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THE IMPACT OF TAX RESTRICTIONS ON THE STRUCTURE OF COMPANY FINANCING SOURCES

Summary: Miller and Modigliani (MM) proved that the value of a firm is higher if the capital structure consist of equity and debt. The positive influence of the tax shield brings extra benefits for the company. This assumption may be modified by the thin capitalization rules, which excluded the interest paid to shareholders from the tax deductible costs. The article verifies the MM assumption in the Polish tax system, including the domestic regulation of thin capitalization. It has been shown that a loan from shareholders abroad may significantly influence the grounds for introducing such a regulation.

Keywords: taxes, Miller and Modigliani theory, thin capitalization.

1. Introduction

The theory of finance assumes the so-called tax shield to have a positive impact, as – compared to financing with equity capital – it increases the profitability of the external sources of financing in capital companies. However, models for determining the value of a company in an economy with taxes do not include the fiscal constraints imposed by the tax systems of individual countries on the possibility to classify the interest paid to the lender as a given company's tax deductible expenses. These are the so-called regulations regarding thin capitalisation, which affect the formation of a company's structure of liabilities in various ways in different countries.

National tax regulations also contain specific provisions covering these issues. The aim of the article is to verify the impact of domestic tax regulation on the thin capitalization in Poland. It might be hypothesised that tax constraints should discourage shareholders from the debt financing of companies. A company's value should not grow in cases of increasing financing via loans from shareholders.

This article is based on the Polish tax regulations and takes into account the differences in the forms of companies' capital and the location of theshareholders' registered office. The research methods applied in the article are the induction and deduction methods.

2. The value of a company in an economy with taxes

The Miller-Modigliani theory (further referred to as MM), indicates that in an economy without taxes the value of a company is not dependent on the structure of the sources of its financing [Brealey, Myers 1999, p. 614]. In light of the first statement of the MM theory, a company's value is equal to the sum of the discounted payments, including earnings before interest and taxes (EBIT). In formal terms this can be expressed as follows:

$$V_u = V_l = \frac{EBIT}{k_u},$$ (1)

where: V_u – value of a company not using debt (*unleveraged*); V_l – value of a company using debt (*leveraged*); k_u – the cost of company's equity capital.

Formula (1) is satisfied provided that only perfect capital markets exist and there are no taxes on the part of both businesses and their shareholders. When introducing corporate tax, formula (1) is modified by adding the part covering the tax shield to its current form [Iwin-Garzyńska 2010, p. 85]. Finally, it takes the form:

$$V_l = \frac{EBIT(1-T)}{k_u} + \frac{TDk_d}{k_d} = V_u + TD,$$ (2)

where the variables of the formula have been designated in the same way as in formula (1), and: T – corporate tax rate; D – the value of company's debt; k_d – the cost of company's debt (interest rate).

According to formula (2), the value of a company financing itself through both equity capital and liabilities will always be greater than the value of a company using equity only. This leads to significant incentives for managers who need to favour a broader range of debt financing a company's undertaking.

In terms of taxation, the maximum possible amount of foreign capital in a company has not been specified. It should be emphasised, however, that due to the possibility to classify interest on foreign capital as atax expense (tax shield), when financing a company through loans from shareholders, it is possible to sustain a tax loss for fiscal reasons over a long period of time while conducting business profitable at an operational level. In such a case, the interest on the granted loan may be treated as minimising the tax burden, or its optimising, within a group of related companies. Such actions may lead to the erosion of the tax base and have been covered by a specific tax regulation, commonly referred to as *thin capitalisation*. The tax provisions related to this phenomenon vary between countries [Fordońska, Partyka 2009, p. 10]. The next part contains descriptions of the regulations currently in force in Poland, taking into account their impact on the financing structure of domestic companies.

