioned metrics of effectiveness, those which are most frequently used by enterprises in the management of capital structure include the following: degree of financial leverage (DFL), return of equity (ROE), weighted average cost of capital (WACC) and economic value added (EVA).

Financial leverage can be the tool which complements the ratio analysis employed in the process of determining an optimal capital structure. It examines the impact of the change in financial structure (increased level of debt in financing the firm's assets) on the change in the rate of return on equity (Sierpińska, Jachna, 2003: 89). If increased debt leads to an increase in return on equity ($ROE = \text{net earnings/equity}$), then we have a positive effect of financial leverage, while in a situation when this increase reduces return on equity, then there is a negative effect of financial leverage. A measure that characterizes financial leverage is degree of financial leverage (DFL). Financial risk rises with an increase in the degree of financial leverage. A high degree of financial leverage shows that operating profit is slightly above financial costs. A negative value of the degree

of financial leverage means that the firm generates an operating profit that is lower than the interest owed. The theory of finance does not know the target level of financial leverage at which the optimization of capital structure takes place. It is a well-known fact that while getting a company into debt, one should analyze the impact of the increased debt on return on equity and on financial risk which is illustrated by the ratio of degree of financial leverage (Wnuczak, 2011: 508).

Weighted average cost of capital (WAAC) is yet another indicator linked to capital structure. It is dependent on the cost of individual equities and the share of equity and debt in the total financing. In seeking to achieve an optimal capital structure, an enterprise should minimize the WACC and thus increase its value. By choosing appropriate proportions in terms of equity and debt, it can influence its level. Since the WAAC is a discount rate appropriate for total cash flows, its minimal level is associated with the enterprise's maximum value. In this sense, only one D/E capital structure is optimal at which the weighted average cost of capital is at minimum. On this basis it was concluded that aiming at this capital structure is a management priority. As was shown before, capital structure and by inference the WAAC can change regardless of the management activities conducted by an enterprise. Moreover, a vast body of empirical research shows that it is not easy to specify the costs of so called financial difficulties or, in other words, financial uncertainty which emerges when there is a relative increase in debt (Szczęsny, 2014: 80).

The next measure, economic value added (EVA), could be described as a measure denoting an increase in the enterprise's value for owners. This value may also be defined as the difference between the operating profit after taxes and the total cost of capital. Since the EVA examines the impact of the enterprise's EBIT and the total cost of the capital invested on the value of the enterprise, it can be used while evaluating the validity of getting the company into debt for the purpose of implementing investment projects. If an investment results in a higher operating profit gain than the costs related to servicing equity, then it will be reflected in the EVA increase and the enterprise's higher value, and so borrowing in this kind of situation ought to be considered a reasonable move (Wnuczak, 2011: 509).

EVA is an internal estimate of an added value created by an enterprise, since it provides the basis on which the enterprise's operating results and work performed by its management staff are assessed from the point of view of its capability to increase the market value of the capital invested. Zero economic value added is a sort of a "break even" level for a business operation run by an enterprise at a particular level of the weighted average level of the cost of capital. If economic

value added is above zero ($ROIC > WACC$), this means that the enterprise is capable of raising the value of capital invested in it, while in taking on a negative value ($ROIC < WACC$) – the capital invested in the enterprise loses its value (Duliniec, 2011: 69-70).

Another market indicator, next to EVA, is value creation index (VCI). The VCI is the quotient of return on equity and the cost of acquiring it. Here, the anticipated value is return on equity that is higher than its cost. The value of this index should be above 100%, which means that equity generates value added above the cost of acquiring it.

The effectiveness indicators listed above can serve as a basis for setting the enterprise's financial strategy. Financial strategy is to be understood here as a long-term program of actions aimed at acquiring funds to cover the current operations and development-oriented activities and where and how equity from the available internal and external sources is spent. Moreover, one of the elements involved in the financing strategy is developing appropriate relations between equity and debt so that the effects arising from their deployment could bring benefits exceeding the costs needed for acquiring these sources of financing. Thus, using effectiveness metrics is well-grounded, for it delivers important data which affect the decisions in terms of determining capital structure and seeking to reach its optimal level.

