Purchase of an asset finance essay

Finance

Introduction

In its simplest terms, investment can be described as the purchase of an asset, old or new, by an individual or a corporation which add to the existing stock of assets. Intermittently, the term might be restricted to the purchase of an asset on the Stock Exchange. Investment includes the increment of capital equipment, whether it consists of fixed capital, capital asset, working capital or liquid capital. Clear distinction among investment, reinvestment and disinvestments is indispensable. Reinvestment means the purchase of a capital asset of any kind out of income whereas the sale of a capital stock is termed disinvestment. However, what matters is net investment which can be defined as net addition to all kinds of capital equipment, after allowing for those changes in the value of the old capital equipment which are taken into account while considering net income. Another important distinction is made between financial and economic investment. In the financial sense, investment is the commitment of funds to derive future income in the following ways: interest, dividend, premiums, and pension benefits, appreciation in the value of their capital purchasing shares, debentures and insurance policies where such investments generate financial assets. On the other hand, according to the economic point of view, investment means the net additions to the economy’s capital stock which consists of goods and services that are used in the production of finished goods and services. The two types of investments are, however, related and dependent. The money invested in financial investments is ultimately converted into physical assets. Thus all investments result in the acquisition of some assets either financial or physical. In all the above cases, it can clearly be seen that investment

involves employment of funds with the aim of achieving additional income or growth in values. The crucial quality of an investment is that it involves waiting for a reward. Investment necessitates the commitment of resources which have been saved in the hope that some benefits will accrue in future. Fischer and Jordan (1994) have defined investment as " a commitment of funds made in the expectation of some positive rate of return." Investment is very fundamental for the survival of any business where it may help firms to attain economies of scale. Business firms operate and invest in risky environments and since these risks impact the level of returns from business investments, they directly affect the economic value of both individual investment projects and the firm as a whole. As a result, diversification is important since it leads to risk. Investment also help firms to increase the supply capacity of their businesses to meet rising demand; replace worn out (depreciated) machinery; achieve the efficiency improvements needed to compete with rival businesses and achieve higher profitsInvestment is of vital importance because the capacity of production in an economy depends on the capital available to produce. The existence of capital increases when the companies invest in new tools, new buildings, new computers, new machines etc. which allows firms to produce. Investment is a flow that increases the existence of capital in the economy. However, depreciation reduces the existence of capital where new investment is therefore needed to replace those depreciated assets. The flow of investment expenditure depends on the potential benefits and costs of buying capital goods. The potential benefits are measured in terms of the potential yield, and the buying costs are measured by the interest rate. Investment decisions of corporate firms require special attention because of the following reasons.

First, it influences the firm’s growth in the long run. For instance a firm’s decision to invest in long term assets has a decisive influence on the rate and direction of its growth. A wrong decision can prove disastrous for the continued survival of the firm. Similarly, an unprofitable expansion of assets will result in heavy operating cost to the firm hence inadequate investment in assets both financial and physical would make it difficult for the firm to compete successfully in the market. Secondly, it affects the risk of the firm where a long term commitment of funds may also change the risk complexity of the firm. For example, if a firm has made an investment and the return is average or there are frequent fluctuations in the return, then the firm will become more risky. Finally, investment decisions generally involve large amount of funds which make it imperative for the firm to plan its investment programmes very great care and has to be very cautious for procuring finances internally or externally. The structure of this chapter is as follows: Chapter 2 reviews the theoretical literature since Modigliani and Miller (1958) on the relationship between investment and finance. Section 2. 1 examines the financing investment decisions from the perspective of their treatment of finance constraints. Section 2. 2 explores the theoretical review and section 2. 2. 1 focuses on Cost of Capital and Theory of Investment. Section 2. 2. 2 examines the Cost of Capital and Theory of Investment with Corporate Taxes. Section 2. 2. 3 explores the Determinant of Corporate Borrowing. Section 2. 2. 4 discusses on the implication of Financial Leverage and Agency Problem. Section 2. 2. 5 examines the Capital Structure and Investment and lastly section 2. 2. 6 explores the relationship between Bankruptcy Cost, Financial leverage and Investment.

2. 1Financing Investment

To support its investments, a firm must find the means to finance them and which can be done using long term sources of finance. The main sources of long term finance fall into two broad categories that is internal financing and external financing where internal financing comprises of retained earning and depreciation charges while external financing consists of mainly equity financing, preference capital and financial leverage. We can use the concept of securities to further differentiate between the types of external financing. That is, the equity and preference capitals represent ownership securities (capital) whereas financial leverage consists of creditor ship securities (debt capital). Below we discuss both internal and external financing. However, given the aim this thesis, we concentrate on creditorship securities, also known as financial leverage.

2. 1. 1Internal Financing

Depreciation charges and retained earnings represent the internal sources of finance available to a firm. If we assume that depreciation charges are used for replacing the worn out plant and equipment then, retained earnings represent the only internal source for financing expansion and growth. Retained earnings are the money that shareholders forgo or sacrifice as dividend and most of the time companies retain a percentage of profit after tax for financing growth. If we have a look at a sample of corporate balance sheets, we will find that reserves and surplus, other than share premium reserve and revaluation reserve, are an important source of long term financing. Moreover, the easy availability of retained earnings coupled with the notion of low cost may drive firms to make investment in sub-marginal or

unprofitable projects which can hurt the interest of the shareholders. Thus retained earnings have both positive and negative attributes from the point of view of the firm as well as shareholders and it should be utilized with caution.

