

Original Paper

Capital Structure, Agency Cost and Corporate Governance:
Theoretical Linkages under the Operational Framework of a
Modern Company

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Abstract

The purpose of this paper is to explain the interaction mechanism between the capital structure of a modern company, the implying agency cost that is raised when the company is expanding and the corporate governance system that should be implemented in order to achieve a smoothness of the implied internal friction. The corporate governance experience suggests that there is a lack of a systemic management at those problems. The above corporate problems reduce the maximization of the company value. It is argued that the failure to maximize the value of the company can be attributed to the endogenous weakness of corporate interconnection. This paper analyses the theory of corporate interconnection between its agents (shareholders, executive managers and bondholders), contributes to a better understanding of those issues and propose some ideas of addressing them through a systematical and analytical framework.

Keywords

agency cost, capital Structure, corporate governance, corporate finance, ownership structure, value of firms

1. Introduction

The capital structure, the agency cost and the way in which a company is structured and controlled, in other words, the corporate governance, are key issues that a modern company should take into account in order to operate efficiently (Morellec et al., 2012). Although each of the above issues can be identified and addressed independently, experience suggests that an effective business policy considers

those issues as a systemic problem and as such should attempt to resolve them. That is because the level of capital structure affects indirectly the agency cost, which emerges as the company grows, and the role of the corporate governance is to mitigate this cost. Although these economic concepts often refer to financial studies and are key and independent chapters in financial manuals, there is a lack of theoretical interconnection between them and how they affect the value of the firm.

The main purpose of this paper is to describe meticulously the “shadowy” theoretical interconnection between capital structure, agency cost and corporate governance and thus help to more effectively manage the above chain of problems in operating a modern enterprise. The remainder of the article is formed as it follows.

In the second part of the paper there is a brief overview of the optimal level of capital structure, introducing the meaning of the bankruptcy cost in an enterprise as the main determinant of its external borrowing. The third part of the paper deals with the problem of agency cost in a business not only on the side of conflicting interests between management and shareholders, but also on the conflicting interests between shareholders and lenders (bondholders) of the company and finally on the side of the conflicting interests between the majority shareholders and the minority shareholders. Finally, the fourth section mentions the role that corporate governance can play in normalizing agency cost and thus increasing the value of the business.

2. The Link of Capital Structure, Value of Firm and Debt

The term capital structure is mainly used to describe the permanent financing of the enterprise, which consists of long-term borrowing, preference capital and equity, that is to say, the capital structure is part of the financial structure (Milton & Raviv, 1991).

According to Modigliani and Miller (1958; 1963) [MM1 Proposition], the value of a Leveraged VL business (under corporate tax status but in the absence of personal taxes) is greater than the value of an Unleveraged Vu, by the amount of the present value of the tax shield $T_c * B$, faced by the leveraged business. This is expressed by the relation (1):

$$VL = Vu + T_c * B \quad (1)$$

where $T_c * B$, we denote the product of the corporate tax rate, T_c , with the size of the debt, B , assumed by the enterprise (see Figure 1).

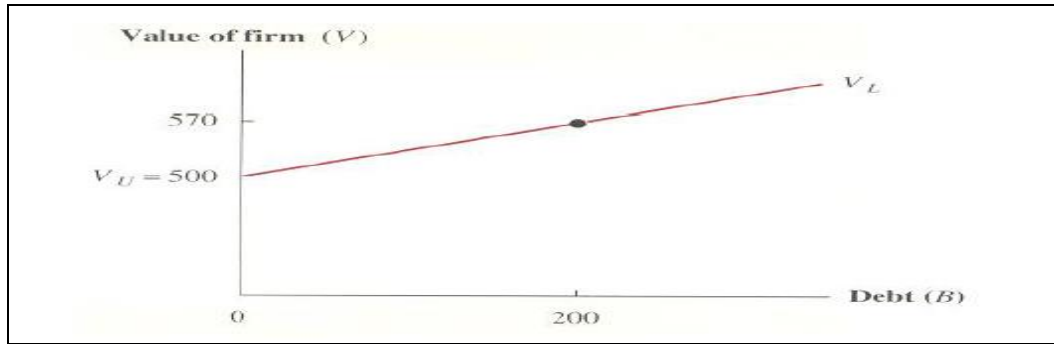


Figure 1. Value of Firm and Debt (Note 1)

By saying a tax shield, we mean the tax exemption that VL has from the state because the debt servicing cost is considered a financial expense and is deducted from the taxation of profits generated by a business in an economic period.