3. Thin capitalisation – national regulations

Thin capitalisation was introduced into the Polish tax system in 1999 [The Act of 20 November 1998…] and is based on the OECD Guidelines [Mika 2008, p. 12]. At present, in accordance with Art. 16, para. 1, point 60 of the CIT Act [The Act of 15 February 1992…][1], interest on loans (credits) granted to a company by a shareholder holding not less than 25% of the company's shares does not constitute a tax expense if the value of the company's debt to its shareholders holding at least 25% of its shares and to other entities holding at least 25% of the shares in such a shareholder's capital reaches a total of three times the value of the company's share capital – in the part by which the loan (credit) value exceeds this debt value, as determined on the interest payment day. These principles apply analogously to loans (credits) granted bya shared shareholder of borrower companies (Art. 16, para. 1, pt. 61 of the CIT Act).

    The above-described provisions condition the tax classification of the paid-out interest on the ratio of the loan to the value of the share capital. This capital is determined without taking into account that part of the fund or capital which was in fact not transferred to it, or which was covered from receivables from loans (credits) and the interest income from these loans (credits) payable to the members towards the company (Art. 16, para. 7 of the CIT Act). Ultimately, this capital must therefore be actually paid up or covered by an in-kind contribution by shareholders.

    The ratio of the share capital to the value of the granted loan is determined at the time of interest payment. In practice, this allows for granting a loan of a value equalling three times the share capital. The whole of the interest on the granted loan will constitute a tax expense, provided that, at the time of its payment, the loan is repaid up to a value of no more than three times the share capital –the regulations do not exclude the possibility of calculating such interest as they govern only the time of its pay-out.

    As mentioned above, the provisions on thin capitalisation cannot be viewed solely in terms of a company acting as the borrower. They should in fact be considered taking into account the taxation of interest received by lenders (shareholders).

4. Lender

Taking into consideration the type of lenders (consumers or entities conducting a business activity) and their registered office (in their home country or abroad), we can distinguish the following entities.

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[1] The Act of 15 February 1992 on Corporate Income Tax as amended, referred to as CIT.
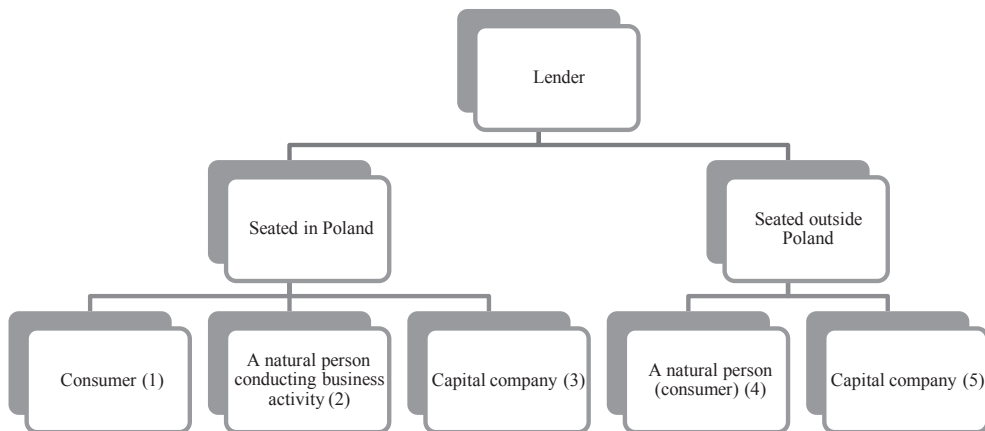
Fig. 1. Potential lenders of a capital company in Poland

Source: own work based on tax regulations.

Each of the lenders was assigned a number and, due to the different specificity of the overall consequences of taxing paid interest, each of them requires to be discussed separately.

4.1. Consumer as the lender

Whereas a company (borrower) can include paid-out interest in tax expenses, having regard to the regulations on thin capitalisation, in the case of a consumer being the lender the received interest constitutes taxable revenues. The tax is calculated within a separate source of revenues, i.e. money capital and property rights (Art. 10, para. 1, pt. 7 of the PIT Act[2]).Interest is subject to a revenue tax of 19% (Art. 30a of the PIT Act) as it is calculated on the amount of the received interest without taking into account any costs associated with obtaining it. These revenues cannot be combined with revenues from other sources.

