Capital Structure

By

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Submitted in partial fulfillment of the requirements for the degree of

MASTERS IN BUSINESS ADMINISTRATION

Graduate School of Business, Faculty of Management
University of Natal (Durban)

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August 2003

DECLARATION

DECLARATION
This research has not been previously accepted for any degree and is not being currently submitted in candidature for any degree.

Signed.....

096295

Date.....13 August 2003.....

Student number: 201506087

CONFIDENTIALITY CLAUSE

13 August 2003

TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

Due to the strategic importance of this research it would be appreciated if the contents remain confidential and not be circulated for a period of ten years.

Sincerely

STUDENT'S INITIAL AND NAME: T. MONGOATO

ACKNOWLEDGEMENTS

I would like to thank all the people that assisted me in putting together this dissertation, the list is too long to mention.
Special thanks go to my fiancée (Thokozani Dlamini) for burning the midnight oil with me while I was busy typing and the overwhelming support and understanding she provided me all the time.
I would like to thank my supervisor (Prof E. Thompson) for the support and guidance she gave me, without her, I probably would not have managed to get this far, I sincerely thank you Prof.

ABSTRACT

The dissertation begins with the explanation of the framework of the dissertation, discusses the background of the study, the motivation and value of the study.
The problem statement and study objectives are defined as well as the research methodology.

In line with the objectives of the study, various capital structure theories are examined the importance of the weighted average cost of capital is analyzed and the specific components that make up the weighted average cost of capital namely, the cost of equity and cost of debt are explored.
Further more the signaling and agency costs theories are also extensively discussed and many other concepts and theories of significance to capital structure management.

The corporate profile of Aspen Pharmacare is discussed as well as the industry within which the company operates, the strategic alliances and agreements entered into, in line with the company's growth strategy.

The company's financial statements are analysed so as to compute the gearing level. The dissertation concludes by saying that the gearing ratio needs to be looked at in comparison to the company peers in the industry, so as to best establish the norm of the industry, and that, it is only then that a conclusive statement can be made as to whether the company gearing strategy is appropriate or not.
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Chapter One: Introduction

1.1 Introduction

This chapter sets out to explain briefly the framework of the dissertation, explains briefly the background of the study, the motivation and value of the study.
The problem statement and study objectives are defined as well as the research methodology and the limitations of the problem statement.

1.2 Background of the study:

The capital structure theory is a well-researched topic by the financial academics and practising professionals alike.

Deciding on the appropriate level of debt for a firm is the responsibility of senior management.
Given a firm's equity capital base, arriving at an optimum gearing (equity – debt ratio) is subject that has led to researchers and finance students spending hours attempting to determine whether indeed an optimum level of gearing does exist.

Capital structure theories were first developed in the 1950's by Franco Modigliani and Merton Miller (abbreviated as MM), in years to follow, more researchers tackled this intriguing subject.
The theories that were pursued by various academics and finance practitioners are covered in great detail in this research paper under the topic Theoretical Review.

Traditional capital structure theory says that increasing the firm's gearing level is beneficial because the firm would be financed by cheaper debt, since debt is tax deductible, thus resulting in a decline in cost of capital.

The discounting of future cash flows at a lower cost of capital produces a higher net present value and as a result, shareholders wealth is maximised.
However, as the firm's borrowing levels rise, there is a great potential of the firm suffering financial distress due to it's inability to service the debt obligations.

The increase in firm's financial risk results in firm's creditors instituting covenants against the company, some of which may constrain management's ability to manage the firm well.
The shareholders in return demand higher returns on equity invested in the company. So, the debate on whether there is an 'optimum gearing level' rages on.

To that effect, this paper will discuss the research problem, define the research limitations, outline what the researcher hopes to achieve, that is explain the research objectives.
A case analysis of the firm under study (which is Aspen Pharmacare) is undertaken, essentially to explain the company offerings in terms of services and products followed by a detailed literature review after which the researcher will analyze Aspen Pharmacare's gearing ratio from the financial extracts that were published by the company for the financial years 2002 and 2001 and then make conclusions on the analysis done.

1.3 Motivation for the study:

The capital structure decision is important for the business because it enables a firm to be able to be in a position to work out it's financial obligations to the creditors as well as be informed about the capacity of the firm to borrow funds for various business projects that would in the long term add maximize shareholders wealth.

1.4 Value of the project:

This study will be of value to Aspen Pharmacare in the sense that future oriented decisions will be made with full knowledge of the dynamic nature of the financial markets and the pharmaceutical industry, being in a position to make decisions in a world of certainty and the world of uncertainty, better understand the financial decision making processes that daily confront the strategic decision makers.
The risk profile of the company is established.

The definition of the problem statement takes a full page on it's own because it forms the crux of the research process, this was a deliberate decision to do.

1.5. Definition of the Problem Statement

- does Aspen Pharmacare's capital structure policy for the financial years 2001/2 conform to capital structure theories?

