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## **SHAPING CAPITAL STRUCTURE IN ENTERPRISES**

### **Summary**

*The aim of this article is to investigate the capital structure of small and medium sized enterprises (SMEs) in Poland. Different capital structures are reviewed in order to test their applicability to small business sector and to identify the most important determinants influencing financial policy of small and medium sized enterprises. The results may be used by small owners and policy makers to take advantage of better mixes of financial resources.*

### **1. Introduction**

Managing enterprise finances is inseparably connected with the necessity to take two kinds of decisions, namely financial and investment ones, whose significance should be evaluated from the perspective of the influence they have on achieving the main aim of an enterprise, which is maximization of its value. The strategic type of investment choices does not raise any objections while decision processes concerning seeking sources of financing have accumulated a lot of controversies which have become inspiration for theoretical and empirical research in this area. Their main objective is to determine the influence that financial decisions have on maintaining financial balance of an enterprise and realization of the set aims. Therefore the issue of conscious and optimal choice of financial policy instruments has become one of the most vital scientific dilemmas in the area of finance, the interpretation of which has exceeded the understanding of such actions only in the context of their supporting function to making investment choices. This practical issue of managing enterprise finances has become a separate and significant problem, the solution to which is hoped to improve the effectiveness of company operations.

This paper tries to answer the question to what extent the enterprise can use the output developed by theory and research in the area of shaping capital

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structure so far and in which areas we should expect further scientific work in order to find ways of better reflecting the enterprise functioning. The answer to the above questions will allow us to determine the scope of the issue which may constitute the foundation for further, multi-faceted research on capital structure. It will be possible to achieve the determined objectives when we conduct a theoretical analysis based on the review of literature and observation of real situations and decisions in the business world.

Due to the size and complexity of the analyzed issue, it will be inevitable to make a far-reaching synthesis of theoretical and empirical verdicts and to make some generalizations within formulated conclusions, therefore this paper is only a small contribution to the discussion over the essence and determinants of capital structure and the legitimacy of further interest of scientists and practitioners in Polish reality. In other words, the author is planning to present selected contemporary and future dilemmas connected with the subject of shaping capital structure and does not aim at analyzing the whole area of this essential and controversial and ambiguous issue.

## **2. Selected issues of shaping capital structure**

One of the dilemmas facing entrepreneurs is the choice of the method of financing their current and future needs, which is reflected in the capital structure. These decision problems of enterprise owners have become an area of interest for scientists, who try to determine the optimal (target) structure and then to choose particular sources of finance to achieve the determined limit. However, the conceptual involvement of researchers representing various fields of science in solving this problem has not brought any coherent and unambiguous solutions in this area yet. In spite of tremendous intellectual efforts made by researchers which has undoubtedly brought about identification of substantial regularities and formulation of important conclusions, capital structure still remains “eternal mystery in the science of finance” [Chittenden, Hall, Hutchinson 1996, p. 59].

The mysteriousness of this issue is connected with lack of coherent and unambiguous conclusions in many aspects. Their consideration should be started with stating the fact that so far scientists have not been able to formulate one definition of the capital structure term. This term is identified with all liabilities which reflects all sources of capital used to finance assets or with involved constant capital (owner’s equity and long-term liabilities), or finally, with all types of capital used in an enterprise which generates financial costs [Skowronek-Mielczarek 2007, pp. 37-38]. A natural consequence of the lack of uniform definition of the capital structure term is ambiguity concerning measuring and interpreting the existing indebtedness, as we are faced with

a variety of indicators which show its share [see Jerzemowska 1999, pp. 17-29]. Taking the above discrepancies into consideration, we should remember that the task of precise definition of the capital structure term must be completed each time by the scientist or practitioner, who should take into account the conditions in which the analyzed entities function and their specificity of using sources of finance.