When classifying the paid-out interest as tax deductible expenses in a capital company, the above-described specificity reduces the ultimate benefits resulting from the existence of atax shield. The value of the 'saved' tax in a company is expressed as

$$P_{(-)} = int* \ T, \tag{3}$$

where: $P_{(-)}$ – the amount of unpaid tax due to the inclusion of interest in tax expenses; int – the amount of paid-out interest;

This amount is 'compensated' with the tax paid by the borrower on the received interest. Technically, the borrower receives:

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[2] The Act of 26 July 1991 on Personal Income Tax, as amended, referred to as PIT.

$$INT = int * (1-t), \tag{4}$$

where: INT – the amount of interest received by the borrower; t – tax rate paid by the borrower.

In view of the fact that the corporate tax rate (T) is in this case equal to the tax rate on the received interest (t), ultimately these values do not result inan additional burden on the paid-out interest.

4.2. A natural person conducting business activity

If a loan is granted by a natural person conducting a business activity and is linked to this activity, in accordance with the regulations regarding PIT, revenue on interest should be classified within a third source of revenue – on non-agricultural business activity (Art. 10, para. 1, pt. 3 of the PIT Act). The consequence of such settlement is the ability to combine together the revenues related to the business activity and those on interest. The sum of these revenues will tend to be reduced by the amount of the costs incurred in connection with the business activity.

In contrast to the taxation of the consumer, in this case interest will be subject to income tax. This solution is more profitable as it is possible to include tax deductible expenses when taxing the interest. Depending on the model of business activity taxation (rates of 18% or 32% in the case of the progressive tax scale, or 19% in the case of proportional tax), the final value of the tax burden on received interest may be lower than it is in the case of consumer taxation. In the event of an entrepreneur incurring a tax loss, the received interest will not be subject to tax. Therefore in particular cases this may result in the tax shield being effectively used by a capital company.

4.3. Another capital company as the lender

Granting a loan by a capital company to its subsidiary will lead to the necessity to prove revenues to the lender. Similarly as is in the case of non-agricultural business activity, revenues on interest are to be combined with other revenues, and the determined sum of revenues reduced by the total tax deductible expenses.

However, unlike a one-person business activity, both paid-out and received interest is not to be subject to income tax, provided the payments occur within a so-called tax group. In accordance with Art. 1a, para. 2 of the CIT Act, casuistic regulations, specifying entities that can create such groups, have been introduced. In particular, the obligation to prove the income of all the companies as a whole (Art. 1a, para. 2, pt. 4 of theCIT Act) leads, in practice, to a small number of such groups being created in Poland [Dymek 2006, p. 68].

Ultimately, it must be pointed out that, irrespective of settling the revenue on received interest with a lender being a capital company in a form analogous to settlements of natural persons engaged in business activity or within a tax group,

the inclusion of paid-out interest in a borrower's tax deductible expenses will be tax-efficient only if the lender subjects it to an effective tax rate lower than 19%.

4.4.   A consumer with place of residence abroad

When analysing the taxation of interest revenues on the part of a natural person residing abroad, it is first necessary to define the concept of a domestic tax resident. In accordance with Art. 3, para. 1 of the PIT Act, it is a natural person, who –if residing in Poland– is obligedto pay tax on all their income (revenue) regardless of the location of the revenue' sources (unlimited tax obligation). Residing in a given place consists in:

1)   having the centre of one's personal or economic interest (centre of vital interests) within Polish territory or

2)   staying on Polish territory longer than 183 days in the tax year.

A contrario, then, a non-resident is an entity that does not have its centre of vital interests in Poland,nor stays there more than 183 days in the tax year. In practice, the exclusive conjunction 'or'– used by the legislator – significantly impedes a precise classification of whether a given person meets the conditions for being a domestic resident. This is all the more important since a foreigner classified as a Polish resident is obliged to subject all their income, including foreign revenue, to taxation in Poland.

If arecipient of interest (the lender) is a non-resident of Poland in the above sense, taxation of the received interest in the recipient's country of residence will result in the interest being doubly taxed. On the one hand, Polish tax authorities will demand to tax this interest on the territory of our country (in accordance with Art. 3, para. 2a of the PIT Act), on the other, these revenues will be subject to taxation in the lender's country of residence in accordance with the unlimited tax obligation principle.