1.6 Objectives of the study

- investigate Aspen Pharmacare's approach to capital structure management
- use the publicly available financial information to analyze relevant variables (financials) that influence a particular capital structure decision, namely
  the weighted average cost of capital
  cost of equity
  cost of debt
  agency costs
  signaling theory
  optimal capital structure (if any?)
- explore various capital structure theories
- compare and contrast Aspen Pharmacare's capital structure to theory explored
- pronounce on the findings i.e. whether the company's leverage policy is consistent with theory explored

It is important to emphasize from the onset that it is not the purpose of this study to quantitatively determine the company's weighted average cost of capital, cost of debt, cost of equity and signaling costs but rather, that, these important topics in capital structure will be covered under the literature review.
There is no sufficient information to correctly determine quantitatively these variables, I will limit myself to the calculation of the gearing ratio.

1.7 Research Methodology

This is a case study analysis of Aspen Pharmacare based on the publicly available financial information for the years 2001/2.
An extensive literature review on capital structure will be undertaken
A brief case analysis on Aspen Pharmacare explains the company offerings in terms of products and services.
The balance sheet statements for the respective years will be analyzed in line with the above defined research objectives, recommendations and conclusions made.

1.8 Limitations of the Problem Statement

Assumption is made that for the purposes of this study; the financial information to be gleaned from the two financial years in consideration will give a true reflection of management approach to managing the company's gearing levels.
In reality, a more comprehensive analysis of the financial statements coupled with direct personal interaction with the company's senior management team would be required to be in a position to make a relatively accurate pronouncement on the company's capital structure policy.

1.9 Structure of the study

Chapter 2 deals with the theoretical review on capital structure.
Chapter 3 is a brief case analysis of Aspen Pharmacare
Chapter 4 is the analysis of Aspen Pharmacare's financial statements (observations) while Chapter 5 gives recommendations and conclusion.

1.10 Summary

Chapter 1 has indeed set the scene for the rest of the study.
The structure and format of the study was outlined, consistent with the principles of a research process.
The gearing ratio question is a subject that continues to engage finance students, academics and finance professionals immensely, consuming a lot of time and energy in explaining this concept, without a definitive conclusion on the key question of what an optimal capital structure should be for a firm.
Franco Modigliani and Merton Miller first developed capital structure theories in the 1950's.

Chapter Two: Theoretical Framework

2.1 Introduction

In line with the objectives of the study, this chapter examines various capital structure theories, analyze the importance of the weighted average cost of capital, and explore the specific components that make up the weighted average cost of capital namely, the cost of equity and cost of debt.
Further more the signaling and agency costs theories are also extensively discussed and many other concepts and theories of significance to capital structure management.

2.2 Theoeretical Review

There are many theories that have been advanced in the study of capital structure; this section will delve into some of these theories.

Michael Jensen and William Meckling wrote a paper on "Theory of the firm: managerial behaviour, agency costs and ownership" in 1976 in which they define the concept of agency costs, show it's relationship to separation and control issue, investigate the nature of the agency costs generated by the existence of debt and outside equity, demonstrate who bears these costs and why.

They define agency costs as:

- the monitoring expenditures by the principal
- the bonding expenditures by the agent
- the residual loss,

Agency relationship is defined as contract under which one or more persons (the principal) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent
In the conclusion of their study they said "Agency costs are as real as any other costs. The level of agency costs depends among other things on statutory and common law and human ingenuity in devising contracts. Both the law and the sophistication of contracts relevant to the modern corporation are the products of a historical process in which there were strong incentives for individuals to minimize agency costs"

In his paper on "Determinants of Corporate Borrowing', Stewart C. Myers predicts that corporate borrowing is inversely related to the proportion of the market value accounted for by real options. It also rationalizes other aspects of corporate borrowing behaviour for example the practice of matching maturities of assets and debt liabilities.
Stewart concludes his paper by stating that his theory/analysis did not rely on imperfect or incomplete financial markets.

According to his theory, the amount of debt issued by the firms should be set equal to that amount which maximizes the market value of the firm. It has no direct relationship to the probability of default or the amount lenders are willing to advance. In broader interpretation, discretionary expenditures include all future investment and variable cost which if undertaken increase the end-of-period value of the firm.

Although a general measure of this concept is difficult to derive from accounting data, the following specific propositions should hold, other things equal, if the theory is right:

(1) assets in place should be financed with more debt than growth opportunities. The investment in assets-in-place is a sunk cost and by definition not discretionary (Stewart assumes that the secondary markets for assets-in-place do not exist or that sale in secondary markets can be regulated by the debt contract)
(2) For assets-in-place, the following factors should be associated with heavy debt financing (a) capital intensity and high operating leverage, and, of course, (b) profitability, ideally measured in terms of expected future value of the firm's assets.

Modigliani and Miller (1958,1963) wrote the seminal paper on cost of capital, corporate valuation and capital structure. They assumed either explicitly or implicitly that:

- capital markets are frictionless
- individuals can borrow and lend at the risk free rate
- there are no costs to bankruptcy
- firms issue only two types of claims: risk free debt and (risky) equity
- all firms are assumed to be in the same risk class
- corporate taxes are the form on government levy (i.e there are no wealth taxes on corporations and no personal taxes)

- all cash flow streams are perpetuities (that is, no growth)
- corporate insiders and outsiders have the same information (that is no signaling opportunities)
- managers always maximize shareholders wealth, no agency cost

Marginal Effective Tax Rates: by DeAngelo and Masulis

DeAngelo and Masulis (1980) extended Miller's work by analyzing the effect of tax shields other than interest payments on debts e.g. non-cash charges such as depreciation, oil depletion allowances and investment tax credits. They were able to demonstrate the existence of an optimal (non-zero) corporate use of debt while still maintaining the assumption of zero bankruptcy (and zero agency) costs.