5. Application of selected metrics in determining capital structure – Ursus S.A. , a joint stock company

Ursus S.A. is the oldest Polish manufacturer of agricultural vehicles and machines. The company's activity profile includes manufacture and sale of agricultural tractors and machines. The company has production facilities in Lublin, Dobre Miasto i Opalenica. It has been operating in Poland for over 120 year. Since 2007, it has been listed on Warsaw Stock Exchange.

The decisions on capital structure are of a strategic importance for the company. They should be based on a thorough analysis of the company with all decision-makers taking into consideration all the factors affecting this structure. In making such key decisions from the perspective of the continuation of the company's business the effectiveness measures may offer support. Table 2 contains the selected effectiveness indicators of Ursus S.A. related to capital structure.

Table 2. Effectiveness indicators in the company under study over the period of 2014-2016

Indicator Year	2014	2015	2016
Equity (E) (PLN thous.)	97 348	122 163	140 054
Debt (D) (PLN thous.)	91 763	153 512	119 392
E/(E+D) (%)	51,5	44,3	53,9
D/(E+D) (%)	48,5	55,7	46,1
D/E	0,94	1,25	0,85
E/D	1,06	0,79	1,17
EBIT (PLN thous.)	17 854	16 103	(2 645)
EAT (PLN thous.)	11 329	7 719	17 083
ROE (%)	11,63	6,31	12,19
DFL	1,50	1,62	-
WACC (%)	5,36	4,30	5,90
EVA	4 311,73	1 185,40	(17 382,88)
VCI	2,15	1,16	2,25

Source: self-reported data based on consolidated financial statements of Ursus company over the years 2014-2016.

The share of debt (on which interest is paid) in the total equities in 2014 was at 48,5% with equity making up 51,5%. In 2015 these proportions were reversed, i.e. debt (55,7%) made up a bigger share. The share of equity in the capital structure rose in 2016 up to 53,9% while debt was at 46,1%.

Following the effectiveness criterion regarding the use of ROE, the most advantageous capital structure over the years in question was the structure from 2016 because ROE was at 12,9%. This is higher than the average ROE value for the sector² which is at 4,94%³. However, it should be noted that in 2016 the company recorded an operating loss. At the same time there was a negative financial leverage effect, for the operating profit (in this case this is operating loss) was smaller than the break even point of return on equity calculated as the product of total capital and cost of debt (interest rate). In spite of this, the company gained net earnings to which financial revenues contributed (in 2016 they grew by as much as 3397%, compared to 2015). Hence the high return on equity. The decrease in EBIT in 2016 was caused by the implementation of the company's

² Manufacture of electrical machinery (according to WSE).

³ Data from the fourth quarter of 2016.

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development program and new projects. In the years before, on the other hand, there was a positive financial leverage effect. In 2014, the degree of financial leverage was at 1,5, which meant that an increase in return on equity by 1% was accompanied by an increase by 1,5% in net earnings. In 2015 a slight increase in DFL was reported (1,62), which led to a rise in the risk arising from higher debt and higher costs of its servicing. Here attention should be drawn to the value of E/D ratio being below unity (in 2015) which shows that debt is dominant in the company's financing and there is an increase in the risk of losing financial liquidity.

The weighted average cost of acquiring capital in the company over the period discussed was the lowest in 2015 and it was recorded at 4,3%. Debt was predominant in the capital structure at that time (55,7%); however, it should be emphasized that ROE was then at the level of 6,31%, that is lower by 5,32 percentage points compared to the year before and lower than the average value recorded for the sector (9,3%).