According to the second proposal of Modigliani and Miller (1963) [MM2 Proposition], the cost of the share capital of a leveraged business is as follows:

$$R_s = R_o + B/S * (1 - T_c) * (R_o - R_b) \tag{2}$$

where R_s denotes the required return on share capital (cost of share capital), R_o denotes the cost of the share capital of an unleveraged business, B/S is the ratio of the size of the loan capital to the share capital of VL, and with R_b we denote the cost of the borrowed capital (the required return of the lenders of the company).

The financing of an enterprise comes mainly from two sources of capital: foreign capital (external financing), B , and equity, S . Consequently, the total cost to a leveraged business arises as a weighted average capital cost, R_{wacc} (weight average capital cost), that is:

$$R_{wacc} = S/(S+B) * R_s + B/(S+B) * R_b * (1 - T_c) \tag{3}$$

From equation (3) it becomes clear that as the size of the loan capital increases in an enterprise, the lower the weighted average cost of capital faced by the enterprise becomes (see Figure 2).

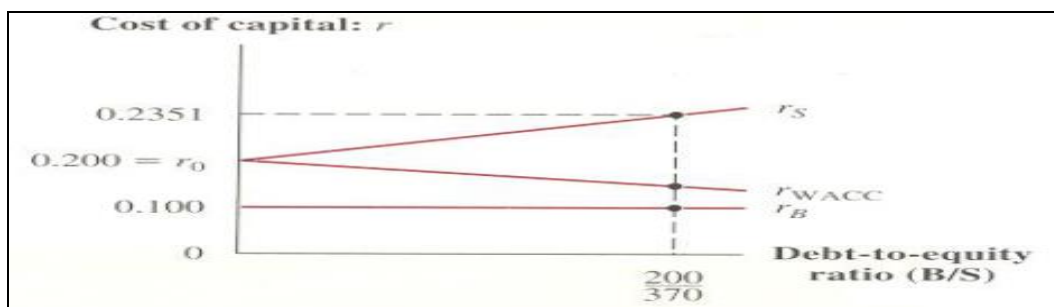


Figure 2. Cost of Capital and Debt-to-Equity (Note 2)

The equation (3) implies that the company’s management has a serious incentive for an unlimited

increase in external borrowing to minimize R_{wacc} , which means there is a tendency to change the value of the business almost entirely in value of borrowed capital. The main benefits that the company expects from using more debt are, as already mentioned, the tax benefits (tax shield) and the benefits of lowering the representation costs, especially between management and shareholders (but not just as discussed in the third chapter of the article). On the other hand, the use of more debt increases the likelihood of financial inactivity (i.e., sub-invested funds) and financial crisis (seizure or even bankruptcy).

The unlimited increase in external debt, as implied by the formula (3), is not a policy that is realistic because the business is delineated by the presence of risks arising from debt, resulting in an increase in R_{wacc} . The management of the firm is therefore required to determine an effective balance between external debt, B , and equity, S . The limits on debt utilization arise from the fact that as the external borrowing increases, the probability of bankruptcy of the company increases too. According to Haugen and Senbet (1988) the probability of bankruptcy has a negative effect on the value of a firm (see Figure 3).

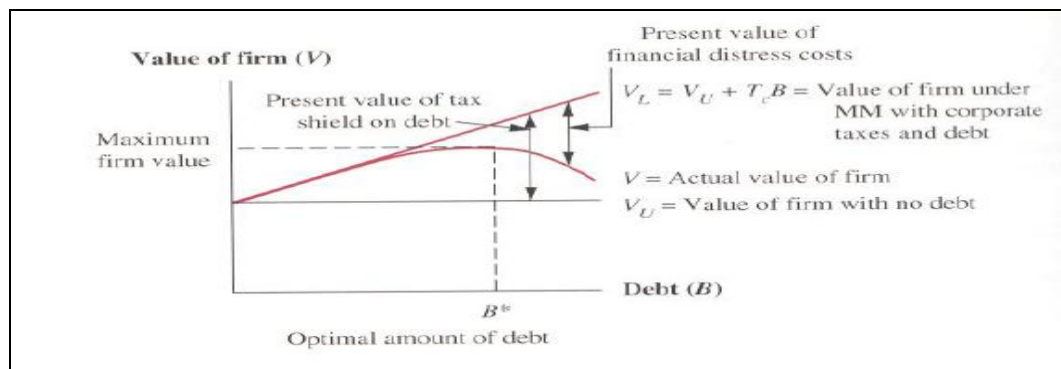


Figure 3. Value of Firm and Debt (Note 3)