DeAngelo and Masulis demonstrated that the corporate tax supply curve is downward sloping to reflect the fact that the expected marginal effective tax rate differs across corporate suppliers of debt.

They also stated that investors with personal tax rates lower than the marginal individual earn a consumer surplus because they receive higher after-tax returns. Corporations with higher tax rates than the marginal firm receives a positive gain to leverage, a producer's surplus, in equilibrium because they pay what is for them a low pre-tax debt rate.

Hsia (1981) combined the option pricing model, the capital asset pricing model and the Modigliani-Miller theorems to show how the cost of risky debt is affected by changes in capital structure.

Assumptions he made were:

- that the firm issues zero coupon bonds that prohibit any capital distributions (such as dividend payments)
- that there are no transaction costs or taxes so that the value of the firm is unaffected by its capital structure (in other Modigliani-Miller Proposition 1 is assumed to be valid)
- that there is a non-stochastic risk free rate of interest
- and that there are homogeneous expectations about the stochastic process that describes the value of the firm's assets.

Given these assumptions, a simple firm is imagined, that issues only one class of bonds secured by the assets of the firm.

Another contentious issue in the capital structure is not only the ratio of debt to equity but also the maturity structure of debt, what portion of total debt should be short term and what portion should be long term, whether the firm should use variable rate or fixed rate debt, whether long term bonds pay annual coupons with a balloon payment or should they be fully amortized (equal periodic payments)?

There are three approaches to answering the maturity structure problem.

The earliest, by Morris (1976) suggests that short-term debt or variable rate debt can reduce the risk to shareholders and thereby increase equity value if the covariance between net operating income and expected future interest rates is positive.

This cross-hedging argument is based on the assumption that unexpected changes in interest rates are a priced (undiversifiable) factor in the arbitrage-pricing model. It does not rely directly on bankruptcy and thereby allowing a greater gain from leverage. Smith and Stulz [1985] supported this point of view.

A second approach to optimal debt maturity is based on agency costs.
Myers (1977) and Barnea, Haugen and Senbet (1980) argued that if the shareholders claim on the assets of a levered firm is similar to a call option, then the shareholders have an incentive to undertake riskier (higher variance) projects because their call option value is greater when the assets of the firm have higher variance.

If the firm with long-term risky debt outstanding undertakes positive net present value projects, shareholders will not be able to capture the full benefits because part of the value goes to debt holders in the form of a reduction in the probability of default.

Short-term debt may alleviate this problem because the debt may come due before the firm decides to invest.
Hence, the theory suggests that firms with many investment opportunities may prefer to use short-term debt or callable debt.

The third approach is a tax-based explanation provided by Brick and Ravid (1985). They say that suppose the term structure of interest rates is not flat and there is a gain to leverage in the Miller (1977) sense, then a long term maturity is optimal because coupons on long term bonds are currently higher than coupons on short term bonds and the tax benefit of debt (the gain leverage) is accelerated.
If the gain to leverage is negative, then the result is reversed.

A warrant is a security issued by the firm in return for cash. It promises to sell m shares (usually one share) of stock to an investor for a fixed exercise price at any time up to the maturity date.
When a call is exercised, it increases the number of shares outstanding and thus dilutes the equity of the stockholders.

The problem of pricing warrants has been studied by Emmanuel (1983), Schwartz (1977), Galai and Schneller (1978) and Constantinides (1984).

The simplest approach to the problem (Galai and Schneller (1978)) assumes a one period model.

The firm is assumed to be 100% equity financed, and its investment policy is not affected by its financing decisions.

For example, the proceeds from issuing warrants are immediately distributed as dividends to the old shareholders.
Also the firm pays no end-of-period dividends and the warrants are assumed to be exercised as a block.

Galai and Schneller show that the returns on a warrant are perfectly correlated with those of a call option on the same firm without warrants.

Emmanuel (1983) demonstrated that if all the warrants were held by a single profit-maximizing monopolist, the warrants would be exercised sequentially.

Constantinides (1984) solved the warrant valuation problem for competitive warrant holders and showed that the warrant price given a competitive equilibrium is less than or equal to the value it would have given block exercise.

Frequently the balance sheet of a firm has several contingent claim securities, eg, warrants and convertible bonds, with different maturity dates. This means that the expiration and subsequent exercise (or conversion) of one security can result in equity dilution and therefore early exercise of the longer maturity contingent claim securities. Firms can also force early exercise or conversion by paying a large cash or stock dividend

Brennan and Schwartz (1977a) and Ingersol (1977a) both examined the effect of a call feature on convertible debt and preferred.
Unlike simpler option securities, convertible bonds and preferred stocks contain dual options.

The bondholder has the right to exchange a convertible for the company's common while the company retains the right to cal the issue at the contracted call price.
One interesting implication of the theory on call policies is that a convertible security should be called as soon as its conversion value rises to equal the prevailing effective call price.