2. 1. 2External financing

External Financing consists of ownership securities (equity) and creditorship securities (financial leverage). Equity/Ownership securitiesEquity shares represent the ownership position in a company where the holders of the equity shares are the owners of the company, and they provide permanent capital hence, they are also referred as ordinary share capital. They have voting rights and receive dividends at the discretion of the board of directors. The owners' interest, (that is shareholders), is residual in nature, reflecting the excess of the firm's assets over its liabilities and as the latter are the claims of outside parties, equity represent owners' claim against the business entity as of the balance sheet date. Preference share capital represents a hybrid form of long term financing that is it combines some of the features of equity as well as debentures. It resembles equity in the following ways: Preference dividend is payable only out of distributable profits that is profit after tax and it is not tax deductible. In addition, it is similar to debenture in the following ways: The dividend rate of preference capital is usually fixed and the claim of preference shareholders is prior to the claim of equity shareholders. Financial Leverage /Creditorship securitiesDebentures are financial instrument for raising long term debt where debenture holders are the creditors of a firm; therefore, the obligation of a firm towards its debenture holders is similar to that of a borrower who

promises to pay interest and principal at a specified period. Debentures very often provide more flexibility than term loans as they offer greater variety of choices with respect to maturity, interest rate, security and repayment. Term loans are also known as term finance or project finance and the primary sources of such loans are financial institutions. The former refers to any money that a firm borrows where there is an obligation to pay back. Such finance is usually obtained from banks and financial institutions. Term loans will normally require monthly payments of the principal and interest over a predetermined period of time. Small businesses can obtain debt financing from a number of different sources which can be broken down into two general categories namely private and public sources. Example of private sources of debt financing might include banks, credit unions, leasing companies etc and on the other hand, public sources of debt financing will normally include a number of loans programs provided by the government mainly to support small businesses. The issuance of debt commits a firm to pay cash as interest and principal. Financial Leverage can be explained as the amount of debt used to finance a firm's assets and projects; hence, a firm with significantly more debt than equity is considered to be highly leveraged. Leverage helps both the investor and the firm to invest or operate; however, it comes with greater risk. If an investor uses leverage to make an investment and the investment moves against the investor, his or her loss would be much greater than it would've been if the investment had not been leveraged. Therefore leverage magnifies both gains and losses. In the business world, firms can utilize leverage and try to generate shareholder wealth, but if it fails to do so, the interest expense and credit risk of default payment can destroy shareholder value. Among the diverse

sources of corporate financing, financial leverage is perceived to have both positive and negative attributes as debt financing instrument as established by Jensen and Meckling (1976), Jensen (1986), Cantor (1990), Harris, Milton and Arthur, R., (1991), Whited (1992), Bradley, Michael et al (1984), Altman et al (2002), Carlos, A., (2005) . It is probably one of the important tools in the hands of a financial manager who is engaged in framing the capital structure of the firm where any firm can easily adopt an all equity capital structure and thus avoid the financial risk; however, an important question may arise of why not to avail the benefits of cheaper debt financing? With financial leverage, the advantage arises from the possibility that funds borrowed at a fixed interest rate which can be used for investment opportunities earning a rate of return higher than the interest paid. This means borrowings as much as prudent debt management permits, and thereby magnifying the returns to the equity shareholders. During the repercussion of the Great Depression and throughout the 1930s and 1940s, financial leverage was predominantly considered as a clear evil way, but an occasionally necessary ingredient of a well- managed corporation’s capital structure, but even then only if it is being use in careful moderation (Donaldson 1963).

2. 2Theoretical Review

In our theoretical review we will focus on Cost of Capital and Theory of Investment, Cost of Capital and Theory of Investment with Corporate Taxes, Determimant of Corporate Borrowing, Financial Leverage and Agency Problem, Capital Structure and lastly Financial leverage and Investment.

2. 2. 1Cost of Capital and Theory of Investment

Modigliani and Miller (1958) took a reasonably straightforward opinion of the purpose of a company in an economy where they pointed out that companies take cash from providers of long-term funds, invest it in new projects with positive Net Present Value (NPV) and repay the future net inflows to these fund providers in the form of dividend plus interest. Pretending that we are in a world of perfect markets, no taxes and no transactions costs[1]that a company, if a company's investment policy was taken as given then the extent of financial leverage in a company's capital structure would not affect the firm's value. Thus, that financial leverage does not matter and the cost of capital as the value of the firm is independent of the capital structure. The MM model is based on the following assumptions: Firstly, the capital markets are perfect and complete information is available to all investors with no cost to be paid; hence, they assumed that investors can borrow and lend funds at the same rate and can move quickly from one security to another without incurring any transaction cost. Secondly, securities are infinitely divisible where investors are rational and well informed about the risk and return of all securities. Thirdly, there is no corporate tax and personal leverage; therfore, corporate leverage are perfect substitute. Assume that there are two firms (U and L), which generate the same stream of operating income but differs only in their capital structure. Firm U is unlevered whereas firm L is levered. Firm U values' of its ordinary share/ equity (EU) would be similar to the total value of the firm (VU), i. e. for U, we have EU = VUHowever, for Firm L, the following relationship holds: That is, the value of its ordinary shares is equal the value of the firm less the value of the debt. The question remains where

will a potential investor invest, is it firm U or V. Assume that the investor is risk – adverse, then he will prefer firm U. If he invest x% of the firm's value then, his investment is 0. 0x *VU. If x is 1 then his investment is 0. 01* VU and the investor is entitled to x % of gross profits. The investor can also purchase the same fraction of both equity and debt of the levered firm. In this case the investment and return will be as follows (note that r denotes interest and profits):