In order to eliminate double taxation, in practice, two methods are used: the method of exemption with progression and the ordinary tax credit method [Hamaekers et al. 2006, p. 42]. The use of each of them depends on the individual provisions in agreements regarding the avoidance of double taxation between Poland and the lender's country of residence. It is therefore necessary to discuss each of them.

The method of exemption with progression

This method involves excluding from tax the income (revenue) received from abroad. However, to determine the correct tax rate in the taxpayer's country of residence, foreign income (revenue) is combined with domestic income (revenue) in order to establish the correct tax rate. This rate is subsequently used to tax domestic income (revenue) only.

The application of this method can be illustrated with the following example.

Table 1. Calculation of tax using the exemption with progression method

OUTSIDE POLAND The tax rate = 20%	POLAND The tax rate = 19%
Lender	**Borrower**
Revenue = 3,000 [U] Tax deductible expenses = 1,000 [U] Revenues from interest = 1,000 [U] Total taxable income: 3,000 – 1,000 = 2,000 [U] Tax = 400 [U]	Revenue = 5,000 [U] Tax deductible expenses = 2,000 [U], Incl. the amount of paid-out interest = 1,000 Taxable income = 3,000 [U] Tax = 600 [U] The amount of 'saved' tax = 190 [U]
TOTAL tax paid = 400 + 600 – 200 = 800 [U]	

Source: own work.

As presented in Table 1, the value of the paid-out interest does not affectthe lender's final tax settlement. This is due to the lack of progression of rates in the lender's country of residence. This means, therefore, that the 'saved' amount of tax in the country of the borrower's registered office effectively reduces the total tax payable.

The ordinary tax credit method

This method is based on combining the incomes both earned in the taxpayer's country of residence and foreign ones. The thus determined income constitutes a basis for the calculation of tax whose amount is reduced proportionally by the tax paid abroad. This can be shown with an analogous example.

Table 2. Calculation of tax using the ordinary tax credit method

OUTSIDE POLAND The tax rate = 20%	POLAND The tax rate = 20 %
Lender	**Borrower**
Revenue = 3,000 [U] Tax deductible expenses = 1,000 [U] Revenues from interest = 1,000 [U] Total taxable income: 2,000 + 3,000 = 5,000 [U] Tax = 1,000 [U] Tax to be paid = 1,000 – 600 = 400 [U]	Revenue = 5,000 [U] Tax deductible expenses = 2,000 [U], Incl. the amount of paid-out interest = 1,000 Taxable income = 3,000 [U] Tax = 600 [U] The amount of ‚saved' tax = 200 [U]
TOTAL tax paid = 400 + 600 − 200 = 800 [U]	

Source: own work.

Similarly as in the method of exemption with progression, due to classifying paid-out interest as tax deductible expenses, the reduced amount of tax is effectively

translated into a reduced amount of tax payable. Given that the income in the lender's country of residence is proportional to the income earned in Poland, the whole of the Polish tax is deductible. This eventually results in the joint taxation of the shareholder and the financed company.

Due to the necessity of the company paying out the interest to pay the so-called withholding tax, the presented calculations may ultimately differ. The amount of the rate and the payment terms are regulated each time by an agreement on avoiding double taxation [Ziółek (ed.) 2007, p. 18].

4.5. A foreign capital company as the lender

The current tax regulations are evolving in the direction of minimising the fiscal burden in the area of international cash flows between associated capital companies [Litwińczuk (ed.) 2013, p. 126]. This tendency takes its origins from the tax regulations formed at the level of the European Union (formerly the European Economic Community) and is based on the implementation of two Council directives:

- Council Directive 2003/49/EC of 3 June 2003 on a common system of taxation applicable to interest and royalty payments made between associated companies of different Member States (OJ EU L 157, 26.6.2003, p. 49; Special Edition in Polish: Ch. 09, Vol. 001, p. 380);
- Council Directive 90/435/EEC of 23 July 1990 on a common system of taxation applicable in the case of parent companies and subsidiaries of different Member States (OJ EU L 225, 20.8.1990, p. 6; Special Edition in Polish: Ch. 09, Vol. 001, p. 147).