Mikkelson (1981) discovered that on average the common stock returns of companies announcing convertible debt calls fell by a statistically significant 1.065% per day over a two-day announcement period.

Harris and Raviv (1985) provide a signaling model that simultaneously explains why calls are delayed far beyond what would seem to be a rational time and why stock returns are negative at the time of the call.

Assumptions made were:

- suppose that managers know the future prospects of their firm better than the marketplace, which is heterogeneous information.
- also that managers' compensation depends on the firm's stock price, both now and in future periods

If the managers suspect that the stock price will fall in future, conversion will be forced now because what they receive now given conversion exceeds what they would otherwise receive in future when the market learns of the bad news and does not convert.
Conversely, managers' failure to convert now will be interpreted by the market as good news.

There is incentive for managers not to force conversion early because the market views their stock favorably now and it will also be viewed favorably in the future when the market is able to confirm the managers' good news.
A similar paper by Robbins and Schatzberg (1986) explained the advantage of the call feature in nonconvertible long-term bonds.

Stock Markets and Equity Share Capital

The stock markets in the world play a significant role in facilitating the raising or providing the mechanism for the raising of capital, it is in this light that a brief exploration of the stock markets has a merit in the capital structure question.

Companies, governments and international organizations issue securities. These securities are sold to investors and the money raised is received by the issuer. This is referred to as a primary market.

The first time buyer of the security may wish to sell the security at some time. This first-time buyer sells to another investor. This is known as a sale in the secondary market.

A stock exchange is an organization that helps bring into contact the potential seller and potential buyer.

A stock market is a place where securities can be bought and sold.

The securities traded in a stock exchange can be conveniently divided into two categories, equity type securities and debt-type securities. This distinction has however become blurred with new types of securities issued that can under certain circumstances be debt and under other circumstances equity. These new types of

security are complex capital instruments, sometimes called quassi equity or mezzanine finance.

Advantages of a Stock Exchange

The benefits of having a stock exchange in a country can be looked at from four points of view.

First in respect of the economy, there are benefits to society in general, and then there is the point of view of those directly involved with the exchange of securities, namely, the financial intermediaries.
Finally, there are those who wish to invest funds through the market and those who wish to obtain funds from the market.

The gains to the economy come from:

- an improved utilization of existing domestic savings and encouraging new savings
- channeling these savings to where they can (hopefully) be most efficiently used.
- attracting foreign savings, namely, portfolio investment
- assisting in the privatization process
- providing a market for corporate control, i.e. an opportunity for inefficient firms to be taken over and run by more efficient managers

To those who wish to invest, the advantages include:

- ❖ enabling them to spread risk over a number of investments, the market allows portfolio preferences to be established
- ❖ an opportunity to earn higher rates of return from equity investments than available on alternative investment opportunities, an opportunity to provide some cover against inflation
- ❖ providing a liquid investment opportunity, with securities that can easily be traded in the market should cash be urgently needed
- ❖ for some the opportunity to gamble
- ❖ an opportunity to invest in imaginative types of financial securities.

For companies and others seeking funds, the advantages of a stock exchange listing include:

- an access to investment capital
- an opportunity to expand the size of the business through acquisition without losing control of the business
- an opportunity for fast growing and young companies to obtain finance
- an opportunity to improve company financial gearing and to be less dependent on bank finance
- the fact that market attaches a price to risk and enables risk to be transferred
- An opportunity to become known to national and world investors

The stock exchange is not without its problems, and these include:

- is it a fair game – do all buyers and sellers involved in the market have equal opportunities to make profits?
- is it well regulated?
- does it benefit larger firms and organizations at the expense of smaller firms and organizations and larger investors at the expense of smaller investors?

The Global Equity Markets

The demand for the global equity markets has come from both investors seeking diversification in their portfolios and from companies seeking to raise money in different national equity markets.

Investors gain from diversification. It is less risky to hold equity investments in a number of companies than to invest all one's funds in the equity of just one company. It is equally risky to place all one's investments in companies whose success depends on the economy of one country. Although the economics of the world are becoming increasingly linked, it is clear that if some economies are going to perform well, some will perform less well.

Therefore a careful investor diversifies his or her portfolio such that its performance is not dependent on the relative success or failure of one company.

It has been shown in international diversification portfolio literature that up to a point international diversification not only increases the average returns that can be earned, but also at the same time reduces risks associated with those returns.

Table2.1: International stock market comparisons: market value of equities as at 31/12/92 (listed on the major (principle) market)

	Domestic £ billion	Overseas £ billion	Total £ billion
Europe			
Germany	218	n/a	218
Luxembourg	8	132	140
Paris	217	n/a	217
London	634	1553	2187
Vienna	12	244	267
North America			
NASDAQ	411	N/A	411
New York	2508	105	2613
Toronto	160	205	365
Far East			
Hong Kong	114	n/a	114
Tokyo	1583	417	2000
Korea	71	-	71
Australia	88	88	176
Mexico	92	n/a	92

The following points can be noticed from the table above

- London has more overseas companies listed than any other market
- The overseas companies listed in London are the leading multinationals. Their market values in total exceed the market value of all the domestic companies listed.

