



## **Effects of Using Borrowed Capital within the Companies' Activities**

Bogdan-Florin FILIP

*Alexandru Ioan Cuza University of Iasi, [bogdan\\_filip@yahoo.com](mailto:bogdan_filip@yahoo.com)*

**Abstract.** The paper approaches some aspects regarding the use of the borrowed capital by the companies, in the light of the effects generated by it in relation to their own activity. The treatment of these effects starts from the premise that, beside the effect of increasing the total capital of which the company can dispose by obtaining loans, there are complementary effects such as increasing of costs, financial leverage and financial risk, which are analyzed in terms of the specific implications on the company's activity. There are taken into consideration some particularities and their implications which come from the formation of the borrowed capital for the company, determined, in principal, by the use of the bank loans, respectively the use of the bond loans, inclusively in relation with the use of equity.

**Keywords:** loans, equity, capital cost, financial leverage, financial risk

### **1 Introduction**

The formation of a part of the necessary monetary capital for companies, for developing economic activities, through loans or credits obtained from other individuals or legal persons, primarily from commercial banks, represents a normal phenomenon with objective nature. It gives the necessary support in carrying out the overall economic process, in which the resources and their selection dress, alternatively, various natural-material forms, respectively a monetary one. This process induces the disengagement and the accumulation of available money on the level of some structural components of the economy, for longer or shorter periods, while on other structures appear additional needs for resources in monetary form.

Transferring of available money amounts from their owners to the disposal of the companies requesting them in order to complete their equity or their funds attracted on other ways, in order to cover the higher needs determined by their development or carrying out their current activities, is made based on certain principles, under the form (generically called) of the loan or credit. Such a transfer requires the presence of credit relations between the two parties involved, one in a debtor position, considered by us to be the company and the other as a creditor, which can be an individual or a legal person, usually a bank. But, mostly commercial banks are lenders, which in fact intermediate (arrange) redistribution under certain conditions of financial resources become available, within the specific process of bank lending, implying as borrowers, mainly, the companies. This process generates, in turn, multiple complementary effects, respectively various implications, sometimes contradictory, not only in the debtor companies' activities, but also in the creditor's (bank's) one.

Therefore, we propose ourselves, first, to outline the main points of the formation and use of the borrowed capital by companies, along with equity, but also with the resources attracted at their disposal, objectively, from persons (entities) with whom they come into various financial relationships, including with the state. Our approach aims, from this perspective, the need and possibility of linking up the processes of formation and use of company's capitals, primarily of the borrowed ones, in terms of adapting their global and structural dimensions to the real needs of the company, according to the aspirations of its financial structure optimization. In this respect, in the

paper, it is approached, comparatively, the specific cost of each source of funding, which are treated in detail in the scientific literature (Stancu, 2007; Brealey & Myers & Allen, 2010), aiming deepening of some particular aspects of the borrowed resources and, in an original approach, it is sustained the similar treatment those considered distinctively as attracted resources, especially under the conditions of their more intensive use, on the background of lack of liquidity at companies' level.

In the same context, it is aimed the deepening of the observations on the content and way of manifestation of the effects of using the borrowed capitals by companies, including that of the specific cost expressed by the related interest payments. We take into account, thus, the increase of the global dimensions of capital, production and turnover, the growth of the market value of the company, tax savings, financial leverage, etc., but also the financial risk, considered both from the companies' perspective, which may go bankrupt, and from the banks' one, who may suffer important losses.