But it is not the risk of bankruptcy itself that reduces the value but the cost associated with bankruptcy, that is, bankruptcy cost, $C(b)$. With the introduction of bankruptcy cost, the type of weighted average cost of capital determination is modified as follows:

$$R_{wacc} = [S/(S+B) * R_s + B/(S+B) * R_b * (1 - T_c)] - C(b) \quad (4)$$

Bankruptcy cost consists of three main components:

- The direct costs of financial crisis (seizure or even bankruptcy). These costs are legal and management costs incurred in the process of liquidating the assets of a financially seized enterprise or in the process of re-establishing a business that has already been bankrupt.
- The indirect costs of a financial crisis. These concern the reduction of the capacity to attract new investments and the creation of incentives for under-investment in the enterprise.
- Agency cost. When an enterprise is leveraged, conflicting interests develop between shareholders and bondholders, between shareholders and executives, and between majority shareholders and

minority shareholders. These conflicting interests, which are magnified in a period of financial crisis, entail costs for the company and reduce its value.

The cost of bankruptcy is therefore the link between the fundamental concept of capital structure and the popular concept (in modern financial theory) of agency costs (David & Lawrence, 1988). The above interactions involving the agency cost are developed in the third section of the article.

3. Agency Cost

As stated above, the agency cost is a key component of the total cost of a leveraged business and is positively correlated with the increase in debt. This cost derives from the choices of individual interests or selfish strategies that are developed in the context of the operation of the enterprise among the owners, lenders and its executives (Haugen & Senbet, 1979). All the above conflicting interests constitute the agency cost in an enterprise, which in turn is a key component of the cost of financial distress. The cost of the financial crisis in a firm in its worst version, appears as the cost of bankruptcy in an enterprise.

The probability of bankruptcy has a negative impact on the value of a business (Haugen & Senbet, 1978), so most of the cost of such an unpleasant situation is borne by the company's shareholders. These selfish strategies among the main actors in an enterprise adversely affect its smooth operation, and act like sand on the gears of a machine, creating internal friction and thus reducing the value of the business. We can distinguish three main areas in which the agency cost of the business grows.

3.1 Scope of Conflicting Interests between Executive Managers and Shareholders

a) Labor Avoidance / Productivity Reduction: As the business grows, the productivity of the company's executives is becoming more and more difficult, as the roles of the executives in the company are complicated and in some cases self-inhibited or mutually eliminated by reducing its competitiveness. For example, the finance manager may be suspicious of a sales manager's request to increase the advertising campaign's costs because the former wants to see increased operating profits in the current financial period for his own benefit, even though this suspicion may undermine the future competitiveness of the business. There is also a lack of zeal for work when the remuneration of executives is independent of the profits achieved by the firm and labor supply is not linked to productivity bonuses.

b) Luxurious living costs: Increasing the size of the enterprise also separates ownership from management and thus creates incentives to avoid work and wastage of extra cash at the expense of luxury living for managers to the detriment of shareholders / owners.

The company's shareholders can be protected from the selfish choices of managers with two main ways: Firstly, by allowing executives to become co-owners of part of the value of the business they run, thereby weakening the incentive to avoid work and reduce productivity. Secondly, allowing the company's debt to rise to such a level that additional cash can serve the interest rate on debt servicing marginally, so that managers cannot do excessive waste.

3.2 Conflict of Interests between Shareholders and Lenders/Bondholders

The most common strategies of shareholders against bonds are:

- a) Undertaking risky investment projects. As the debt/equity ratio rises to an excessive degree, the incentive for large risk investment on the part of the shareholders emerges because they create the illusion that they invest with others' money, since a large percentage of the value of the business consists of borrowed funds, that is the bondholders' money.
- b) Another strategy of the shareholders against the bondholders is that in a period of financial crisis, shareholders seeing that the company is going bankrupt are authorizing the payment of extra or larger dividends for themselves, leaving less than the value of the business (Milking the Property) for bondholders (it is known that in the event that the bankruptcy business enters into liquidation of its assets, the bondholders and other lenders are repaid first, while the shareholders last).
- c) The probability of bankruptcy creates an underinvestment motivation. When the probability of bankruptcy is high, shareholders are reluctant to take on an investment plan even if it has a positive net present value (Jensen, 2000). This is because the following question arises for the shareholder: why should I spend money on an investment when there is a high probability that this money will be passed on to the bondholders if the company goes bankrupt?
- d) Another shareholder action that damages the bondholders is the management of the firm- which is considered trustworthy by the bondholders-decides to issue a bond that is absorbed by the bondholders at a low interest rate. In the process, the shareholders decide that the current management is very conservative in its investment choices and change it with a new more risk-lover management that will take more risky decisions. Bondholders are affected by a change in management because while they previously lent the business at a low interest rate, they see that they cannot be compensated with a higher interest rate (basic rate + risk premium) now that the new management takes on more risky investment plans.
- e) Bondholders also suffer when shareholders allow the management to issue a bond with a low issue rate; at second step allow the issue of a new bond with a higher interest rate to be issued and finally the management decides to repay first the bondholders of the second bond and rolling the bond payment of the first bondholders for later on. In this case, the bondholders of the first issue bond are clearly negatively affected. Although the impression is that shareholders may harm bondholders in a variety of ways, if we ask who pays the cost of all the above distortions arising from shareholders "selfish" investment strategies (especially when they occur in times of financial crisis) the answer is that the cost is paid by the company's own shareholders.

That is because borrowers acting in a rational way, know that a financial crisis rise up they cannot hope that the shareholders will first interest in repaying the company's external debts, but they will be primarily interested for their own property. Most likely, in situation of financial crisis, shareholders will probably choose investment strategies that reduce the value of bonds. Bondholders can protect their interests by increasing proportionately with the interest rate risk they require to buy bonds and

therefore shareholders are called upon to pay a higher borrowing rate due to their selfish strategies.

The rise in the cost of external borrowing, R_b , directly increases the weighted average capital cost that the business faces, R_{wacc} , and creates problems in the financial management of the firm. That's why the management has a good reason to want to reduce it. In order to protect bondholders from shareholders' selfish strategies and thus accept a lower return on their money (by reducing the premium they require), which will not increase R_{wacc} dangerously, a set of preventive agreements / measures have to be taken by the management of a business, in part or as a whole (depending on its bargaining power), in order to finance relatively inexpensively through the issue of the bond issue.

These measures are briefly described below:

Positive Nature Binding Agreements: They are said to have a positive character because they do not give a sense of strict limitation to the management's business initiatives, leaving space for a loose monitoring by the bondholders:

- a) Keeping Low Operating Capital: The firm therefore agrees to maintain the minimum working capital necessary for its smooth operation, thus reducing the likelihood of financial inertia of capital and the difficulty of servicing its obligations to third parties.
- b) Recurring Financial Statements: Periodic publication of financial statements helps all traders with the company to have better information on it, reducing uncertainty about the course of the business.

Negative Nature Binding Agreements: They are said to be negative because they give a sense of rigorous supervision / control to the management's business initiatives on the part of the bondholders:

- c) Dividend Payment Limit: Bondholders request the management to commit to a pre-defined dividend payment limit to shareholders because, as reported in financial crisis situations, shareholders decide to pay large dividends in order to "erase" the value of the company before the bankruptcy.
- d) The company cannot pledge its assets to get a loan without informing the bondholders in detail about the loan contract.
- e) The company cannot merge without the consent of the bondholders because the result of a possible merger may have positive synergies for the shareholders but not necessarily for its lenders.
- f) The company cannot sell valuable assets without the approval of the bondholders.
- g) The company's management cannot issue additional long-term debt without the bondholders' approval, as this may increase the likelihood of bankruptcy and reduce the ability to pay the claims of the old lender to the firm.

In addition to positive / negative binding agreements, the capitalization of the company's debt is a complementary way on the management's side to smooth the bondholders' demands. Through debt capitalization, bondholders are also allowed to become owners / shareholders in the business. Convertible bonds are a financial instrument that is used in these cases successfully.

3.3 Conflict of Interests between Insiders (Shareholder of Majority) and Outsiders (Shareholder of Minority)

The most common strategies of majority shareholders at the expense of minority shareholders are as follows:

- a) Overpricing of raw materials necessary for the operation of the company (transfer pricing). Let's suppose that company D has two shareholders, shareholder A, which owns 60% of the company and shareholder B, which owns 40%. Assuming that shareholder A is the owner of another company E at 100% which supplies raw materials to D. If the shareholder A overprice the raw materials by 100% then he wins 40% ($100\% * 100\% - 100\% * 60\% = 40\%$) by the two companies in which he holds a share, while the minority shareholder B will lose 60% of the above transaction ($40\% * 100\% - 100\% * 100\% = -60\%$).
- b) A major shareholder may agree on a share exchange that benefits him but not the others in the event of a takeover or merger.
- c) A major shareholder may impose on a listed company controlling a share capital increase at a price much lower than the current stock market value of the firm, hoping that many retail investors, whether by inertia or ignorance, negligence or unpredictability, will not participate in such an increase, so the major shareholders could increase their share in the company at privilege prices (Doukas, 2002).