Types of Equity Share

(a) Ordinary shares

An equity interest in a company can be said to represent a share of the company's assets and a share of any profits earned on those assets after other claims have been met.

The equity shareholders are the owners of the business – they purchase shares (commonly called ordinary shares), the money is used by the company to buy assets, the assets are used to earn profits, and the assets and profits belong to the ordinary shareholders.

Equity shares entail no agreement on the company's part to return to the shareholders the amount of their investment.
The directors are under obligation to maintain the assets intact, i.e. not to allow them to drop in value

If an equity shareholder wishes to regain the money he has invested, he must either find a buyer for his shares or force the company into liquidation.
It is possible that the company itself may wish to purchase the shares.

The equity shareholders as an interest group, are the last to have their claims met by the company, all other interests – employees, creditors and holders of debenture come before.
It is these ordinary shareholders, with their equity stakes in the business that take the greatest risks.

The amount that the ordinary shareholders receive varies from year to year depending on the performance of the company, but because their investment bears the greatest risk, they will on average expect a higher rate of return than that accruing to the more secure forms of investment.

The rights of an equity shareholder normally include:

- the right to receive a share of the dividends distributed
- the right to receive a share of the net assets of the business should it be liquidated
- the right to vote on important issues such as merger bids or takeovers for the company
- the right to attend general meetings of the company
- the right to vote on elections of members of the board of directors
- the right to be able to share in any new issue of equity shares by the company , the pre-emptive right

(b) Preferred shares

The shareholders receive payment at an agreed rate of return, based on the particular terms of the capital issues of the company.

(c) Non-voting shares

Companies who at one time were family owned usually issued such shares. As the business grew, the company needed to increase its equity base, but the family wished to maintain control and one way to do this was to issue non-voting equity share

(d) Purchase by a company of its own shares

This method provides companies with an alternative way of rewarding shareholders, the company being able to purchase shares rather than pay dividends.

The purchase should force up the price of the remaining shares in shareholders' possession.

It reduces the number of shares and increases the earning per share.

The conditions that must be satisfied before a company can purchase it's own shares are as follows:

- the company must be authorized to do by its articles of association
- the company must after the purchase have other shares in issue at least some of which are not redeemable. This condition is designed to prevent a company's issued share capital from consisting of redeemable shares only. Without this condition, the company could redeem its whole share capital and thus cease to have any members.

The following conditions that apply to the redemption of shares also apply to a company purchasing its own shares:

- a company may not purchase unless those shares are fully paid
- the terms of purchase must provide for payment at the time that the shares are purchased.
- all companies may, in general, purchase shares either out of distributable profits or out of the proceeds of a new issue of shares made for the purpose of purchase. In addition, a private company may make a payment out of capital to purchase shares provided that it is authorized to do so by its articles of association.
- Where shares that are being purchased were issued at a premium, a proportion of any premium payable on this purchase may be paid out of the proceeds of an issue of shares made for the purpose of the purchase.

(e) Shares issued under share option schemes

Most companies now offer share option schemes to their executives and certain classes of employees.

These options allow those involved to purchase shares of the company at a pre-determined price.

Share option schemes are intended to align the remuneration of the executives to the performance of the company and also to ensure that executives personal goals are aligned to the company's.

Methods of raising equity

The following are some of the methods employed to raise equity:

- An offer for sale
- An offer for subscription
- A placing
- An intermediaries
- A rights issue
- An open offer
- An acquisition or merger issue
- A vendor consideration placing
- A capitalization issue (or bonus or scrip issue) in lieu or dividend or otherwise
- An issue for cash
- An exercise of options or warrants to subscribe for securities and such a method as may be approved by the Stock Exchange either generally or in any particular case

Debt Finance

It is difficult in the accounting and finance area to draw a clear distinction between short-term, medium-term and long-term debt.

Some of the debt instruments include:

- Debentures
- Loan stock
- Bonds
- Long-term loans from banks
- Convertibles
- Warrants
- Commercial bills
- Certificates of deposit
- Mortgages

The distinguishing features of debt finance are as follows:

- from an investor's point of view it is less risky than equity finance. Interest is paid out before dividends and in the event that the company goes into liquidation the providers of debt finance are paid back before the shareholders receive anything.
- from the point of view of the borrowing company it is less expensive than equity finance. Because the risks are less, the investor is satisfied with a lower expected rate of return. Further, because interest is an expense, which has to be met whether or not profits are earned, it is tax deductible.

The Capital Structure Puzzle

The optimal balance between debt and equity financing has been a central issue in corporate finance ever since Modigliani and Miller (MM) showed in 1958 that capital structure was irrelevant.

Of the theories and research work that have been developed since then, none disproves Modigliani and Miller irrelevance theorem.