## **2 General overview on the effects of the formation of the borrowed capital**

From the perspective of the debtor company it may be outlined, in the foreground, the global favourable effect, consisting in the purchase of an additional amount of money compared to the capital owned, which is necessary for making some essential expenses for the development of its activity and for achieving of certain objectives, such as growth, increasing the company's value, making profit, etc. Simultaneously, it is obvious also another effect, with inverse impact, on the financial state of the debtor company, which lies in the cost regarding the loan, supported and materialized on the payment of interest and fees to the creditors, without ignoring neither the obligations of reimbursement for the loans received, on the agreed deadlines, avoiding penalties or loss of related securities etc. Within this context, it has to be revealed the fact that the inclusion of the received loans in the economic business cycle of the debtor company presumes also ensuring the prerequisites necessary for unfolding the financial circuit of the borrowed amounts, so that at the terms of repayment, they can return to the legal starting point (the creditor). From here comes also the need for the debtor company to use the borrowed capital only under the condition of its recovery by ensuring the collection the value of the goods (products) or services supplied to its customers, ensuring also the achievement of a satisfactory profitability, as to permit the cover of the specific additional credit costs and making a profit. In the same context enrolls also the selection of the destinations given to the loans vs. the terms for which they were contracted, preventing spending short term amounts received for accumulating of fixed assets that require longer recovery periods and do not allow reimbursement to the established maturities (Modigliani & Miller, 1958).

Therefore, it is necessary that, within the financial management of the company, to use loans for setting up the necessary capital, under the conditions of creating an optimal financial structure. However, this involves judicious selection of the usable sources of funding, including the proportions held by each of them in firm's total capital formation and between financial structure optimization criteria a place of the foreground is to minimize the average cost of the total capital used (Halpern & Brigham & Weston, 1998). In this regard, it is worth accepting, especially in theory, the idea that financial resources usable in the firm consist of the own funds (equity) and borrowed ones (borrowed capital) and its financial structure optimization problem is treated, usually, only through the formation of equity, on one hand, and the borrowed capital, on the other hand, with all their specific implications, mainly, of the related costs (Crouhy & Galai & Mark, 2000).

In our opinion, however, the presence of financial resources, belonging to third parties (workers, suppliers, clients, state etc.), existing in the economic circuit at the level of the companies, is a reality growing stronger through the proportions held by them together with the own resources and borrowed ones, which justifies taking them into consideration also within the framework of the analysis on optimizing the balance between equity and borrowed capital.

However, if we accept as a necessary and representative prerequisite for the company making the decision to apply for loans, the creation of an optimal financial structure, if only in terms of proportions incumbent on the two basic components of equity and borrowed funds, we find that classical or traditional financial theory (Harris & Raviv, 1991; Stancu, 2006) in this area has come with the theory that the optimal applicable criterion is that of minimizing capital costs. According to this theory, both the shareholders of a company and its creditors do not want debts coming from very large-scale loans, the first ones fearing reduction of dividends they may obtain and second ones fearing the possible inability of the debtor to honour payment obligations (repayments, interest).

The issues raised above are manifested largely, also presently, but in the current financial theory (Chew, 2000), the references on optimal financial structure of firms and implicitly on the use of credits have become more complex. It went, thus, to assess the impact of funding source used, not only regarding the cost but also the value of the company, aiming to ensure an increase of this value.

Thus, it is noticed that within the framework of the changes occurred in the theory of the company's financing sources appears relevant the reconsideration of some theses of the first version of Miller and Modigliani's theory, respectively that the financial structure should not influence the market value of the company. But, on the subsequent version of that model, by taking into account the impact of the use of loans by companies, in the case of income (profit) after taxation and under the conditions of state acceptance of related interest expenses deductibility, it led to the conclusion that by using loans it may be achieved also an increase of the companies' value. From the same perspective there are of interest also the more recent approaches in terms of preferential capital structures of firms (Myers, 2001). This highlights the shape of certain preferences such as the one towards the increase of the proportion of funding from internal sources, which does not generate costs of interest kind or of issuing with priority of bonds instead of issuing shares, etc. So, in both alternatives, optimizing the company's financial structure makes indispensable the evaluation of the cost of each of the two major components of capital that the company can obtain. This, without neglecting either the presence of some features with differentiated impact in the case of some distinct forms (within each one) as that of the credit (loan) bond compared to the bank loan.

So, it is recognized in principle that the dividends, which have for the shareholders the significance of earnings expected on account of the capital they brought, represent for the company the cost of the equity purchased by issuing and selling shares, which will be supported from the profit, resulted under the conditions of using this capital in developing profitable activities.

