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OPTIMAL CAPITAL STRUCTURE

Summary: *The capital structure occupies a significant place in the process of financing business activities. There is an open question about what should be the ideal capital structure mix, i.e. in which circumstances borrowing is more justified and in which circumstances the use of own resources. When looking for an answer to this question, it is always necessary to start from the basic task of business, which is to increase the value of the company. For this purpose, the research of authors who have made a fundamental and theoretical contribution will be presented and efforts will be made to expand existing knowledge about the optimality of capital structure.*

Key words: *capital structure, indebtedness, own funds, enterprise, value*

JEL classification: *G32*

INTRODUCTION

The capital structure policy implies a decision on the most favorable capital structure. This should be the capital structure that will provide the greatest value of the company with the lowest cost of capital. Business processes are dynamic category, and the business environment of the company is subject to constant changes, so the criteria for the degree of optimality of the capital structure are relative. For these reasons, it is necessary to take into account other aspects of the company's business policy and a number of other business decisions when defining the capital structure policy.

1. TRADITIONAL THEORY OF CAPITAL STRUCTURE

The market value of shares and other cash flow rights of companies that are owned by investors determine the economic value of companies in the market. The company's funds are directed to the company's business and investment activities. The higher the risk, the higher the investor's return on invested capital. When we consider the traditional school of capital structure, we start from the question of whether there is a capital structure in which the company can achieve its highest market value, and the answer is that there is a combination of debt and equity that minimizes the average price of capital, and maximize its market value. When the share of borrowed capital increases, the value of the company will also increase because the equity (higher price) is replaced by borrowed capital (lower price), which reduces the average price of the company's capital and increases its market value. Furthermore, when indebtedness increases excessively, profit is called into question, and creditors and shareholders demand higher rates of

return, and market value declines. According to this theory of capital structure, the basic problem is the behavior of investors, shareholders and creditors who, when the share of borrowed capital in the capital structure increases to a certain level they, in line with the increase in risk, start looking for higher returns, so that there is a decline in the market value of the company.

2. MODIGLIANI- MILLER THEORIES OF CAPITAL STRUCTURE

Modigliani-Miller (MM) theories of capital structure has two starting points. One is about irrelevance and the other about the optimality of capital structure. According to Modigliani-Miller (MM) theories of capital structure, the relationship between borrowed and equity is irrelevant (Miller 1958). According to this theory, the value of a company is determined by the amount of cash and risk at cash flows that depend on the investment, and not the financial decisions of the company. In conditions of perfect capital markets, capital value is independent of the capital structure, or irrelevant. The addition of this theory introduces corporate income tax into the analysis. As interest is recognized as an expense for tax purposes, the company will increase the share of debt in the capital structure to increase the residual cash flows to investors in the amount of tax savings on interest payments. That is, since the tax is paid on gross profit, interest as an expense reduces the value of gross profit, and thus reduces the tax base. The existence of tax deductions on interest payments causes the company's value to increase with the increase in risk for the amount of the capitalized value of tax deductions for interest (Modigliani 1988; Miller 1988). Thus, the new position of the MM theories change the position, considering that the benefit of replacing dividend payments that are not recognized as expenses for tax purposes, with interest payments recognized as tax purposes, makes that the optimal capital structure that maximizes the value of the company is one in which the share of indebtedness is 100 the estimate. The conclusions of MM theories on the irrelevance of the capital structure and on the optimality of the capital structure are incorrect (Arnold and Hatzopoulos 2000). In the MM theories, it is neglected that tax savings based on interest are uncertain. As risk increases, calls into question the realization of a positive profit before tax. By using other tax exemptions, the company can reduce its tax base through: exemption based on additional investments in the company, termination of employment of redundant workers, digressive write-off of fixed assets, reduction of corporate income tax rate, finding more favorable suppliers, etc. The tax effects of interest disappear if the company goes bankrupt, and its probability of going bankrupt is higher if the indebtedness is higher. The risk of interest tax effects is growing, and their possible impact on the value of the company is weak.

After the introduction of the corporate income tax, as a supplement to the MM theories, the personal profit tax of shareholders and creditors was introduced. The introduction of personal taxes has not significantly changed the theory that by using corporate debts, the value can be increased by an amount that is directly proportional to the share of debts in the capital structure.

However, the amount of increase in the value of companies based on joint corporate-personal tax savings differs from the product of the marginal and average tax rates of the firm and the market value of the debts (Myers and Nicholas 1984).