Minority shareholders can be protected following two ways:

- a) Applying the Right of Violation (Veto). The veto right basically prevents the board from taking decisions unless there is a common consensus from all shareholders.
- b) Transparency Clauses and Open Competitions. Transparency clauses and open competitions protect minority shareholders from collusions of majority shareholders by sharing information to all owners in a symmetrical manner.

4. Corporate Governance

Corporate governance describes the system by which companies are guided and controlled. More specifically, the corporate governance system distinguishes rights and obligations between key participants in an enterprise. In an ideal system of distinction of powers and roles, the shareholders, the administrative board the senior executives and the lenders of the business offer everyone in their own way, with main purpose to maximize the value of the business (Maher & Anderson, 1999). According to Jiraporn and Gleason (2007) capital structure is influenced by the strength of shareholder rights. That is, there is empirical evidence that shows an inverse relation between leverage and shareholder rights, suggesting that firms adopt higher debt ratios where shareholder rights are more restricted. This is consistent with agency theory, which predicts that leverage helps alleviate agency problems. The protection of the shareholders' interests is at the core of a corporate governance system that solves the key problem of conflicting interests between the shareholders (principal) and the management (agent) (Tirole, 1999). An effective corporate governance system should minimize the representation costs that

develop between the conflicting parties in order to maximize the value of the business (Monks, 1995). In order to smooth out the internal rigidities and selfish ambitions developed within the company's operations, shareholders usually sign a shareholder agreement specifying and clarifying the following main points: Firstly, clarifying the basic principles of how to run and manage a company and how to take investment decisions. Secondly, the relations that are hold among the shareholders. International practice suggests various solutions in order to improve corporate governance methods, and succeed a more effective relationship between shareholders, management and management board of a company. Doukas (2002) mentions the following mainstream suggestions:

- a) Transparency, clarity and disclosure of the company's rules to determine the responsibilities and obligations of the shareholders, administrative board, the president and the managing director and the criteria for choosing advisors.
- b) The administrative board should also include consultants who are not executives of the business so that they are not professionally dependent on it, and that they are not members of the close environment of the major shareholders.
- c) The term of office of the members of the administrative board should not exceed one year, because relations of dependence are created over time. They should have the opportunity to devote sufficient time to deal with business issues and they should not be absent from board meetings.
- d) The president and CEO of the company should be different persons. When it is the same person, then the need for a strong board with an independent opinion is even more urgent.

It is noted that even an ideally efficient corporate governance system cannot by itself ensure the maximum profitability in a company and cannot substitutes the entrepreneurship and the skills of a very good Chief Executive Officer (CEO) (see Maher & Andersson, 1999). Dahya, McConnell and Travlos (2002) note that companies which need capital and wish access to international capital markets should be adjusted according to the requirements of international markets, should modernize their corporate governance systems and should hire for their the administrative boards experts on the subject in order to achieve their goals.

5. Conclusion

Capital structure, agency cost and corporate governance are the fundamental pillars that interact systemically and simultaneously on the efficiency of a modern company. The analytical presentation of the mechanism through which these pillars are interconnecting and how they ultimately affect the target of the value maximization of a modern company is the main purpose of this paper.

Empirical evidence shows that most companies have tried to manage these issues fragmentarily and independently in the past. The problem of finding the optimum level of the capital structure is classic issue for every bigcompany. However, the problem of agency cost is not easily perceived as it indirectly affects the value of the company, increasing the risk of bankruptcy. There are also companies that not only have not adopted an effective corporate governance system but are not even aware that

this pillar helps to easing internal friction and as a result has a significant positive impact on the value of the company. A modern company that wants to be profitable and competitive should necessarily create a set of internal mechanisms in order to solve effectively the issues of capital structure and agency cost.

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Notes

Note 1. Ross, Westerfield, Jaffe, Corporate Finance (ed.6th). Chapter 15, p. 412.

Note 2. Corporate Finance (6th, ed.) Chapter 15, p. 413.

Note 3. Ross, Westerfield, Jaffe, Corporate Finance (6th, ed.). Chapter 16, p. 432.