### **3 Complementary effects of loans' use**

Regarding the cost of capital borrowed by a company or another, there may appear significant differences in size, resulting inclusively from relatively different levels of interest rates on loans from banks compared to the results obtained by issuing and selling bonds on financial markets. Moreover, in the usual case of companies making profit, even the respective cost is directly determined by the interest rate agreed with creditors, this diminishes, implying another effect of tax savings realized by the debtors on the account of the interest expenses on loans used deducted from gross profit, which may be accepted by state, in principle, in order to stimulate the development of national economy.

Therefore, the real percentage of the actual cost supported by the company in the normal case of a loan presence and so of the borrowed capital used in profitable activities can be expressed by a formula of the following form:

$$C_r = i * (1 - t) \tag{1}$$

Where:

Cr - real cost of borrowed capital expressed as a percentage,

i - Nominal interest rate,

t – Tax rate.

It is obvious that the tax saving involved by using loans, obtained by the companies in the most comprehensive form, that of bank loans, as well as the reduction of the related costs varies in size, depending on several factors. Between them there have to be remarked the size of the borrowed capital, that of the nominal interest rate and of the repayment period, but also the financed business's financial results (profit, loss), including the size of the obtained profit.

But, in a global approach, the amount of the tax saving (fiscal economy) obtainable by using a credit by a company can be expressed by the following formulas:

$$T_s = D_t * t \tag{2}$$

Or

$$T_s = (i * C) * t \tag{3}$$

where:

$T_s$  = tax saving related to borrowed capital,

$D_t$  = total amount of interest paid by the company deducted from gross profit,

t - income tax rate (percent),

i - nominal interest rate,

C - credit (borrowed capital) used by firms

In the context of the approached subject it appears very revealing also the generation of leverage, materialized in changes at the level of the return on equity, based on the efficient use of (bank) loans into their own business, respectively of the borrowed capital. Naturally, such changes should take place only in a positive direction, meaning the increase in rate of return on account of additional profit obtainable by the company by using borrowed resources. Such leverage (L) is determined as the difference between the economic rate of return and the interest rate paid for borrowed capital, and it limits itself to equity, because of some specific interdependencies. Thus, if we admit that a company uses total capital ( $C_t$ ), composed of equity ( $C_e$ ) and borrowed capital ( $C_b$ ), achieving an economic rate of return ( $r_e$ ), which diminishes under the impact of interest rate on loans (i), having as correspondent a profit (P), interdependencies leading to production of leverage (L) and, thus, its dimensions can be expressed by the following formulas:

$$P = (C_e * r_e) + C_b (r_e - i) \tag{4}$$

where:

$$L = r_e - i \tag{5}$$

and

$$C_e * L = C_b * (r_e - i) \tag{6}$$

resulting

$$L = \frac{C_b * (r_e - i)}{C_e} \tag{7}$$

Since the return of borrowed capital, resulting in the difference between the economic rate of return and the interest rate, is transferred as financial leverage expression on the existing equity, permanently

available for the company, the latter records a cumulative rate of return ( $r_p$ ), based on both categories of capital, which can be rendered as follows:

$$r_p = r + L \quad (8)$$

The leverage involved by using bank loans or bond loans by the companies can be and, usually, is positive and its achievement depends primarily on the profitable nature of the economic activity. It becomes even greater as the economic rate of return is higher, the interest rate charged for the received loans is lower and the proportions of the used loans are higher.

There is not excluded either the situation that the effect resulting from lending companies to be negative if their activity becomes unprofitable and, therefore, the interest rate may not find coverage in the economic rate of return and the costs related to the loans to generate losses, phenomenon known as "the club effect."

Simultaneously, an important contribution to manifesting leverage is due to the interest rate for the loans granted to the companies, whose size is determined, in principle, by the relations that are established on the financial-monetary market between supply and demand for loan capital. In this regard, mutations that occur are caused by various factors, sometimes subjective, including by the promotion of certain government policies of circumstantial nature, as is the case of recession or economical-financial crisis of today (Marrison, 2002). Thus, there may be noted the concerns and the measures initiated to stimulate investment and increase the number of jobs at the level of the companies, consisting also in reducing of interest rates in order to facilitate access to new bank loans, but also in the implementation on large-scale of restructuring of economic activities. It appears, so, more obvious the need for approach related to the companies' interests and to the banks' ones in order to prevent bankruptcies and stimulate the recovery of economic and financial activities.