As a supplemented MM theories of capital structure, the theory of static compromise and the theory of static optimum are developed. The theory of static and compromise theory of static optimum developed the introduction costs of financial difficulties and the reduction of tax effects on the real amount. According to this theory, companies strive to keep the level of indebtedness relatively unchanged relative to a predetermined point of static optimum that represents a compromise or balance between missed tax savings on the one hand, and the cost of financial difficulties on the other. With the growth of the degree of indebtedness, the value of the company grows by the amount of the present value of interest tax effects, but with the growth of the degree

of indebtedness, the discounted value of the expected costs of financial difficulties grows (Milton 1991). Yet this theory has no value for business decision making. Rarely useful practical message is that the company should be moderately indebted. The extent to which the company will borrow depends on the structure of funds. In accordance with the views of critics, MM theories and its attached theory of static compromise are inappropriate because in the absence of tax deductions, and due to the existence of financial difficulties, indebtedness will not be useful.

The existence of an optimal capital structure is also called into question, because the shift of the capital structure, regardless of the direction, by the market is interpreted by the fall in stock prices and the value of the company. This is contradictory with today's theory of capital structure, because the market reaction should depend on whether the capital structure is moving towards the point of optimum or moving away from it. Another contradiction of the theory is that interpreting the theory of static compromise leads to the conclusion that those companies that are more profitable in the branch should borrow more due to greater opportunities to service debts and higher taxable profits to be protected (Myers 1993). However, the most profitable companies in the industry are less indebted compared to those that are less profitable.

3. AGENCY THEORY OF CAPITAL STRUCTURE AND MODERN CONCEPTIONS

The traditional theory of capital structure and the MM theories are considered controversial today, but the amended MM theories gave a financial theory of capital structure, or the theory of static compromise. Along with the development of these theories, there have been developed and attitudes agency theory and other theories about the impact of capital structure on the value of the company, but have not yet been completes in the special theory of capital structure (Miglè 2021).

3.1. Agency costs and ownership structure

Today's financial theory of capital structure is incompetent because it does not consider the impact of ownership structure on the value of the company. The value of the company increases with increase in concentration of ownership in the extent of changes in property leads to a reduction in agency costs, and a better alignment of interests of managers and shareholders. In companies that are identical, but differ only in the degree of concentration of ownership, those that have a more concentrated ownership structure, have higher profitability and greater value because there is greater interest of owners to monitor and control and make the necessary changes in management. Because companies are the target of takeovers by market participants, it is also important to consider ownership in the capital structure. Higher indebtedness reduces the possibility of enemy takeover. The growth of the degree of indebtedness increases the degree of concentration of ownership and control, which leads to an increase in the value of the company (Dawar 2014).

3.2. Agency theory applied to investment funds

Managers destroy the value of the company by investing available surplus cash in investment projects that are not profitable. Free cash flows are what remains of the business net cash flow after issuing from it to all investment projects with a positive net present value. In mature companies is very significant problem of free cash flow because uncontrolled draw in business activities instead of being channeled into profitable investment activities. Control of agency costs related to free cash flows can be performed, in addition to the company's market control mechanism, with use of indebted capital, because debts discipline managers. Higher indebtedness

has disciplining effects on the management of companies with positive free cash flows due to the reduced risk of reinvesting funds in unfavorable projects and greater management engagement to secure debt repayment funds (Berger and Patti di Bonaccorsi 2006).

3.3. Agency cost of debt

Agency borrowing costs are linked to the conflict between the shareholder / manager-creditor and lead to a decline in the value of the company. The main sources of conflicts of interest between shareholders and creditors on bonds are: dividend policy (new borrowing reduces the value of bonds); dilution of rights (the value of creditors' rights will decrease by borrowing); the problem of asset substitution (when an enterprise substitutes less risky assets with assets that are more risky, the value of creditors' rights will decrease and the value of equity will increase); the problem of underinvestment. Creditors will, depending on the intensity of agency costs of debts, demand a premium on interest rates, thus shifting the bearing of these costs ex-ante to shareholders. Shareholders will prefer to bear the additional agency costs of new debts as long as new investments increase their well-being.