Money undoubtedly determines the operations and development opportunities of any enterprise, therefore it is generally accepted that capital is “the blood circulation system of each economic organism” [Janasz 2008, p. 72]. The most essential and mutually interpenetrating are divisions of capital according to their origin and ownership right. In the first criterion we have internal financing, connected with utilizing resources generated in the enterprise and external financing, consisting in obtaining financial means from external sources, that is generated by another entity. The second division introduces the differentiation between owner’s equity connected with obtaining the ownership right to the enterprise by the person contributing it, and borrowed capital which does not give such rights, offering only the possibility of influencing the actions of an enterprise through monitoring the way in which it uses and repays the financial means lent to it. Borrowed capital is of external type, which distinguishes it from owner’s equity, which may be obtained from both sources. Other features of borrowed financing are its temporary character, payment for its use and the necessity of repayment and higher probability of its appearance, as in case of bankruptcy of a debtor, the claims of the capital provider are privileged in comparison with the claims raised by the owners. On the other hand, providers of owner’s equity usually do not expect their expenses to be reimbursed, but to participate in profits, which makes this type of financing more stable, positively influencing liquidity and financial credibility and creating a kind of guarantee for the creditors that they will recover the resources they invested. The most important feature of owner’s equity is its limitation, which makes it necessary to supplement it with means from external sources, the use of which may solve or let the enterprise prevent its current financial problems and provide an opportunity to carry out its investment plans requiring expenditure exceeding the resources owned and generated by the enterprise itself (see Table 1).

**Table 1.** Comparative analysis of owner's equity and borrowed capital

Owner's equity	Borrowed capital
<ul style="list-style-type: none"><li>• indefinite time, no interest rate charged</li><li>• safe source of financing</li><li>• guarantee function for creditors</li><li>• owners can control the board of directors</li><li>• cost of owner's equity higher than cost of borrowed capital</li></ul>	<ul style="list-style-type: none"><li>• definite time, interest rate applied</li><li>• flexible source of financing</li><li>• risk of bankruptcy and costs of financial difficulties</li><li>• tax benefits from interests</li><li>• effect of financial leverage</li></ul>

Source: [Duliniec 2007, p. 88].

We can conclude from the information contained in the table that each discussed type of capital has its advantages and drawbacks. Own funds are a safer source of financing as they offer practically limitless time and there are no regular and obligatory payments to creditors, which lowers the risk of the enterprise insolvency. On the other hand, though, own capital has its drawbacks, such as limitation and high risk run by capital providers, who do not have any certainty of achieving expected benefits, which makes this type of financing usually more expensive. Borrowed capital offers higher flexibility, providing owners with an opportunity of wide choice of financed instruments and their constant rotation when repaid liabilities are replaced with new ones, which allows the enterprise to shape its debt structure in various ways regarding costs, purpose and date of repayment, creating favorable conditions for adjusting contracted debt to current and investment needs of an enterprise. Moreover, the use of borrowed capital is connected with certain tax benefits, as its price is lowered due to the fact that its interest rate lowers the tax base, which is defined as the tax shield effect. Its disadvantages include: higher risk of bankruptcy (insolvency) of the enterprise which is connected with contracting a debt, resulting from the danger of failing to cope with the necessity to repay the contracted liabilities and the necessity to make periodical and fixed payments for debt interest rate.

The above presented pictures of both funds make the foundation for taking financial decisions and for theoretical analyses aiming at finding the aspects of maximizing enterprise value through manipulating its capital structure. Shaping capital structure consists in determining proportions of financing the enterprise activities from owner's equity and borrowed capital. For the past few decades, then, the issue of determinants and effects of capital structure policy has been a central point of theoretical considerations and empirical research conducted by scientists representing various fields of science.

The breakthrough moment for these considerations and search, commonly considered a specific accelerator for other theories and research, was the model of capital structure, developed by F. Modigliani and M. Miller (the so-