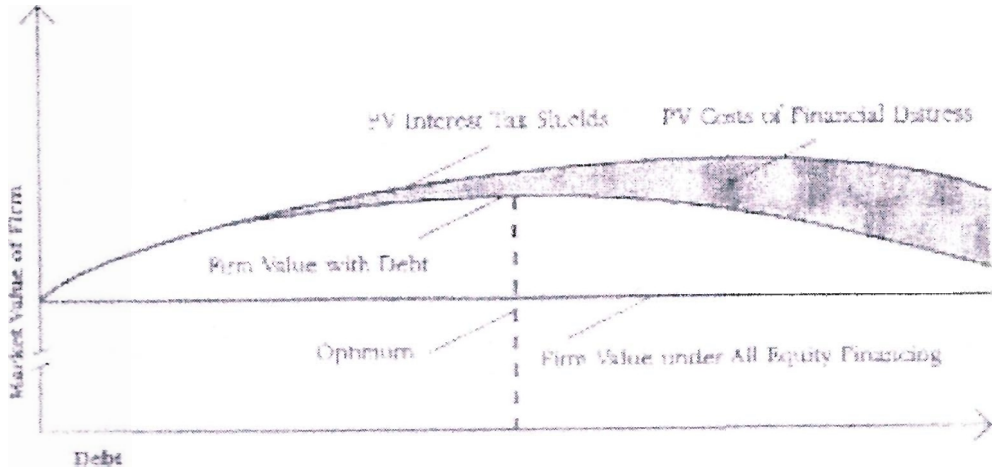
MM's practical message as interpreted by Stewart C Myers from the Massachusetts Institute of Technology is that, if there is an optimal capital structure, it should reflect taxes or some specifically identified market imperfections, thus managers are often viewed as trading off the tax savings from debt financing against costs of financial distress, specifically the agency costs generated by issuing risky debt and the deadweight costs of possible liquidation or reorganization, this Stewart calls the **static trade-off** theory of optimal capital structure.

Stewart considers the static tradeoff theory, a pecking order theory emphasizing problems of asymmetric information and a preliminary organizational theory, which drops the assumed objective of shareholder value maximization. In the end, however, Stewart admits that none of these theories is completely satisfactory, however, the exercise of trying to apply them forces on to take the firm's point of view and to think critically about the factors which may govern actual decisions.

The Static Tradeoff Theory

The graph below (fig 2.1) summarizes the static tradeoff theory.

Fig 2.1



The horizontal base line expresses MM's idea that V, the market value of the firm-the aggregate market value of all its outstanding securities should not depend on leverage when assets, earnings and future investment opportunities are held constant.

But the tax deductibility of interest payments induces the firm to borrow to the margin where the present value of interest tax shields is just offset by the value loss due to agency costs of debt and the possibility of financial distress.

The static tradeoff theory has several things going for it:

- firstly, it avoids 'corner solutions' and rationalizes moderate borrowing with a story that makes common sense, that most business people immediately agree that borrowing saves taxes and that too much debt can lead to costly trouble.
- secondly, since costs of financial distress should be most serious for firms with valuable intangible assets and growth opportunities, mature firms holding mostly tangible assets should borrow more, other things constant than growth firms or firms which depend heavily on R&D, advertising etc, thus a pharmaceutical company could be expected to borrow less than a chemical company even if the two firms' business risk (measured by beta for example) is the same.

The static tradeoff theory may also seem to draw support from the studies of the reaction of stock prices.
Clifford Smith research "Investment Banking and the Capital Acquisition Process", Journal of Financial Economics, vol 15, no 12, January – February 1986,3-29 shows that all leverage increasing transactions are good news and leverage decreasing transactions are bad news.

Thus announcements of common stock issues drive down stock prices but repurchases push them up.

Exchange of debt for equity securities drive up stock prices but equity for debt exchanges depresses them.
These 'event studies' could be interpreted as proving investors' appreciation of the value of interest tax shields, thus confirming the static tradeoff theory's chief motive for borrowing.

Compelling evidence against the static tradeoff theory:

- the pecking order theory can explain the same facts as the market's rational response to the issue or retirement of common equity.
- second, the simple static tradeoff theory does not predict what the event studies find. if the theory were true, managers would be diligently seeking optimal capital structure, but find their firms bumped away from the optimum random events.
- a couple of years of unexpectedly good operating earnings or the unanticipating cash sale of a division might leave a firm below it's optimal debt ratio, for example; another firm suffering a string of operating losses might end up too highly levered.
- the most telling evidence against the static tradeoff theory is the strong inverse correlation between profitability and financial leverage. Within an industry, the most profitable firms borrow less, the least profitable borrow more.

Thus we would expect to observe some firms issuing debt and/or retiring equity to regain the optimal debt ratio –they would move to the right, up the left-hand side of the graph above. But other firms would be reducing leverage

and moving to the left, up the right-hand slope of the graph above. The movement should be value increasing in both cases, and good news if it is news at all.

It's possible, of cause, that the leverage –increasing transactions reflect reductions in business risk increases in target debt ratios. If investors can't observe these changes directly, then a debt-for-equity exchange is good news; it demonstrates management's confidence in the level and safety of future earnings.

It's also possible that managers are not value maximizers and do not attempt to lever up the optimum. If most firms are sitting comfortably but inefficiently on the left of the upward-sloping value curve in the graph above, then any increase in leverage is good news, and any decrease is bad news.

However, we can't just explain away the event study results without thinking more carefully about how a "managerial" firm would want to arrange it's financing.