3.4. Asymmetric Information and Capital Structure

Borrowing capacity is the amount of indebtedness in the capital structure that is optimal from the point of view of maximizing the value of the company for shareholders. That is the amount of indebtedness that the company should have. In practice, the concept of borrowing is linked to creditors' assessments of investment security and the ability of debtors to pledge funds for assumed debts. Borrowing capacity is higher if there is an active market for the assets available to the company and if the assets are not subject to obsolescence. Borrowing capacity is lower if a company has high taxes compared to the cash flows it generates. If the value of a company comes largely from assets that are already in operation, it will have higher borrowing capacity than companies whose future depends on future investment opportunities. Borrowing capacity is higher if fixed assets participate more in the structure of assets. Is it better to borrow or issue shares? Since borrowing is in line with the optimistic forecasts of managers in relation to business, there will be an increase in stock prices. A manager who works for the interest of shareholders will issue shares only if their value is real or overvalued, while if he does not work for the interest of shareholders he will issue shares when their value is underestimated. Investors interpret each issue of shares as an indicator that the shares are overvalued, and reduce the amount of investment that they are willing to pay for the shares. The issue of shares for investors is bad news, which means that the issue of shares leads to a drop in the share price. According to Myers' theory (Myers 1984), assuming that the dividend policy is set in the long run and there are no changes in the short run, the company will prefer internal rather than external sources of funding, and will only, after exhaustion of internal resources, use external and those that are the least risky financing sources. If the company prefers to have more capital after conventional borrowing, it will switch to risky borrowing by issuing bonds, then by issuing convertible securities and warrants, then by issuing preferred shares and only after all exhaustion of borrowing will issue ordinary shares. In this theory, there is the apparent role of asymmetric information. The use of funds from the accumulation of profits does not require a new issue of shares, so it is not affected by the problem of asymmetric information and therefore these sources will always have an advantage over external sources of funding. The prices of preferred shares and bonds are less sensitive to changes in the company's perspective, so these sources are not strongly influenced by the problem of asymmetric information. Ordinary shares in each of their new issues are checked and examined by investors in relation to the business perspective and the

value of the company's assets, so that they represent a more risky source of financing with a pronounced problem of asymmetric information. As mentioned earlier, managers issue shares when they are overvalued, so investors will not want to pay the full price for the shares that managers would issue, but would only buy them at a discount. So if managers work in the interest of shareholders, they will not issue shares, but provide capital from the source of borrowing. Undervalued shares will not be issued by the manager, if he works in the interest of the shareholders, but he will regain the capital from borrowing. Therefore, management first draws capital by borrowing. Only in cases where the indebtedness of the company is so high that all borrowing capacities have been used, the company will issue shares.

According to Myers Theory (Myers 1993) financial reserves are unused borrowing capacity and cash surpluses, as well as securities and real assets that can be sold quickly. A company, waiting for favorable investment opportunities, often does not use the borrowing capacity to the end so if the company is highly indebted, it will be difficult to attract new sources of borrowing. The concern that management will miss the investment opportunity is also the situation where new shares can be issued only with significant discounts, cash reserves, securities and real assets that can be sold quickly. According to this theory there is a clear distinction between internal and external capital. The optimal capital structure, according to this theory, does not exist. According to the theory of static compromise, companies adhere to the point of static optimum, while according to Myers theory, the debt ratio of companies can shift relatively often and with high amplitudes, and in accordance with the dynamics of resource depletion to the determined hierarchical order. According to this theory the risk varies with disharmony of internal cash flows and investment decisions. Therefore, the company with high profitability and limited investment opportunities have a low level of indebtedness, while companies with low profitability and the average investment opportunities will be debited to finance investments. This theory, although quite close to business practice, still has deviations because there are many companies that issue shares even though they could issue bonds. This theory does not consider the impact arising from interest tax effects, the cost of financial difficulties, changes in the ownership structure, and changes in agency costs of free cash flows. Therefore, this theory more could be called bets on the financial policies of the company to meet a funding gap.

4. CAPITAL STRUCTURE IN CRISIS

The global financial crisis in 2008 raised many questions about how financial and macroeconomic instability may affect the capital structure of small, medium and large enterprises (Demirgüç-Kunt et al. 2020). The financial crisis can affect the capital structure of a company in different ways. In times of crisis, as uncertainty and risk grow and expected returns on invested capital decline, both creditors and companies become less interested in concluding long-term loans (Demirgüç-Kunt et al. 2020). From the perspective of lenders (creditors), due to the increase in probability of inability to collect receivables, the deadline for payment of interest increases significantly during the crisis, which makes long-term debt less attractive in relation to short-term debt (Gürkaynak and Wright 2012; Dick et al 2013). As uncertainty or risk increases and business prospects are becoming increasingly uncertain, companies that are unable to opt for an aggregate structure of maturity may choose to have reduced maturities and leverage despite high costs. That is, companies in these circumstances do not use borrowed sources of financing for investments.