called MM theory), published in 1958. In their original version of the model, assuming the existence of ideally competitive markets, they formulated and mathematically proved the conclusion that capital structure does not influence the enterprise value. This controversial opinion, based on the assumptions of a perfect market, contrary to economic reality, gave a strong impulse for initiating scientific discourse concerning the possibility of increasing market value of an enterprise through intentional manipulation of its capital structure. This decades-long and still unfinished debate has led to significant development of finance theories in the area of financing enterprises, evolving towards more precise reflection of economic reality through gradual rejection of the assumptions of an ideal market (see Table 2). Currently, the most popular theories explaining financial decisions are: static trade-off theory, agency costs theory and pecking order theory [Ramalho, Vidigal da Silva 2009, pp. 623-633]. They all express a commonly held assumption that the policy of shaping capital structure affects the enterprise value, however this influence is either presented and proved by showing consequences of using particular sources of finance (static trade-off theory, agency costs theory) or by assuming a certain sequence of used instruments (pecking order theory). Each of them, however, points at the usefulness of introducing indebtedness into the structure due to the possibility of achieving some benefits resulting from financial leverage and tax shield and an opportunity of reducing the costs resulting from information asymmetry and representation problems. However, taking into account new types of costs, though allowing us to better reflect the real conditions in which enterprises operate, complicates the task of defining target limits of indebtedness due to difficulties of measuring them. Therefore a theoretical alternative to search for the target (optimal) capital structure is a pecking order theory, which assumes an order in which we use particular types of capital, abandoning any attempts at determining theoretically and practically risky levels of debt.

A great number of capital structure theories confirm the opinion that this issue is extremely complex and significant both for the economic theory and practice. The significance of the financial decisions issue is confirmed by the assumption being the foundation of all contemporary capital structure theories, according to which it is possible to affect the enterprise value by minimizing costs of obtaining sources, such as tax burden, contract costs and information costs. This possibility offers entrepreneurs another instrument that, in particular market conditions, can be used to increase the potential of their economic entities. The complexity of the analyzed issue can be confirmed if we look at particular theories from a historical perspective (see Table 2), which allows us to discern their evolution towards multi-faceted concepts taking into account costs and benefits of contracting additional debt, making it more difficult to determine uniform principles of shaping sources of finance.

**Table 2.** Presentation of selected theories of capital structure

Theory	Essence	
net profit	Ideal market	Fixed costs. Optimal capital structure when the entity is financed in 100% by borrowed capital.
net operating profit	Cost of borrowed capital < Cost of owner's equity	Enterprise value and average weighted cost of capital are independent of capital structure. There is no optimal capital structure, and the value of the enterprise and total cost of capital are independent of financial leverage used.
traditional		Increasing share of cheaper borrowed financing is not balanced with increased financial risk. Optimal capital structure appears in the balance point, where the capital cost is the lowest and the market value the highest.
MM*	Model assumptions**	All differences in market value caused by capital structure changes are eliminated by arbitration. Finally capital structure is unimportant for the enterprise value, which depends only on expected financial flows.
MM*	Model assumptions***	Benefits of contracting debts amount to interest rate tax shield. Optimal capital structure appears when the enterprise is 100% financed by borrowed capital.
Miller model	Model assumptions****	The difference between tax rates for owner's equity and borrowed capital eliminates tax asymmetry, which accounts for the fact that indebtedness no longer affects the enterprise value. Return to the thesis concerning unimportance of capital structure.
static trade-off	Taking into account costs of financial difficulties	Fixed assets and total invested capital. Along with increasing debts, the enterprise is running growing risk of bankruptcy, which reduces tax benefits related to contracted debt. Optimal capital structure is a specific compromise between benefits and costs of contracting a debt of particular interest rate.
agency costs	Taking into account agency costs	Optimal capital structure minimizes agency costs resulting from conflicts of particular groups of interest in an enterprise (especially on the line of management – owners and creditors – owners).
signals	Taking into account costs of information asymmetry	Shaping capital structure is supposed to signal future financial results to external persons.
pecking order	Taking into account costs of information asymmetry	Assumption that the preference system exists. The sequence of using internal and external sources of finance (retained profits, issuing debt securities, issuing equities) aims at minimizing information and transaction costs.

\*Modigliani-Miller theories.

\*\*We can mention the following conditions: 1) uniform expectations of investors concerning future income and associated risk; 2) risk groups (enterprises with the same income and operational profit) are mutually homogenous 3) operational profit does not change in the whole period (zero growth of an enterprise); 4) ideal capital markets (complete information, particular investors do not influence the price, no transaction costs, no risk of insolvency, entrepreneurs and investors contract debt at the same interest rate free of risk); 5) there are no taxes [Modigliani, Miller 1958, pp. 262-267].