Table 2. 0: Debt v/s Equity

ITEMSINVESTMENTRETURNDebt0. 01 DL0. 01 rEquity0. 01 EL0. 01(– r)Total0. 01 (DL + EL) = 0. 01 VL0. 01 As can be seen from the above analysis, both options offer the same payoff. Assuming that the investor decides to take a bit more risk, i. e. he decides he will buy 1% of the outstanding shares of firm L. In this case his investment ant return will be as follows: INVESTMENTRETURN0. 01 EL = 0. 01 (DL - EL)0. 01 ((– r)Another strategy would be the investor borrows 0. 01 DL on his own account and purchase the one percent of the stock of the unlevered firm. As a result, the investor increases his cash inflow by 0. 01 DL. However, he will have to pay interest of 1% on his loan. In this case his total investment and return are as follows:

Table 2. 1: Borrowing v/s Equity

INVESTMENTRETURNBorrowing-0. 01 DL-0. 01 rEquity0. 01 VU0. 01 Total0. 01(VU - DL)0. 1 ((– r)Again both strategies offer the same payoff that is one percent of profits after interest. Therefore he again maintain that both investments must have the same cost that is 0. 01(VU - DL) must equal 0. 01(VL - DL) and VU must equal VL . MM concluded that as long as investors

could borrow or lend on the same terms as the firm, they can undo the effect of any changes in the firm’s capital structure. This is the basis of MM proposition 1. Proposition 1: The market value of any firm is independent of its capital structure. MM extended proposition 1 by arguing that there is a linear relationship between cost the cost of equity and the financial leverage. Financial leverage is measured by the Debt to Equity ratio, i. e. DE. The cost of equity capital can be denoted by the following relationship:(1)where Ke denotes cost of equity capital; Ko denotes overall cost of capital and Kd denotes cost of debts of the Firm L. If we assume that there is no corporate tax then Kd is equal to the rate of interest on financial leverage employed by the firm. Consider the following two examples: Example 1Example 2DE2/31KO0. 181. 18KD0. 100. 10

KE

23. 3%

26%

It can be seen that due to an increase in financial leverage the risk premium of equity shareholders have increased from (23 – 18) = 5% to (26 – 18) = 8%. We can verify for Ko, which is given below: When debt equity ratio is 2: 3 then, The similar result is obtained when DE is 1. It can be concluded that the overall cost of capital, which is the weighted average cost of debt and cost of equity, is unaffected even if the degree of financial leverage is increased. As per the MM model, however, any benefits arising by substituting cheaper leverage for more expensive equity are offset by an increase in both the costs as reflected on the following graph. Proposition II: The rate of return investors expect to receive on their shares increases as

debt equity ratio increases, however any increase in expected return is offset by an increase in risk.

Figure 2. 1: Graphical Illustration of MM Proposition II

Cost of CapitalKoKeKdRisk – Free debtRisky debtDEIt can be argued that most of the assumptions of the MM model are unrealistic and untenable. The validity of the model, on practical considerations, can be examined as follows: Non-substitutability of personal and corporate leveragesUnder the MM model, the arbitrage mechanism operates on the assumption that the personal leverage of the investor and the corporate leverage are perfect substitute. However, this may not be true in real life. There may be difference in the effects of personal leverage and the corporate leverage, and it may be substantiated as follows: Firstly there may be different borrowing rates for the corporate and the individuals. The arbitrage process pre-supposes that an individual investor is able to borrow funds at the same rate of interest at which the leverage firm could and hence personal home made leverage of the individual investor is a perfect substitute of the corporate leverage. However, in practice neither the interest rates for borrowings by different types of borrowers are same nor the interest rate of lending by different categories of investors is same. An individual can not borrow or lend funds at the same rate at which a corporate firm can whereas a corporate entity having better credit standing in the market can definitely borrow at rates lower than the rate which an individual pay. Secondly in the arbitrage process, when an investor takes a personal loan, he creates a personal leverage and then he purchases shares of unlevered firm. As a result, the leveraging has shifted from the corporate leverage to the

personal leverage of the investor. One can ask whether these two leverages are substitutes. When an investor borrows funds in his personal capacity, he in fact incurs an unlimited liability towards the lender; however, as a shareholder of the levered firm, his liability is limited only to the capital subscribed irrespective of the level of borrowings by the firm. So, the personal leverage is not a substitute of the corporate leveraging. Thirdly, the firms usually have a higher leverage capacity as compared to the leverage capacity of the individuals the creditors may not lend, to an individual, beyond a particular level. Fourthly, borrowings either by firms or by an individual involve a lot of formalities and inconveniences. An individual investor may have a preference for corporate borrowing, because in this case, he will remain an outsider to the act of borrowing. Thus, the personal leverage may not at all be sufficient replacement for corporate leverage. Transaction costsThe assumption of no transaction cost of the MM model is also imaginary as the buying and selling of shares by the investors will surely involve some transaction costs which will make the arbitrage process to stop short of completion. Though the quantum of transaction costs will generally be small, yet the efficiency of the arbitrage process will be affected. Availability of complete informationIn real life, the assumption that all the investors have complete information is also illusory; however, the arbitrage process requires that the investors have complete information about the levered firmCorporate TaxesMM (1958) does not incorporate corporate taxes in his model; hence it can be argued that corporate taxes of the levered firm are significant in practice. Assuming that there are two similar firms which differ only in terms of leverage; then the levered firm will surely have a higher cash profit to be distributed among shareholders than the unlevered

firm. This occurs as a result of tax deductibility which results in higher value of the levered firm than that of the unlevered firm. We consider the MM model with corporate taxes in the next section.