Research in Belgium and the US has shown that companies that had higher short-term debts before the Global Financial Crisis experienced a larger decline in investment during the crisis (Duchin et al. 2010; Vermoesen et al. 2013). On the other hand, "shorter maturities can alleviate the problem of underinvestment of debt financing in times of growing uncertainty and become

more attractive to borrowers because the value of short-term debt is less sensitive to future investment opportunities than the value of long-term debt” (Myers 1977). According to economic theory, likely extent to which the crisis affects the capital structure of company by creating higher risks, greater uncertainty or lower returns on invested capital depends on the characteristics of the financial system and the legal and institutional environment in which companies operate (Demirgüç-Kunt et al. 2020; Duvnjak 2020, 42). Accordingly, in joint stock companies, according to the agency theory of costs, in crisis conditions (Jensen and Meckling 1976) in countries where monitoring costs and bankruptcy costs are high, increasing the possibility of deviations from the yield would cause a greater redirection of risk to shareholders. In times of crisis when poor results are achieved (Duvnjak 2020, 54) and uncertainty, it is more likely to shorten the maturity of debt and reduce the impact on debt in environments where it is difficult to execute contracts, for example where bankruptcy laws and procedures are such as cost a lot (Diamond 2004). In the context of international debt, in times of crisis in countries with weak property rights and the rule of law, a lack of investor rights may result in inefficiently short debt maturities and excessive risks (Jeanne 2009). In the immediate aftermath of the global financial crisis: leverage, the use of long-term debt to finance assets and the maturity of debt declined among firms that used long-term loans to service debt before the crisis. This has been observed in underdeveloped countries, developing countries, countries that have not experienced a systemic banking crisis and different types of firms (Demirgüç-Kunt et al. 2020). The decline in leverage and long-term loans is particularly pronounced in small and medium-sized enterprises and large companies that are not listed on the stock exchange. In contrast, there was no significant decline in the debt or maturity ratio among listed companies. Analyzing companies in which significant changes in capital structure have been observed, it is considered: that the decline in leverage, maturity of debt and use of long-term debt is significantly higher for SMEs in countries with stricter restrictions on raising loans (Demirgüç-Kunt et al. 2020). In the pre-crisis and post-crisis period, companies with a debt ratio lower than the industry average recorded an increase in the debt ratio, while companies with a debt ratio higher than the industry average recorded a decline in the debt ratio (Iqbal and Kume 2015; Leary and Roberts 2005). During and immediately after the global financial crisis, there are complex interrelationships between the evolution of solid capital structures and the characteristics of a country. The financial sector and a strong legal institutional environment can mitigate the negative effects of financial and economic instability on small, medium and large enterprises. The surprise event (COVID-19 pandemic) has raised many questions about how chronic uncertainty caused by crisis events affects the availability of entrepreneurial funding sources for start-ups, small and medium-sized enterprises (SMEs) (Brown and Rocha 2020). A study of investment in entrepreneurial finance in China during the unfolding crisis Covide-19 shows that these capital investments dropped dramatically immediately after the virus Covide-19, resulting in an annual reduction of 60% of the total volume of investment of collected between the first quarters of 2019 and first quarter of 2020 (Brown and Rocha 2020). Research has shown that start-ups are hardest hit by the crisis. Although the global financial crisis strongly affected the debt market, entrepreneurial finance is still vulnerable to major upheavals caused by the crisis Covide-19th. Although micro-level crisis management is largely the task of the companies themselves, the legal and institutional environment should support entrepreneurs in their efforts to deal with crises such as COVID-19, which means that policymakers implement crisis management at the macro level to strengthen corporate resilience, including startups, and to support their individual crisis management actions (Kuckertz et al. 2020). Studies have shown that regions that show a high level of entrepreneurship before the crisis are more resistant to exogenous shocks (Williams and Vorley 2015; Bishop 2019). Studies in Greece have shown that a lack of institutional support limits

entrepreneurial activity and that this effect is more pronounced in times of crisis (Williams and Vorley 2015).

CONCLUSION

Considering the available sources of financing, several theoretical approaches have been developed for determining the criteria of the optimal relationship between individual sources, i.e. the degree of optimality of the capital structure. In this paper, the Traditional Theory of Capital Structure, Modigliani-Miller (MM) Theories of Capital Structure, Agency Theory of Capital Structure and Modern Conceptions and Capital Structure in Crisis are analyzed in detail in order to approach the answer to the "historical" question: "Is the optimal capital structure still required?"

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