\*\*\*Introducing corporate income tax to the assumptions.

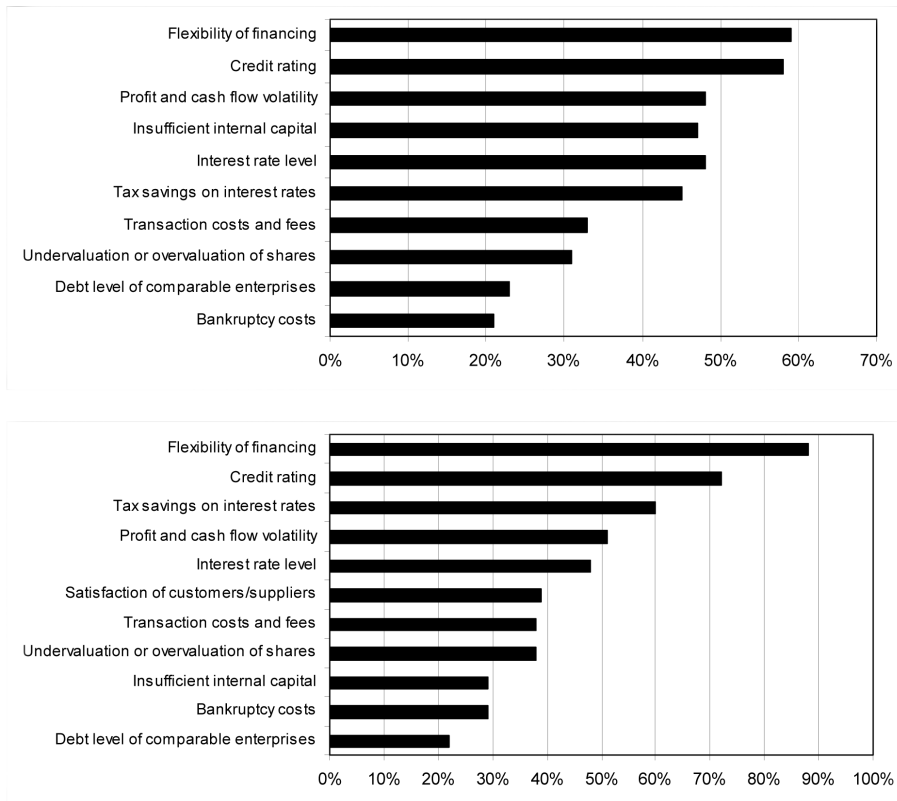
\*\*\*\* Introducing personal income tax to the assumptions.

Source: [own elaboration, on the basis of: Jerzemowska 1999, p. 61-132; Duliniec 2001, p. 105-141; Zawadzka 2009, p. 90-102; Modigliani, Miller 1958, pp. 261- 296; Modigliani, Miller 1963, p. 433-443; Myers 1984, p. 575-590, Stradomski 2004, p. 22-45].

The importance of capital structure issue is also confirmed by the fact that the theories presented above have witnessed numerous attempts at empirical verification, though as in case of theoretical considerations, the results of practical research have not provided conclusive evidence on which model is the most accurate and complete for the enterprises. They all point at the influence of various, often mutually limiting factors which determine capital structure. At the beginning it seems necessary to emphasize that the comparability of particular research is substantially limited due to purely methodological reasons., such as the scope of the sample, its size, criteria of selecting respondents and the time in which the research was conducted. In case of research conducted in different countries which will become the subject of our further analysis, the comparability mentioned above should be considered taking into account institutional differences between countries, such as economic development level, data availability, valid legal regulations, type and scope of control over the enterprise, role of banks and capital markets. Taking into account the above issues related to comparability of data, we will present the results of questionnaires checking the application of particular theories of capital structure in American and European enterprise practice, as the aim is not to make analogies between countries but to confront the analyzed theories with economic reality.