Cost of Capital and Theory of Investment with Corporate Taxes

Modigliani et al (1963) argued that we should not ‘ waste our limited worrying capacity on second-order and largely self correcting problems like financial leveraging’. That is firms should not be worried about growth till they are having good projects in hand and will be able to find means of financing those projects. Modigliani et al (1963) claimed that we should not ‘ waste our limited worrying capacity on second-order and largely self correcting problems like financial leveraging’. Modigliani et al (1963) amended MM theory of 1958 for corporate tax relief on debt interest which significantly changes the implications of their analysis. Since the interest on debt is tax deductible, the more a firm employs leverage in their capital structure, the lower the corporate tax liability would be and greater the value of the firm. In reality, a high debt to equity ratio is being favoured due to tax saving on interest payment. Hence, they concluded that high leverage would increase the firms’ value with corporate income taxes. DeAngelo and Masulis (1980) supported the view that gain from leverage and induced tax shields can be positive. They ascertained that whenever there is an equity swap for leverage, the returns of companies would increase above what was predicted. In other words, the existence of taxes makes leverage a long term source of finance which becomes relevant and attractive.

Figure 2. 2: Graphical Illustration between leverage and value

ValueLeverage (degree)VLVUInterest Tax ShieldFrom the diagram above it can be noted that the excess of cash flow available to a levered firm can be calculated as interest charge multiply by the tax rate. This is the difference between the cash flows of a levered firm and unlevered firm. This difference is known as the interest tax-shieldModigliani et al (1963) showed that the value of a levered firm is equal to the value of an unlevered firm plus the value of the interest tax shield. Their model with taxes is as follows: Where VL is the value of the levered firm, VU is the value of the unlevered firm, D is the total debt raised by the levered firm and t is the tax rate. Thus the value of the levered firm under the MM model after incorporating taxes will be higher than the value of the unleverd firm. For instance if the market value of the firm increases with the level of leverage then it must follow that the overall cost of capital, Ko , will fall. The MM model with corporate tax is shown below:

Figure 2. 3: The MM model with corporate tax

ValueLeverage (degree)KeKdKOModigliani et al (1963) argued that due to tax deductibility of interest payments the appropriate capital structure for a firm is composed entirely of debt. However, Brigham and Gapenski (1996) asserted that the MM model is probably true in theory, but in practice, bankruptcy costs exist and the latter will increase when equity is traded off for leverage. Hence, they contend on an optimal capital structure that is reached when the marginal cost of bankruptcy is equal to the marginal benefit from tax-sheltering provided by the increase in the debt ratio. The

task of efficient managers is thus to recognize when this optimal capital structure is achieved and to maintain it over time. In doing so, they will be able to minimize the weighted average cost of capital (WACC) and financing costs, and thus they will maximize firm's performance and value. Theoretically, modern financial techniques would allow top managers to calculate accurately optimal trade off between equity and leverage for each firm, in practice; however, many studies ascertained that most firms do not have an optimal capital structure (Simerly and Mingfang, 2000). This is due to the fact that managers do not have an incentive to maximize firm's performance because their compensation is not generally related to it. Moreover, since managers do not share firm's profits with shareholders, they are very likely to increase company's expenditures by purchasing everything they like and surrounding themselves of luxury and amenities. Hence, the main concern of shareholders is ensuring that managers do not waste firm's resources and run the firm in order to maximize its value, which entail finding a way to solve the principal-agent problem.

Determimant of Corporate Borrowing

According to Myers (1977), high leverage overhang reduces the incentives of the shareholder-management coalition in control of the firm to invest in positive net present value of investment opportunities, since the benefits accrue to the bondholders rather than to the shareholders. Thus, highly levered firm are less likely to exploit valuable growth opportunities as compared to firm with low levels of leverage. A related underinvestment theory centers on a liquidity effect in that firms with large debt commitment invest less no matter what their growth opportunities. In theory, even if

leverage creates potential underinvestment incentives, the effect could be reduced by the firm corrective measures. Ultimately, leverage is lowered if future growth opportunities are recognized sufficiently early. Myers (1977) forging his theory pointed out that any concept should be able to make it clear as to why the tax advantages of debt financing do not lead firms to borrow as much as possible, and it should explain the phrase " as much as possible." Further, he claimed that there is a need to explain why some firms borrow more than others, why some borrow with short, and others with long-maturity instruments among others. He even acknowledged attempts that have been made to fill this gap. MM has put forward that firms maintain " reserve borrowing capacity". They further postulated that incremental tax advantage of borrowing declines as more debt is issued and interest tax shields become less certain. Along with MM many preceding authors found that the existence of personal taxes reduces the theoretical tax advantage of corporate borrowing. These arguments rationalize firms' reluctance to borrow " as much as possible," but they give little specific guidance beyond that. Myers (1977) developed a theory under which it is coherent for firms to limit borrowing, even when interest is tax-deductible and capital markets are strictly perfect and complete. The theory shows that a form of capital rationing by lenders can exist in such conditions. It specifies an asset characteristic that encourages relatively heavy borrowing; this characteristic is not " low risk" in any of the usual senses of that phrase. Finally, the theory explains a number of previously puzzling phenomena. For example, it clarifies why practical people set target debt ratios in terms of book rather than market values, and why firms tend to " match maturities" of assets and debt obligations. The theory rests on a relatively simple argument. It starts