Within the same framework it is placed also the practice under certain conditions, of partial or complete subsidization of interest on bank loans, this involving the reduction or annihilation of the credit cost, respectively of the borrowed capital used by the companies, which creates also the possibility of amplifying the leverage.

A distinctive effect due, usually, to the credit relationships practice on the market economy is the financial risk. Regarding its meanings, it has to be signalled the fact that, on the conceptual plan, it is suggested, often, the idea according to which the exposure to this risk is concerning the lender, threatened not to be able to recover the granted loans and to cash the corresponding interest. But, in fact, the financial risk has a wider range of expression, being present in almost all relationships taking place in monetary form between participants at the economic and social life, which are exposed at risk, firstly, in terms of receivables. At the same time, we appreciate that the exposure to financial risk is present also in the debtor's case, in relation to its incumbent payment obligations towards the owners of receivables, primarily, towards its creditors, given also the latter rights to exploit the guarantees brought by the debtors for ensuring the recovery of the amounts owed to the creditors, including the application of other legal sanctions on the debtor.

Consequently, a company's financial risk is manifested by the inability of making repayments due on the pre-established deadlines (maturities), being emphasized, especially, through unpaid principal on credit due and unpaid interest due towards the creditors. The generation of this risk through the accumulation of a large amount of unsettled matured debts may lead the company to insolvency or bankruptcy, with loss of assets, respectively of its own capital.

In a synthetic way, the higher or lower level of such a risk depends on the dimensions of the debts accumulated by the company, on one hand, and its ability to pay on account of the performance of profitable activities, which bring benefit (profit). In this context, it is enrolled also one of the alternatives of expression of the financial risk in terms of level of interest coverage from the obtained benefit or profit for the loans used by the company, which can be synthetically represented in the following formula:

$$L_{ic} = \frac{B_t}{A_i} \tag{9}$$

in which:

$L_{ic}$  – the level of interest coverage out of the benefits;

$B_t$  – total benefit before tax and interest;

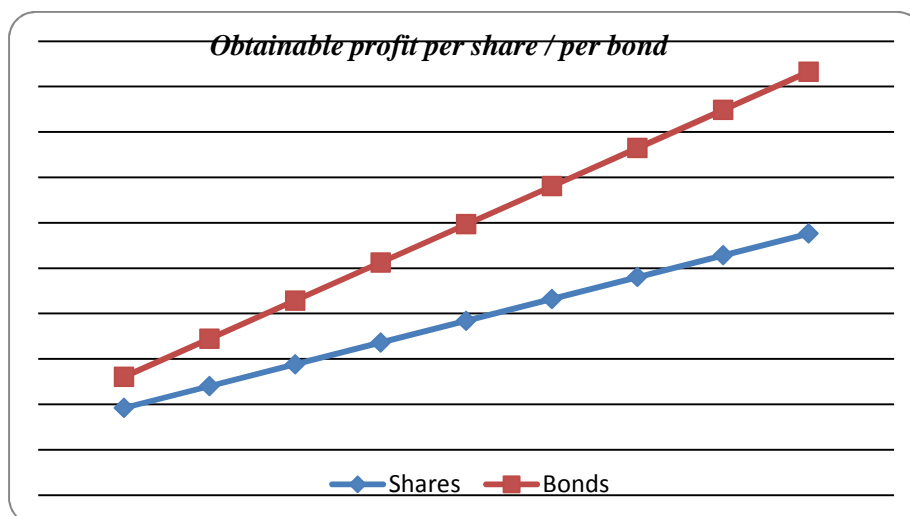
$A_i$  – the amount of the interest to be paid

Calculating such an indicator is useful to assess the risk assumed, attached both by the creditor and the debtor, in terms of the latter's ability to obtain sufficient high new value, out of which to be possible the recovery of the costs regarding interest payment. But although its calculation is necessary, we consider that the representativeness of this indicator remains relatively low compared to the manifestation area of the financial risk. As a result, for a more comprehensive characterization of this risk in terms of company, we appreciate that it may be of interest taking into account also of other indicators that reflect ability to pay, liquidity, solvency, including the calculation of the indebtedness rate of the company, according to the structure of assets and the total debt amount of it (Bucătaru, 2007).