Figure 1 presents the result of the survey concerning the determinants of financial decisions, which show that the dominant choice given by entrepreneurs is the willingness to maintain flexibility of financing and credit rating, which, on the face of it, seems to prove that they operate exclusively in accordance with the pecking order theory. It should be noted, however, that American managers admitted to determining target debt levels (44%) and to considering the question of using external owner's equity (40%), which would indicate the static trade-off theory. In case of European entrepreneurs, we can observe a high percentage of tax benefits answers (60%). These results allow us to make assumptions that entrepreneurs do not only rely on economic rationality logic in their financial decisions, but also take into account the effect their decisions will have on the scope of legal and economic independence of their entities. The specialist literature often emphasizes the pragmatism of entrepreneurs, manifested in maintaining a lower debt level than it would be potentially possible and profitable, due to the willingness to keep some financial reserve needed in case of a worsening economic situation or if some opportunities of profitable investment of capital appear [Cwynar, Cwynar 2008, p. 61; Duliniec 2001 p. 93; Janasz 2007, p. 59].

**Figure 1. Determinants of the capital structure choice: the USA\* and Europe\*\***



\*In 1999 the survey covered 4440 enterprise (return rate of completed questionnaires was on the level of 9%).

\*\*in 2001-2002 the survey covered 710 enterprises (return rate – 8.5%) from 17 European countries (Austria, Belgium, Greece, Denmark, Finland, Ireland, Italy, France, Germany, Luxemburg, Holland, Norway, Protugal, Spain, Switzerland, Sweden and UK).

Source: [Graham, Harley 2002, p. 13-15; Bancel, Mittoo 2002, p. 23, 25, 31; quoted after: Cwynar, Cwynar 2008, p. 64].

The above content proves that in spite of many years passed, filled with numerous debates over the accuracy of particular theoretical assumptions and their empirical verifiability, scientists have failed to develop a uniform model of shaping capital structure in an enterprise [Wiśniewski 2009, p. 515; Janasz 2007, p. 50]. Therefore it seems justifiable to accept the thesis that particular theories do not exclude each other, while each facilitates, be it partly, the comprehension of some aspect of financial operations of an enterprise, directly or indirectly determining its influence on capital structure. These theories, therefore, may constitute some reference point for business practitioners in making their own



financial choices, in which they should compare the benefits of additional use of debt with the additional costs it generates, taking into account transaction costs and information effects beforehand. At the current development stage of theories of shaping capital structure, the concepts and models developed cannot be treated as “ready-to-use models” of conduct, but the knowledge of them facilitates identification of the role played by the factors related to the process of financial sources selection.

### **3. Determinants of capital structure**

Taking into account ambiguity of the theoretical aspects of shaping capital structure analyzed above, we can supplement the analysis of this issue with the presentation of financial decisions as the resultant of the influence of several factors, depending on the situation in internal and external environment of an enterprise and the changes that take place in it.

Among many potentially significant factors influencing the process of making financial decisions, A. Skowronek Mielczarek draws our attention to the importance of the following ones [Skowronek-Mielczarek 2007, pp. 176-177]:

- availability of particular sources – all kinds of restrictions in obtaining sources of finance (formal, legal, financial barriers, etc.);
- profitability achieved by an enterprise – source of security for the claims of capital providers and owners;
- structure of assets – determines the operational risk level of a particular enterprise (the issue of adjusting capital structure to the asset structure due to the time they are at our disposal and flexibility of sources of finance);
- cost of using particular sources of finance – costs of sources of finance differ, therefore there is an opportunity to optimize their level;
- tax system – differentiates the attractiveness of using particular sources of finance (the issue of the so-called tax shield);
- financial risk – taking into account such effects of using borrowed capital as loss of financial solvency, decision independence or finally bankruptcy;
- policy of the owners of a particular enterprise – the choices are influenced by the opinions of people making them (the problem of sharing generated profit, decision concerning increasing owner’s equity, etc.).

Literature often distinguishes a list of determinants of capital structure with their division into macro- and micro-economic conditions [Kowalik 2009, pp. 78-80; Jerzemowska 1999, pp. 51-60], where the most important ones are inflation, industry specificity, tax system, depreciation and government policy.