At present, in accordance with Art. 21, para. 3 of the CIT Act, payment of interest is exempt from income tax if its recipient is a capital company with its registered office in one of the European Union or European Economic Area countries. The condition for exemption is to own a certain percentage of the shares for a period of not less than two years.

In the absence of the conditions for exemption, the flow of interest is taxed according to the same set of rules as in the case of payments to a foreign natural person.

5. Conclusions

In light of these considerations, it should be noted that the presented hypothesis is falsified in the case of loans granted by domestic shareholders. As shown above, the amounts of tax 'saved' by the beneficiary of the loan are then paid by the shareholders in relation to the income received on paid interest. The only exception is a lender conducting a business activity whose loss will enable the exclusion of such interest from taxation.

This hypothesis will be falsified differently in the case of loans granted by foreign shareholders. Within the framework of the adopted assumptions, the effective – at

the tax level – use of the tax shield by the borrower will take place regardless of the method introduced to avoid double taxation. It should be noted, however, that the final profitability of debt financing a company by a foreign shareholder will also be affected by the following factors:

–   progression of taxation in the shareholder's country of residence;
–   proportionality of including the tax paid in the country of borrower's registered office.

These have not been included in the analysis due to their considerable variety depending on the lender's country of residence.

References

Brealey R.A., Myers S.C., 1999, *Podstawy finansów przedsiębiorstw*, Wydawnictwo PWN, Warszawa.

Dymek M., 2006, *Optymalizacja podatkowa*, Wydawnictwo ODDK, Gdańsk.

Fordońska A., Partyka A., 2009, *Niedostateczna kapitalizacja (thin capitalisation) – konsekwencje w prawie podatkowym i rachunkowym*, „Monitor Rachunkowości i Finansów”, nr 5.

Hamaekers H., Holmes K., Głuchowski J., Kardach T., Nykiel W., 2006, *Wprowadzenie do międzynarodowego prawa podatkowego*, Wydawnictwo LexisNexis, Warszawa.

Iwin-Garzyńska J., 2010, *Szkice o kapitale i podatkach*, Wydawnictwo Difin, Warszawa.

Litwińczuk H. (ed.), 2013, *Podatki bezpośrednie*, Wydawnictwo Wiedza i Praktyka, Warszawa.

Mika F., 2008, *Cienka kapitalizacja*, „Monitor Podatkowy”, nr 6.

The Act of 15 February 1992 on Corporate Income Tax, Journal of Laws No. 21, item 86.

The Act of 20 November 1998 amending the Act on Corporate Income Tax, Journal of Laws No. 144, item 931.

The Act of 26 July 1991 on Personal Income Tax, Journal of Laws No. 80, item 350.

Ziółek Ł. (ed.), 2007, *Międzynarodowe planowanie podatkowe*, Wydawnictwo Difin, Warszawa.

OGRANICZENIA PODATKOWE
A STRUKTURA ŹRÓDEŁ FINANSOWANIA PRZEDSIĘBIORSTWA

Streszczenie: Teoria zaproponowana przez Millera i Modiglianiego (M-M) wskazuje, iż przedsiębiorstwo korzystające z mieszanych źródeł finansowania generuje wyższą wartość dla jego właścicieli. Założenie to opiera się na pozytywnym oddziaływaniu tarczy podatkowej przy zewnętrznych źródłach finansowania. Artykuł analizuje oddziaływanie tarczy w świetle krajowych regulacji dotyczących tzw. cienkiej kapitalizacji. Mając na uwadze fakt, że polskie przepisy podatkowe wyłączają określoną wartość odsetek z kosztów uzyskania przychodu, należy stwierdzić, że teoria M-M może ulegać modyfikacjom w zależności od formy i siedziby pożyczkodawcy krajowej spółki kapitałowej.

Słowa kluczowe: opodatkowanie, teoria Millera i Modiglianiego, cienka kapitalizacja.