From the same perspective of our approach there are of interest also the strategic options of various companies on the initial purchase and subsequent increase of capital, consisting in choosing between issuing and selling shares, respectively bonds. In relation to decisions applied in this respect, it shapes also a different financial structure, in which the change of the proportions held by the two major components of the used capital by a company or another determines various implications, which have to be evaluated, inclusively under the aspects previously envisaged.

It appears, therefore, of interest, a computer illustration of possible options for a company that needs, for example, 30 million USD and can choose for gathering them between a bond issue with interest of 6% and the issue of shares at a price of 10 USD per share.

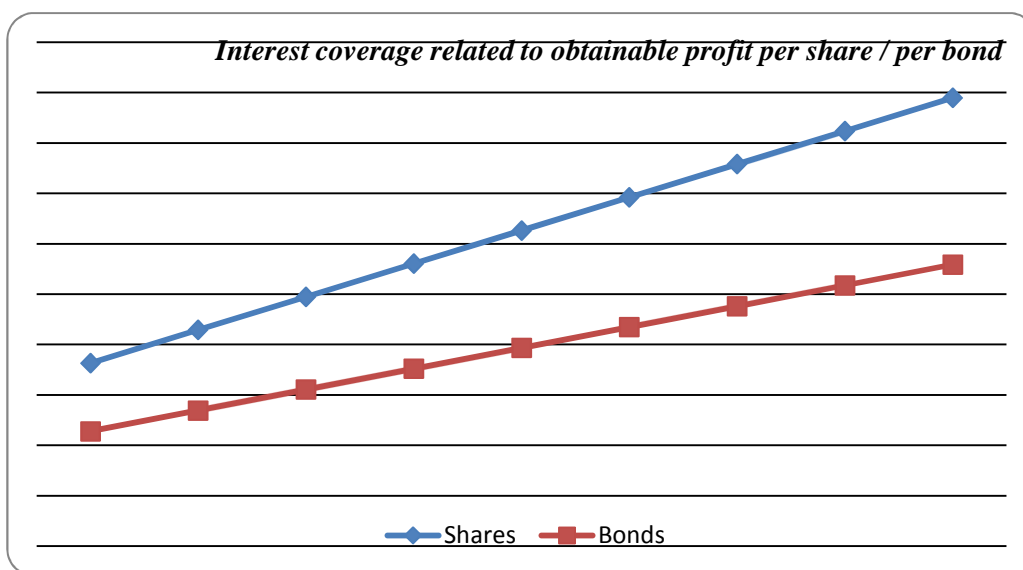
Based on the calculations made it comes to results that reveal, in graphical form, the foreseeable evolution of the obtainable benefit per share / per bond, by admitting the solution of purchasing such capital by issuing shares and increasing equity, compared to the version of issuance of bonds and increase of borrowed capital, as shown by the two curves in Figure 1.



**Figure 1** Obtainable profit per share / per bond

Both curves represented in the graphic provide a positive outlook on the evolution of profitability, the benefit per share / per bond going to grow under the action of issue and sale of both actions and obligations. But at the same time, it results that in the case of the sale of bonds, the profitability increase will be higher than for issuing shares. Such a situation can be explained in terms of response of the potential investors also under the uncertainties coming from confrontation with phenomena such as recession or crisis, they counting more on the obtainable income, as interest for the loans granted to the companies, lower but safer.

Also, the calculations regarding financial risk involved for the same two usable alternatives in order to purchase that capital, risk considered in terms of possibilities to cover the specific expenses, such as the payment of interest on received loans by the companies, led to the graphical representation of the perspectives of interest coverage out of the benefit achieved, shown in Figure 2.