with the observation that most firms are valued as going concerns, and that this value reflects an expectation of continued future investment by the firm. However, the investment is discretionary. The amount invested depends on the net present values of opportunities as they arise in the future. In some future states of nature the firm will stop investing altogether. Thus part of the value of a firm is accounted for by the present value of options to make further investments on possibly favorable terms. This value depends on the rule for deciding whether the options are to be exercised. The paper shows that a firm with risky debt outstanding, and which acts in its stockholders' interest, will follow a different decision rule than one which can issue risk-free debt or which issues no debt at all. The firm financed with risky debt will, in some states of nature, pass up valuable investment opportunities – opportunities which could make a positive net contribution to the market value of the firm. Issuing risky debt reduces the present market value of the firm by inducing a future investment strategy that is suboptimal in the sense just described. The loss in market value is absorbed by the firm's current stockholders. Thus, in the absence of corporate income taxes, the optimal strategy is to issue no risky debt. If there is a corporate tax, and interest is tax-deductable, the optimal strategy involves a tradeoff between the tax advantages of debt and the costs of the suboptimal future investment strategy. The argument is similar to Jensen and Meckling's (1976) analysis of agency costs and optimal capital structure which (will be reviewed in the next section). The suboptimal investment policy is an agency cost induced by risky debt. However, this particular cost was not recognized by Jensen and Meckling. Their theory of optimal capital structure is based on different phenomena. Another problem which has received much attention is over-

investment theory. It can be explained as investment expenditure beyond that required to maintain assets in place and to finance expected new investments in positive NPV projects whereas. Here there is a conflict between mangers and shareholders. Managers perceive an opportunity to expand the business even if that means undertaking poor projects and reducing shareholder welfare. The managers' abilities' to carry such a policy is restrained by the availability of cash flow and further tightened by the financing of debt. Hence, leverage is one mechanism for overcoming the overinvestment problem suggesting a negative relationship between debt and investment for firm with low growth opportunities. Does debt financing induce firms to make over-investment or under-investment? The issuance of debt commits a firm to pay cash as interest and principal. Managers are forced to service such commitments . Too much debt also is not considered to be good as it may lead to financial distress and agency problems.

2. 2. 4Financial Leverage and Agency Problem

The MM theorem leads to a theory of capital structure in terms of market imperfections, which can be extended by including the implications of the agency model. For MM, capital structure reflects a trade off between tax considerations (of both corporations and investors) and the risk of bankruptcy in which they assumed that managers act in investors' interests and creditors face no losses on default. Glickman (1998) questions the consistency of the MM conception of uncertainty (as variance) with the possibility of bankruptcy. He argues that the subjective probability distributions invoked by M&M must in fact be assumed to have objective reality. Otherwise it would be possible for asset valuations to change over

the life of the asset, introducing a source of risk in addition to that of variance. However if variance is the only source of risk admitted, a firm considered sound at the outset will always objectively be so. While a series of bad years might lead to temporary losses, it would not be rational for creditors to exclude, given perfect capital markets. In other words, creditors do not need to rely on collateral, unless it is argued that collateral is taken to protect creditors, not from trading losses, but from moral hazard. Therefore, put moral hazard aside, bankruptcy is not consistent with the idea of uncertainty solely as variance, and cannot be used to explain capital structure behaviour. The agency model (Jensen and Meckling, 1976) offers one solution to this objection. This approach emphasis the conflicts of interest that can arise between the objectives of different parties and the agency costs these conflicts may produce. Agency theory requires the assumption of uncertainty alone and not also of asymmetric information. The primary issue is the principal’s degree of control over uncertain outcomes, not any difference in the information set between principal and agent. Agency costs include: monitoring costs (incurred by principals to ensure that agents perform); bonding costs (incurred by agents to re-assure principals that they will perform); and residual losses (the loss of welfare by the principal resulting from the divergence in the agent’s actions from those corresponding to the principal’s best interests). The agency model may be relevant where financial leverage carries some risk of loss on bankruptcy. The conflict of interest between shareholders and creditors may result in a transfer of investment risk from shareholders to creditors, since shareholders may benefit from a higher risk strategy without bearing the full cost of failure. Since this is anticipated by rational creditors they require a higher

yield or counter-measures such as covenants and collateral that together represents an agency cost of debt, in addition to the ‘ pure’ costs of reorganization in bankruptcy. The agency theory concept was initially developed by Berle and Means (1932), who argued that due to a continuous dilution of equity ownership of large corporations, ownership and control become more and more separated. This situation gives professional managers an opportunity to pursue their own interest instead of that of shareholders. Major effort of researchers has been devoted to models in which capital structure is determined by agency costs. Research in this area was initiated by Jensen and Meckling (1976) building on earlier work of Fama and Miller (1972) that is costs that arises due to conflict of interest. According to Fama and Miller (1972) shareholders are said to expropriate wealth from bondholders by investing in new projects that are riskier than current firm undertakings. Shareholders will do this because they tend to capture most of the gains while bondholders must accept a larger portion of the costs. However, this problem can potentially be alleviated through increases in the number and importance of other fixed claimants. Many fixed claimants include firm stakeholders, and with enhancement of stakeholder consideration on the part of the firm, bankruptcy avoidance and firm survival would be of greater concern to these entities than increased risk-taking and maximization of shareholder wealth. In firms where other stakeholders, in addition to shareholders, are important to managers, there may be less expropriation from bondholders to stockholders since other stakeholders are involved. Additionally, stakeholders have incentives to monitor the shareholders in terms of risk-taking as their continued involvement and benefit from the firm relies upon the firm’s existence and survival. In this