The list of specific factors is an extensive catalogue differently classified in literature. One of possible typologies covers [Jerzemowska 1999, pp. 52-53]:

- degree of operational risk of enterprise activities,
- company position on the market (in its sector),
- obtained profit margins and other measures of financial result,
- quality of enterprise management,
- conservatism of applied accounting principles,
- fixed charge coverage ratio,
- ratio relating borrowed capital to liquidation ratio of company assets,
- adequacy of financial flows to coverage of future debt and its service,
- financial flexibility of the enterprise in future.

The above lists of factors influencing shaping capital structure indicate above all their multitude and variety, which once again proves the complexity and difficulty of the analyzed issue. It is this richness of typologies, indicating variety and dynamics of financial decision determinants that accounts for the difficulties with identification of decisive factors in choosing a particular capital structure in an enterprise, making the financial decision process the domain of the management, realized on the basis of multi-faceted analysis and evaluation of a wide range of determinants. The undisputed benefit of this factor view of decision processes in an enterprise is its strong relation with economic reality, emphasizing the roles of relationships between the elements inside the enterprise and those from the close and distant environment. This allows us to achieve a wider perspective for the analysis of such a fundamental managerial issue which is shaping capital structure.

#### **4. Directions of further considerations and research on capital structure**

The analyzed literature allows us to draw a conclusion that the debate concerning shaping capital structure is not approaching its end, which may be justified by the complexity of this issue and dynamism of changes taking place in the close and distant environment of an enterprise, forcing it to constantly adjust the current solutions to new conditions and the search for new links in the chain leading to the explanation of the role financial decisions play in the process of enterprise operations and development. This rich theoretical and empirical outcome presents great cognitive and practical value, being a significant starting point for further scientific research as well as a useful tool for managers and owners of enterprises.

The existence of many important and yet unsolved issues in the area of shaping capital structure may encourage us to adopt an extremely relative approach consisting in formulating an opinion expressed by words “it depends”

as the main indicator in the process of explaining and interpreting phenomena. Such attitude, consistent with the principles of relativism, does not constitute a promising direction of research on scientific interpretation of a particular problem, which may happen when we ask the question: “What does it depend on?”. Regardless of the lack of a few elements in this puzzle of shaping capital structure, the fact that the process of identifying, interpreting and evaluating important variables of making financial decisions has been going on non-stop allows us to hold some hope that we will witness new and useful solutions both in economic theory and practice.

As there are many theoretical and empirical ambiguities concerning the issue of capital structure, we may expect further attempts at testing the accuracy and purposefulness of adopted assumptions, relations and conclusions, which will result in confirming their validity or rejecting insignificant and inaccurate judgments. One of possible directions of our considerations in this area could be an attempt at developing a model which, to a certain extent, will combine the simplicity, elegance and distinctiveness of predictions of static trade-off theory with realism of pecking order theory, as both concepts are not mutually exclusive, being more complementary in explaining and interpreting various aspects of financial operations of an enterprise.

We can also state that there are still many aspects of financial decision determinants that have not been theoretically determined and empirically tested at length. An example of such area is the issue of identification, explanation and evaluation of relationships between capital structure and the size of an enterprise. Bearing in mind the importance of small and medium-sized enterprises (SME) in market economy, we should try to find an answer to the question whether capital structure theories can be applied in case of smaller enterprises, and then identify the determinant whose influence on decision making practice of SME owners is the strongest. Empirical research proves that SMEs are not particularly interested in setting objectives in form of target capital structure, since due to lower profitability of the sector they cannot take as much advantage of tax allowances as larger entities [Graham, Harvey 2002, p. 15]. The dominant view states that there are possibilities of transferring the assumptions of pecking order theory to the reality of the sector of this size enterprises [Graham, Harvey 2002, p. 19; Ramalho, Vidigal da Silva 2009, pp. 631-634], though there are still some doubts as to what extent identified preferences in choice of financing sources reflect conscious policy of SMEs and to what extent they come from structural features of the sector. However, we should keep in mind that the analysis of finance sources of smaller enterprises is a daunting task due to great diversification of this group and various forms of accumulating data concerning their operations, therefore the knowledge of their financial policy still remains largely intuitive.