**Figure 2** Interest coverage related to obtainable profit per share / per bond

According to the curves represented in the graphic, the interest coverage out of benefit tends to increase, both in the case of increasing the capital by issuing and selling shares and in the case of receiving a new loan due to the sale of bonds. This situation is explained primarily by the increase of the interest to be covered, under the conditions of the use of the new loan, compared to the absence of this growth in the other version.

#### 4 Conclusions

Overall, it can be concluded that the judicious use of companies' capital loan is, fundamentally, not only a possible solution, but an objective necessity. In particular, it favours the adaptation and optimization of the dimensions and the structure of the global capital used by enterprises, under practical conditions of conducting economic and financial activities, without ignoring the advantage of obtaining income (interest) by the creditors and either the positive impact on the general development of economy and society. In this respect, we consider necessary the firms concern for assessing the size of the financial resources attracted outside credit relationships from various entities (state employees, etc..), for a more efficient management of the entire capital. Also, we appreciate that for these resources could be applied a treatment similar to the loans one, at least for amounts (often very large) due to the state by various companies.

The most direct effect is materialized in obtaining by the companies of the money amounts temporary necessary over the level existing at their disposal for the moment. Beside it, there are producing other

effects of cost, leverage or financial risk type etc., having major implications on the companies' functioning and on the financial results of their activities.

From the case study presented in the paper it resulted also that, compared to capital formation based on issuing shares, obtaining loans through bonds sale offers the company the possibility to achieve a higher return.

Although the interest is presumed as supplementary cost element, the judicious use of the loans may contribute to the growth of the company's return, it benefiting also by the leverage, which is normally reflected in a higher return on equity.

It remains of real interest for companies, achieving tax savings, obtainable by using of borrowed capital, which has positive impact on the profit to be distributed, including on the development of the debtor company.

Likewise, by appealing to loans the companies assume inevitably also the financial risk which comes from an inefficient use of the capital, respectively of the borrowed one. This imposes a performing financial management for achieving of an optimal financial structure, avoiding insolvency or bankruptcy.

## 5 References

- Berea, A. O.(2005). *Managementul financiar al firmei*, București: Editura Bren
- Berk, J. & DeMarzo, P. (2007). *Corporate Finance*. Pearson Addison Wesley
- Bran, P. (2003). *Finanțele Întreprinderii*. București: Editura Economică
- Brealey, R. & Myers, S. & Allen, F.(2010). *Principles of Corporate Finance*, McGraw-Hill
- Brigham, E. (1992). *Fundamentals of Financial Management*. Orlando: The Dryden Press
- Bucătaru, D. (2007). *Finanțele Întreprinderii*. Iași: Editura Junimea
- Chew, D. (2000). *The New Corporate Finance*. New-York: McGraw-Hill
- Crouhy, M. & Galai, D. & Mark, R. (2005). *The Essentials of Risk Management*. New-York: McGraw-Hill
- Giurgiu, A., I. (2005). *Mecanismul financiar al întreprinzătorului*. Cluj-Napoca: Editura Dacia
- Halpern, P. & Brigham, E. & Weston, F. (1998). *Finanțe Manageriale*. București: Editura Economică
- Harris, M. & Raviv, A. (1991). The Theory of Capital Structure. *Journal of Finance*, American Finance Association, vol. 46(1), pages 297-355
- Marrison, C. (2002). *The Fundamentals of Risk Measurement*, New-York: McGraw-Hill
- Modigliani, F. & Miller, M.,H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investments. *American Economic Review*, Vol.48, No.3, p. 261-297
- Myers, S. (2001). Capital Structure. *Journal of Economic Perspectives*, 15(2), p.81-102
- Onofrei, M. (2006). *Management Financiar*. București: Editura C.H. Beck
- Ross, S. (2009). *Corporate Finance*. McGraw-Hill
- Stancu, I. (2006). Costul capitalurilor întreprinderii și rata de actualizare a investițiilor. *Economie Teoretică și Aplicată*, 2/2006
- Stancu, I.(2007). *Finanțe*. București: Editura Economică
- Vintilă, G. (2004). *Gestiunea financiară a întreprinderii*. București: EDP, Ediția a IV-a