scenario, agency costs between bondholders and stockholders are diminished while other agency problems (between various stakeholders and equity holders) are created. Total agency costs, however, remain the same since the market balances marginal costs with the marginal benefits of expropriation of various principals. Overall, the increase in entities concerned more with firm value maximization rather than shareholder value maximization (when divergence occurs between the two) decreases agency problems, and therefore costs, between equity holders and bondholders. Agency cost theory of Jensen and Meckling (1976) is another factor impacting on the capital structure that is, on the debt and equity financing decisions. The agency may be of two types: the cost of protecting the interests of shareholders to that of the management interests and on the other hand the costs of protecting the interests of the bondholders from the interest of the shareholders. The first type of agency cost increases the cost of equity to the firm while the second form is passed to the shareholder in the form of increase leverage costs. Though managers are the agents of shareholders they are likely to act in ways that may not maximize the welfare of the shareholders. In practice, managers enjoy substantial autonomy and hence have a natural inclination to pursue their own goals. In order not to be moved out from their position, managers may try to achieve a certain acceptable level of performance as far as shareholder welfare is concerned. However, beyond that their personal goals like presiding over a big empire, pursuing their pet projects, diminishing their personal risks, and enjoying generous compensation and lavish perquisites tend to acquire priority over shareholder welfare. As stated by Jensen and Meckling (1976) managers do not obtain the entire benefit from their profit development

activities, but they do bear the entire cost of these activities. For instance managers can minimize their effort in managing the firm resources and at the same time they can intelligently transfer the firm resources to their own advantage. For instance by consuming " perquisites" such as corporate jets, plush offices, building " empires" etc. The manager bears the entire cost by abstaining themselves from these activities and obtain only a part of the gain. As a result instead of maximizing shareholders wealth they are overindulging in these kinds of pursuits. The lack of perfect alignment between the interests of managers and shareholders results in agency costs. This inefficiency can solved whenever the share of the equity owned manager is higher. Therefore the amount of leverage taken by these managers would be low because the amount of leverage the firm is holding would increase the manager’s share of the equity and would diminish the loss from the conflict between the manager and shareholders. Jensen and Meckling (1976) describe several conditions where agency problems exist at the firm. In each context, there exist non-trivial costs to help alleviate the problem to the principal. For instance, outside equity holders must monitor the managers of the firm to alleviate agency problems inherent between shareholders and managers. Likewise, bondholders assert their need for protective covenants and monitoring devices to ward off possible wealth expropriation by shareholders. The authors find that the optimum capital structure exists where the firm minimizes total agency costs (the sum of agency costs of debt and equity.) Thus, reducing agency costs to either leverage or equity could alter the optimal capital structure and realized leverage levels of the firm. They suggested in their study that given the proportion of leverage and equity in the firm, an optimal capital structure

can be achieved in a situation without taxes and bankruptcy costs. This is achieved by combining in an optimal proportion the outside debt and equity that would eventually minimise the overall agency cost. Corporate managers acts as an agent for the shareholders and their objective are to maximize shareholders wealth . The conflict between them arises when corporate managers does not give the shareholders a fair return on their investment especially when the firms have free cash flow. Free cash flow is cash flow in excess of that required to finance all projects that have positive net present values when discounted at the relevant cost of capital as stated by Jensen (1986). He argued that instead of investing the free cash flow in low return projects or waste it on their personal goals, managers with substantial free cash flow can increase dividends by paying out the free cash flow to the shareholders. Managers do have control over the utilization of free cash flow but with the usage of financial leverage, they are committed to pay out the future free cash flows in terms of interest and principal to the lenders. Financial leverage helps in promoting investments and managers would be careful enough when investing the free cash flow because if the projects happen not to yield positive net present values, then indirectly the shareholders money would be at a lost. However if the leverage is not paid and the investments made are poor, the firm could be in a difficult financial position. Under such situation the firm can enter in a stage of financial distress that may lead to bankruptcy. Thus financial leverage reduces the agency costs of free cash flow by reducing the cash flow available for spending at the discretion of managers and also the threat caused by the failure to make debt service payment serves as an effective motivating force to make such firms more efficient. Lambert and Larcker, (1986) have found

that for 10% increase in company turnover, managers' compensation tend to increase on average of 20-30%. This is due to the fact that managers' salary increase with increase in turnover and it gives managers an incentive to acquire other companies or investing in the operations to increase the size of the company they work for. However, calculating the exact amount of free cash flows is extremely complicated because it involves a perfect knowledge of all available investment opportunities of a firm. Testing the Jensen free cash flow argument is thus very cumbersome. Past empirical studies have used very different proxies for the quality of investment opportunities, and as a consequence, their results were very different and often contradictory. Free cash flow theory argued that the cash flow of firms with poor investment opportunities should be minimized in order to prevent managers from wasting firm's resources in unprofitable investments. Nevertheless, it could be argued that free cash flow theory considers only the positive effects resulting from a reduction of free cash flow, but neglect to put into account the negative signaling effect that a reduction in investments are likely to exert on shareholders. Vermaelen,(1981); Brickley, (1983) have tried to fill this gap in the free cash flow theory by investigating the effects of announcements of corporate capital expenditure on the market value of the firm. However, their results are very unclear and not always in agreement with each other, leaving financial literature with very little evidence on the effect of corporate investment decisions on firms' market value (e. g. The difficulty in finding a definite relationship between the two variables is probably due to the fact that it changes with the industry being examined. As far as underinvestment is concerned, in a static model this agency problem of debt shows up whenever the NPV of an investment project is