The Pecking Order Theory

The pecking order theory of capital structure reasons as follows:

1. Dividend policy is "sticky"
2. Firms prefer internal to external financing. However, they seek external financing if necessary to finance positive-NPV (net present value) real investments.
3. If they do not require external financing, they will issue the safest security first-i.e. they will choose debt before equity financing.
4. As the firm seeks more external financing, it will work down the pecking order of securities, from safe to risky debt, perhaps to convertibles and other quasi-equity instruments, and finally to equity as a last resort.

In the pecking order theory, there is no well-defined target debt ratio. The attraction of interest tax shields and the threat of financial distress are assumed to be second-order.

Debt ratios change when there is an imbalance of internal cash flow, net of dividends, and real investment opportunities. Highly profitable firms with limited investment opportunities work down to a low debt ratio.

Firms whose investment opportunities outrun internally generated funds are driven to borrow more and more.

Thus this theory gives an immediate explanation for the negative intra-industry correlation between profitability and leverage.

Although Gordon Donaldson in his article "Managing Corporate Wealth: The Operation of a Comprehensive Financial Goals System" has argued that reliance on internal finance enables professional managers to avoid subjecting themselves to the discipline of capital market, Myers has suggested asymmetric information as an explanation for reliance on retentions.

There may be a situation where managers because of their access to more information about the firm, know that the value of the shares is greater than the market value based on semi-strong market information.

The use of internal funds also ensures that there is a regular source of funds, which might be in line with a particular company's expansion or renewal programme.

If management is averse to making equity issues when in possession of favourable inside information, market participants might assume that management will be more likely to favour new issues when they are in possession of unfavourable inside information, which leads to suggestion that new issues might be regarded as a signal of bad news.

Myers Majluf in " Corporate financing and investment decisions when firms have information that investors do not, Journal of Financial Economics, June, 187-221" demonstrate that with asymmetric information, equity issues are interpreted by the market as bad news, since managers are only motivated to make equity issues when shares are undervalued.

Asquith P and Mullins D.W in an article "The impact of initiating dividend payments on shareholder wealth, Journal of Business, 56, 77-96, empirically observed that announcements of new equity issues are greeted by sharp declines in stock prices. Thus equity issues are comparatively rare among the large established firms.

Management Behaviour in the Pecking Order Theory.

- internal equity is better than external equity, because dividends are sticky and debt service predetermined, retention of any excess operating cashflow is more or less automatic and does not convey information to investors.
- financial slack is valuable, it relieves manager's fear of passing by a positive NPV outlay when external equity finance is required, but shares can only be issues at a substantial discount to intrinsic value.
  financial slack means cash, marketable securities and readily saleable real assets, it also means the capacity to issue (nearly) default free debt, if a new debt issue carries no default risk, potential investors do not have to worry about whether the firm as a whole is over or under-valued by the market.
- debt is better than equity if external financing is required, simply because debt is safer than equity, asymmetric information drives the firm to issue safest security.

Capital Structure Theories.

1. Traditional View of Capital Structure
   The traditional view of company capital structure suggests that the average cost of capital does depend on the level of gearing.

   The implication is that there is an individual company optimum level of gearing at which cost of capital will be minimized and the value of the firm maximized.

   When a company has both equity and debt in its capital structure then the cost of capital can be expressed as a weighted average cost of capital where the cost of each type of capital in the company is weighted by its proportional value in the total value of the company. This is normally expressed as follows:

$Ko = Ke(Ve/Ve+Vd) + Kd(Vd/Ve+Vd)$

Where

Ko = weighted average cost of capital

Ke = cost of equity

Kd = cost of debt

Ve = market value of equity

Vd = market value of debt

The above formula does not consider taxation, if tax is to be considered, then the after tax cost of debt must be used, which is:

Kd(1-t) where

T = rate of corporate tax, then above formula becomes

$Ko= Ke(Ve/Ve+Vd) + Kd(1-t)(Vd/Vd+Ve)$

As the proportion of debt increases, two things happen:

- the equity shareholders realize that their investment is becoming riskier and therefore demand a higher rate of return from the company.
- lenders advancing money to an already geared will also recognize increasing risk on their investment as the level of gearing rises and expect a higher rate of return on succeeding tranches of debt advanced.

The result of this on the cost of capital is that the increasing cost of debt and equity will tend to cancel out the advantage gained by substituting lower-cost debt for equity.

Thus although traditionalists claim that overall cost of capital is initially reduced by introducing debt into capital structure, it is recognized that as the level of debt increases the total cost of capital no longer decreases and eventually starts to rise again at higher levels of debt.

This view is summarized in the graph below (fig 2.2), which shows a U-shaped cost of capital curve, the optimal level of gearing is where the average cost of capital is at its lowest point, at the trough of the U.
The graph further below (fig 2.3) illustrates the effect of the traditional approach on the market value of the firm at different levels of gearing.