Over the period of 2014-2015 the company achieved a positive EVA value, which means that during the ongoing and investment activity the rate of return on capital invested was higher than the cost of acquiring and using this capital. In 2016, the economic value added is negative, which shows that the rate of return on the invested capital is lower than its cost and therefore the income obtained by shareholders is also lower from what they expected. Thus, the capital invested in the company loses some of its value.

The VCI ratio analyzed in that period was above 100%, which implies that equity generated a positive value above the cost of acquiring it.

In summing up, one can conclude that over the period discussed the condition of the company was at its best in 2014. This year saw equity (51,5%) outweighing debt in the capital structure. The company recorded operating profit as well as net earnings. Moreover, there was a positive financial leverage effect with the return on equity being at 11,63%, compared to 11,16% reported for the sector⁴. The level of E/D ratio shows a low risk of losing financial liquidity. The year 2014 also saw the highest level of EVA ratio over the period in question.

The findings based on the analysis suggest that using the effectiveness indicators the company obtained information about the share of equity and debt (percentage) in the total financing as well as about the impact of this relation on return on equity. Furthermore, an important measure

⁴ The indicator value in the fourth quarter of 2014.

is the determined level of financial leverage whose size affects the decisions made in terms of the choice as to the company's financial strategy. This is related to yet another indicator – WACC which also represents a major element of this strategy, exerting influence on determining capital structure. Equally important ratios of effectiveness, for both managers and shareholders, are EVA and VCI. In 2017, EVA ratio takes on a negative value, which means that the company should take steps aimed at improving performance, reducing the costs of financing interest or changing the structure of financing.

6. Conclusions

The effectiveness indicators employed in the analysis of the company's capital structure are of major importance in the process of making financial decisions on the shape of this very structure. A lack of capital structure management may affect substantially the financial condition and possible continuation of the enterprise's activity. The informative value of the indicators goes beyond determining the relation between debt and equity. Ratios such as ROE, WACC, DFL or EVA measure these areas of the company's activity which have influence on the selection and use of the available sources of funding. They provide a basis for determining capital structure, seeking its optimal level and crucially, for devising a financial strategy which will support the implementation of the enterprise's long-term goals.

Literature

- Barbachowska, B. (2014). Metodologiczne aspekty pomiaru efektywności przedsiębiorstw. *Acta Universitatis Lodzensis, Folia Oeconomica* 4 (304): 45.
- Bielawska, A. (2009). *Nowoczesne zarządzanie finansami przedsiębiorstwa*. Warszawa: Wydawnictwo C.H. Beck.
- Bielski, M. (2002). *Podstawy teorii, organizacji i zarządzania*. Warszawa: Wydawnictwo C.H. Beck.
- Duliniec, A. (2011). *Finansowanie przedsiębiorstwa. Strategie i instrumenty*, Warszawa: PWE, Warszawa.
- Frydenberg, S. (2011). *Capital Structure Theories and Empirical Tests: an Overview*. In: Kent H. Baker; Gerald S. Martin. Hoboken, New Jersey (ed.). *Capital Structure and Corporate Financing Decisions*. J. Wiley and Sons.
- <http://www.bankier.pl>. Accessed 30 May 2017.
- <http://www.biznesradar.pl>. Accessed 18 May 2017.
- <http://www.inwestycjegieldowe.com>. Accessed 15 May 2017.
- Jaki, A. (2012). *Mechanizmy procesu zarządzania wartością przedsiębiorstwa*. Kraków: Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie.
- Łach, K. (2012). Kierunki badań nad determinantami struktury kapitału przedsiębiorstw w Polsce. *Zeszyty Naukowe PTE* 12.
- Micherda, B. (2012). *Podstawy rachunkowości. Aspekty teoretyczne i praktyczne*. Warszawa: PWN.
- Micherda, B.; Górka, Ł.; Szulc, M. (2010). *Zarządcza interpretacja sprawozdania finansowego*. Warszawa: Difin.