smaller than the project-induced increase in the value of the firm’s debt. As the project-induced value increase in debt is likely to be larger at relatively high debt ratios, we expect to find more support for this underinvestment story when leverage is relatively large as compared with the case where leverage is relatively low. In a multi-period framework, we also expect to find evidence of underinvestment especially at relatively high debt ratios. Yet, Ju and Hui (2006) argue that the incentives to under-invest in a multi-period framework are generally lower than in a static model. The reason is that firms take into account the adverse effects of current underinvestment on the profitability of future investment projects that would have benefited from undertaking current ones. Furthermore, Jensen (1986) argues that firms having more internally generated funds than positive net present value investment opportunities, the presence of debt in the firm’s capital structure may force managers to utilize the funds in servicing the debt which could have been utilized in investing in negative net present value projects at the detriment of shareholder’s interest. Such situation can be coined as the over-investment problem. Hence debt financing can be utilized as an instrument to curtail the over-investment problem by forcing managers to pay out excess funds to service debt. Hence for these types of firms debt financing has a positive impact on the value of the firm. As already elaborated corporate managers acts as an agent for the shareholders and their objective are to maximize shareholders wealth . The conflict between them arises when corporate managers does not give the shareholders a fair return on their investment especially when the firms have free cash flow as stated by Jensen (1986). Instead of investing the free cash flow in low return projects or waste it on their personal goals, managers with substantial free

cash flow can increase dividends by paying out the free cash flow to the shareholders. Managers do have control over the utilization of free cash flow but with debt creation, they are committed to pay out the future free cash flows in terms of interest and principal to the lenders.

Table 2. 2: An Overview of the Agency Theory

Key IdeaPrincipal–agent relationships should reflect efficient organization of information and risk-bearing costsUnit of analysisContract between principal and agentHuman assumptionsSelf-interestBounded rationalityRisk AversionOrganisational assumptionsPartial goal conflict among participantsEfficiency as the effectiveness criterionInformation assumptionInformation as a purchasable commodityContracting problemsAgency (moral hazard and adverse selection)Problem DomainRelationships in which the principal and agent have partly differing goals and risk preferences (e. g. compensation, regulation, leadership, impression, management, whistle – blowing, vertical integration, transfer pricing. Financial leverage helps in promoting investments and managers would be careful enough when investing the free cash flow because if the projects happen not to yield positive net present values then indirectly the shareholders money would be at a lost. The firm could be in a difficult financial position if ever the debt is not paid and the investments made are poor. Under such situation the firm can enter in a stage of financial distress that may lead to bankruptcy. Thus financial leverage reduces the agency costs of free cash flow by reducing the cash flow available for spending at the discretion of managers and also the threat caused by the failure to make

debt service payment serves as an effective motivating force to make such firms more efficient as argued by Jensen (1986).

2. 2. 5Capital Structure, Financial leverage and Investment

An important financial decision facing firms is the choice between debt and equity capital (Glen and Pinto, 1994). Since the seminal work by MM, a lot of research investigating the determinants of capital structure has been undertaken. The landmark studies of MM have paved the way for the development of various alternative theories. A major debate in the financial literature has been centered on whether there is an optimal capital structure for an individual firm or whether the proportion of financial leverage in the financial structure is irrelevant to the individual firm’s value. Relationship between Capital structure, Financial Leverage and InvestmentIn finance, the choice of debt over equity to finance the assets of the company is also referred as financial leverage. Financial Leverage varies from huge business enterprise to small firm. The capital structure decision is among one of the basic things that must be done by the managers and policy makers of a firm before they can run their business efficiently. This in turn has significant impact on the investment opportunities and the value of a firm. There are various features of the debt and equity capital. The debt capital is rewarded by interest payments; the debt holder does not own the company and does not have voting rights. For example, the long term debt and bonds. On the other hand, the equity capital is a long term fund raised through the issue of shares by the company. The equity shareholders have voting rights and they are rewarded by dividend. Therefore, both debt and equity tend to have an effect on the profitability of the company as they are being used to finance

investment. As a fact, companies try to use an optimum amount of debt and equity (Optimum Capital Structure) in order to maximise the value of the firm. Various corporate finance theories are based on the Modigliani and Miller (1958) propositions that specify certain conditions under which various corporate financing decisions are irrelevant. The MM propositions provide a base for analyzing how financing decisions can create and destroy the value of a corporation. As per the financial literature, the theory of irrelevancy was presented in an era when research was dominated by the assumption that there was no interaction between the firm's investment and financial decisions. According to the MM theory (1958), in a perfect competitive market the value of a firm depends on its operating income and level of business risk and it does not relate to its financing decisions. Therefore financing choices will not affect firm's value if the capital market is perfect. The theory assumes that any increase in return of the stock holders resulting from an increase in the usage of financial leverage will be exactly offset by the increase in risk. MM argument is based on perfect market assumptions. The only market imperfections they admit are corporate taxes. However, Modigliani and Miller in 1963 amended their previous theory and made room for corporate tax relief on debt interest, which significantly changes the implications of their previous analysis . MM (1963), in their proposition 2 argued that a high debt to equity ratio in the capital structure of a firm should be favoured due to tax saving on interest payment. Hence, they concluded that high leverage would increase the firms' value with corporate income taxes. Their logic was that if the interest on debt is tax deductible, the more financial leverage a firm will employed with a lower corporate tax , a firm would generate higher after tax cash flows and the value of the firm