## 5. Conclusions

The synthetic analysis of the issue of shaping capital structure in an enterprise, demonstrating its theoretical and empirical richness, may confirm the importance and complexity of this problem for science and economic practice. It is this long-term topicality and significance of the issue that led us to take up the issue in an attempt at finding an answer to the question whether the existing scientific outcome may find some application in the economic practice of enterprises.

The capital structure of enterprises turned out to be determined by many various factor, which makes it difficult, if not impossible, to create a universal concept of its shaping, which could constitute an optimal solution for each enterprise. So far, theoretical and empirical efforts have taken us closer to the definition of main determinants, explaining what the enterprise capital structure depends on. Identification of factors influencing capital structure has practical significance, as when entrepreneurs are aware of their role, they will make decisions taking into account many elements which are not indifferent to the enterprise value growth. However, ambiguities and discrepancies in many issues concerning shaping capital structure still call for the need to continue systematic and extensive research in this area.

## Bibliography

1. Bancel F., Mittoo U.R., *The Determinants of Capital Structure Choice: A Survey of European Firms*, 2002, [www.ssrn.com](http://www.ssrn.com).
2. Chittenden F., Hall G., Hutchinson P., *Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and an Empirical Investigations*, „Small Business Economics” 1996, No 8.
3. Cwynar A., Cwynar W., *Optymalizacja struktury kapitału i kalkulacja kosztu kapitału spółki*, [in:] M. Panfil (editor), *Finansowanie rozwoju przedsiębiorstwa. Studia przypadków*, Difin, Warszawa 2008.
4. Duliniec A., *Finansowanie przedsiębiorstwa*, PWE, Warszawa 2007.
5. Duliniec A., *Struktura i koszt kapitału w przedsiębiorstwie*, PWN, Warszawa 2001.
6. Graham J., Harvey C., *How do CFOs Make Capital Structure Decisions?*, „Journal of Applied Corporate Finance” 2002, No 1.
7. Janasz K., *Kapitał jako podstawa rozwoju przedsiębiorstwa*, „Studia i Prace” 2008, Wydział Nauk Ekonomicznych i Zarządzania Uniwersytetu Szczecińskiego, No 1.

8. Janasz W., *Determinanty struktury kapitałowej przedsiębiorstwa*, [in:] Janasz K., Janasz W., Wiśniewska J. (editors), *Zarządzanie kapitałem w przedsiębiorstwie*, Difin, Warszawa 2007.
9. Jerzemowska M., *Kształtowanie struktury kapitału w spółkach akcyjnych*, PWN, Warszawa 1999.
10. Kowalik M., *Determinanty struktury finansowej przedsiębiorstw*, „*Ekonomika i Organizacja Przedsiębiorstwa*”, lipiec 2009, No 7 (714).
11. Modigliani F., Miller M.H., *Corporate Income Taxes and The Cost of Capital: A Correction*, „*The American Economic Review*” 1963, No 3.
12. Modigliani F., Miller M.H., *The Cost of Capital, Corporation Finance and the Theory of Investment*, „*The American Economic Review*” 1958, No 3.
13. Myers. S.C., *The Capital Structure Puzzle*, „*The Journal of Finance*” 1984, No 3.
14. Ramalho J.J.S., Vidigal da Silva J., *A Two-Part Fractional Regression Model for the Financial Leverage Decisions of Micro, Small, Medium and Large Firms*, „*Quantitative Finance*” 2009, No 5.
15. Skowronck-Mielczarek A., *Małe i Średnie przedsiębiorstwa. Źródła finansowania*, Wydawnictwo C.H. Beck, Warszawa 2007.
16. Stradomski M., *Zarządzanie strukturą zadłużenia przedsiębiorstwa*, PWE, Warszawa 2004.
17. Zawadzka D., *Struktura kapitału przedsiębiorstwa*, [in:] A. Bielawska (editor), *Nowoczesne zarządzanie finansami przedsiębiorstwa*, Wydawnictwo C.H. Beck, Warszawa 2009.