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- Motylska-Kuźma, A.; Wieprow, J. (2013). *Decyzje finansowe w przedsiębiorstwie*. Warszawa: Difin.
- Myers, Stewart C. (1984). The Capital Structure Puzzle. *The Journal of Finance* 39(3): 575-592.
- Pomykalska, B.; Pomykalski, P. (2007). *Analiza finansowa przedsiębiorstwa*. Warszawa: PWN.
- Sierpińska, M.; Jachna, T. (2007). *Metody podejmowania decyzji finansowych*. Warszawa: PWN.
- Stoner, J. (1994). *Kierowanie*. Warszawa: PWE.
- Szczepański, J.; Szyszko, L. (ed.). (2007). *Finanse przedsiębiorstwa*. Polskie Wydawnictwo Ekonomiczne.
- Szczęsny, W. (2014). Przesłanki wyboru struktury kapitału – artykuł dyskusyjny. *Finanse – problemy – decyzje 2014 2. Zeszyty Naukowe Wydziałowe Uniwersytetu Ekonomicznego w Katowicach. Studia Ekonomiczne. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach*.
- Wasyłkowska, M. (2013). Ocena sytuacji finansowej przedsiębiorstwa przy zastosowaniu metod analizy fundamentalnej. *Zeszyty Naukowe Uniwersytetu Szczecińskiego 760. Finanse, Rynki finansowe, Ubezpieczenia 59*.
- Wilczyński, R. (2014). Pomiar efektywności a cele przedsiębiorstw. *Zeszyty Naukowe Uniwersytetu Szczecińskiego 803. Finanse, Rynki finansowe, Ubezpieczenia 66*.
- Wnuczak, P. (2011). Zastosowanie ekonomicznej wartości dodanej w procesie optymalizacji struktury kapitału przedsiębiorstwa. *Zeszyty Naukowe Uniwersytetu Szczecińskiego 640. Finanse, Rynki finansowe, Ubezpieczenia 38*.
- Wrzosek, S. (2005). Znaczenie efektywności ekonomicznej w procesach decyzyjnych przedsiębiorstw. In: Dudycz T.(ed.). *Efektywność – rozważania nad istotą i pomiarem. Prace Naukowe AE we Wrocławiu 1060*.

Wykorzystanie mierników efektywności do zarządzania strukturą kapitału w przedsiębiorstwie

Streszczenie

Mierniki efektywności mogą zostać wykorzystane do zarządzania strukturą kapitału w przedsiębiorstwie, rozumianą jako relację pomiędzy kapitałem własnym a zobowiązaniami, od których płacone są odsetki. Dzięki ich zastosowaniu można dokonać analizy i oceny struktury kapitału a także dążyć do jej optymalizacji. Optymalna struktura kapitału minimalizuje średni ważony koszt kapitału, a tym samym wpływa na wzrost wartości przedsiębiorstwa. Kształtowanie struktury kapitału jest jednym z elementów strategii finansowania w przedsiębiorstwie. Najczęściej stosowane mierniki, związane ze strukturą kapitału to: wskaźniki oparte na kryterium wartości kapitałów, wskaźnik struktury kapitału, stopień dźwigni finansowej, rentowność kapitałów własnych oraz średnioważony koszt kapitału. Celem artykułu jest określenie znaczenia mierników efektywności w procesie kształtowania struktury kapitału przedsiębiorstwa. Artykuł został napisany w oparciu o literaturę fachową z zakresu omawianych zagadnień. Ponadto została dokonana analiza wybranych mierników efektywności przedsiębiorstwa, związanych z kształtowaniem struktury kapitału, przedstawiona w formie studium przypadku. Powyższa analiza została przeprowadzona na podstawie skonsolidowanego rocznego sprawozdania finansowego spółki Ursus S.A. w latach 2014-2016.

Słowa kluczowe: struktura kapitału, efektywność przedsiębiorstwa, mierniki efektywności, strategia finansowania

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