would be greater. Other, authors like Masulis (1953) and Lease et al (1956) found that whenever there is an equity swap for financial leverage, the returns of those firms would increase above what was predicted. Their models support the Modigliani and Miller theory of capital structure with corporate taxes and the greater the degree of financial leverage in the firm the greater will be the value of the firm. DeAngelo and Masulis (1980), also supported the MM views that a firm would gain from leverage in other words, the existence of taxes would make financial leverage relevant and attractive. Matheus and Balla (2002) found that one of the main benefits of financial leverage in the tradition trade off model is the tax advantage of interest deductibility.

2. 2. 6 Bankruptcy cost, Financial Leverage and Investment

Bankruptcy cost also affects the financing decisions of a firm. Bankruptcy cost was introduced by Kim (1978) who argued that bankruptcy costs would decrease the attractiveness of the usage of financial leverage and it would increase the financial distress of firms and as a result the cost of financing future investments would increase. There are two types of bankruptcy cost: Firstly direct bankruptcy cost is in fact the legal and other administrative costs that arise from hiring lawyers and accountants. Large firm is more diversified and faces a lower probability of bankruptcy. In contrast, larger size should lead to higher debt capacity. Direct costs are usually born direct from the bankrupt firm or from the claimants of the firm’s assets. Specifically, professionals such as lawyers and accountants, internal staff resources and reduced marketability contribute to the direct cost of handling bankruptcy in the firm. The costs of bankruptcy often increase as the firm

gets into more serious financial difficulty. Secondly indirect bankruptcy costs are those costs which are virtually impossible to measure. For instance, the indirect costs may arise from the fact that companies and customers are indisposed to do business with firms which may not be around for long or new in the business. Proceeding with, if it is a company dealing in electronic devices, customers may fear that that purchasing goods there will be a loss in the case that the company closes and results in the unavailability of replacement parts. Similarly, suppliers are reluctant to do business with such firms. Brennan and Schwarz (1978) made an investigation on the influence of corporate taxes and bankruptcy on the relationship between financing choices and valuation of a firm. According to them, the issue of debt has two effects on the value of the firm such that on one hand, it increases the tax savings as long as the firm survives; but on the other hand, it reduces the probability of survival. Depending on which is the stronger of the two, the value of the firm might rise or fall due to the usage of financial leverage. Baxter (1967) was among the first ones who have proposed the dead weight losses associated with bankruptcy which will cause the value of the firm to fall below the discounted value of the expected cash flows from operation. Altman (1984) explained that there are three costs associated with bankruptcy – administrative costs (direct cost), indirect cost of organization and the loss of tax credits when the firm goes bankrupt. He argued that if indirect costs are taken into consideration, bankruptcy costs are much bigger, and enough to have an impact on firms behaviour. In his findings Altman (1984) stipulates that when indirect costs are taken into account, the bankruptcy cost is much larger and as a result, it will have an impact on the firm’s behaviour. On the other hand, Titman and Wessels (1988) argue that

direct bankruptcy costs being stable, thus, constituting a smaller portion of firm value as the latter increases. Further we go; a large firm is more diversified and faces a lower probability of bankruptcy. In short, larger size should lead to higher debt capacity. Bankruptcy costs cannot be treated as unimportant. On their part, Chen and Merville (1999) find that the indirect costs of financial distress may be considerable. Normally, firms that are faced with the likelihood of bankruptcy find difficulty in their ability to finance new investments. This is because the debt holders are reluctant in the sense that the firm may not survive to realise the reward of a profitable investment opportunity. Kim (1978) shows that the existence of substantial costs associated with bankruptcy discourage the usage of financial leverage.

2. 2. 7Conclusion

Those theoretical results reviewed above contain implications regarding the relationship between leverage and exogenous factors that are not the result of decisions by agents for example, agency models have been among the most successful in generating interesting implications. In particular, these models predict that leverage is positively associated with firm value Stulz (1990)), default probability (Harris and Raviv (1990a)), extent of regulation (Jensen and Meckling (1976), Stulz (1990)), free cash flow (Jensen (1986), Stulz (1990). Other situations involve the implications regarding the relationship between leverage and endogenous factors that are the result of decisions by agents. In such a case, both leverage and the other factor are jointly determined by some third, exogenous factor. Typically, in these cases the endogenous factors are more readily observable than the exogenous driving factor. The other striking feature is that there are very few cases in

which two or more theories have opposite implications. Such conflicts can provide sharp tests capable of rejecting one or more theories in favor of another. The only instances of conflicting results are: firstly Chang (1987) predicts a negative relationship of leverage and firm profitability while several studies predict a positive relationship. Secondly Myers and Majluf (1984) predicts a negative relationship between leverage and free cash flow while Jensen (1986) and Stulz (1990) predict a positive relationship. Thirdly Stulz (1988) predicts a positive relationship between leverage and the takeover premium.