Fig 2.2

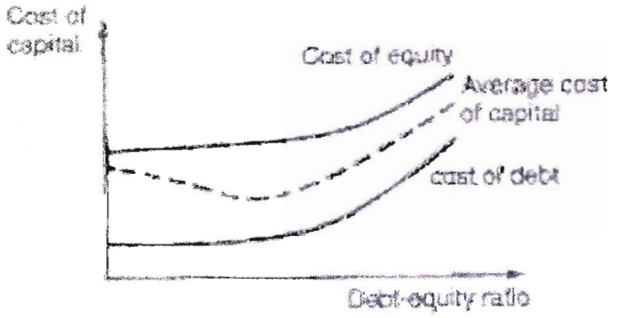
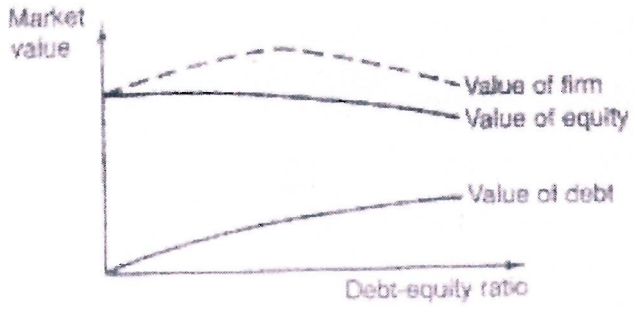


Fig 2.3



If the traditional approach is accepted, then there is a level of gearing for each firm at which the cost per unit of capital is at its lowest point.
Managers would therefore have to identify this optimum level of gearing and ensure that their company maintained its capital structure at this level.

Drawback of the Traditional Theory.

- equity shareholders are expected to ignore the element of risk
- it is questionable whether investors would be prepared to accept the same rate of return from companies in similar industries with different levels of gearing, In fact this lies at the heart of the MM analysis.

2. Modigliani and Miller's Capital Structure Theory in a World With No Taxes

The financial economists Modigliani and Miller (MM) first tackled the capital structure decision in a rigorous theoretical analysis in 1958

MM created a simplified model of the world by making assumptions. Given these assumptions, they concluded that the value of the firm remains constant regardless of the debt.

As the proportion of debt is increased, the cost of equity will rise just enough to leave the weighted average cost of capital (WACC) constant.

If the WACC is constant then the only factor that can influence the value of the firm is its cash flow generated from operations. Capital structure is irrelevant. Thus according to MM, firms can only increase the wealth of shareholders by making good investment decisions.

They made three propositions:

1. Proposition 1

   The total market value of any company is independent of its capital structure The total market value (V) of the firm is the net present value of the income stream(C1). For a firm with a perpetual income stream:

   $$V = C1/WACC$$

   WACC is constant because the cost of equity capital rises to exactly offset the effect of cheaper dent and therefore shareholder wealth is neither enhanced nor destroyed by changing the gearing level.

The assumptions:

- There is no taxation
- There are perfect capital markets, with perfect information available to all economic agents and no transaction costs.
- There are no costs of financial distress and liquidation (if a firm is liquidated. Shareholders will receive the same as market value of their share prior to liquidation)
- Firms can be classified into distinct risk classes
- Individuals can borrow as cheaply as corporations.

An example to illustrate the MM no-tax capital structure agreement.

- assuming that WCC remains at 15% regardless of the debt-equity ratio

  A company is to be formed called Pivot Plc. It needs 1 million pounds capital to buy machines, plant and buildings. The business is generated by the investment has a given systematic risk and the required return on that level of systematic risk for an all equity firm is 15%.

  The expected annual cash flow is a constant £150 000 in perpetuity.

  This cash flow will be paid out each year to the suppliers of capital. The prospective directors are considering three different finance structures.

  - Structure 1: All equity (1,000,000 shares selling at £1 each)
  - Structure 2: £500 000 of debt capital giving a return of 10% per annum. Plus £500 000 of equity capital (500 000 shares at £1 each)
  - Structure 3: £700 000 of debt capital giving a return of 10% per annum. Plus £300 000 of equity capital (300 000 shares at £1 each)

The illustration below shows that the returns to equity holders in this MM world with no tax, rises as gearing increases so as to leave the WACC and the total value of the company constant.

Investors purchasing a share receive higher returns per share for a more highly geared firm but the discount rate also rises because of the greater risk to leave the value of each share at £1.

	Structure1	Structure2	Structure3
	£	£	£
Annual cash flows	150,000	150, 000	150,000
less interest payments	0	50,000	70,000
Dividend payments	150,000	100,000	80,000
Return on debt Kd	0	50,000/500,000	70,000/700,000
Return on equity Ke	150,000/1m=15%	100k/500k=20%	80k/300k=26.7%
Price of each share D/Ke	15p0.15=100p	20p/0.20=100p	26.7p/0.267=100p
WACC (KeWe+KdWD)	15*1.0+0=15%	20*.5+10*.5=15%	26.7*.3+10*.7=15%
Total market value of Debt, Vd	0	500,000	700,000
Total market value Of equity, Ve	150,000/0.15=1m	100,000/.2=.5m	80,000/.267=.3m
Total market value Of the firm, V=Ve+Vd	1,000,000	1,000,000	1,000,000

Where k = represents a thousand

m = a million

- under the MM model the cost of debt remains constant at 10% and the cost of equity capital rises just enough to leave the overall cost of capital constant.

2. Proposition 2

   The expected rate of return on equity increases proportionately with the gearing ratio.

   - As shareholders see the riskiness of their investment increase because the firm is taking on increasing debt levels they demand a higher level of return.
   - The geared firm pays a risk premium for financial risk
   - The increase in the cost of equity exactly offsets the benefit to the WACC of 'cheaper debt'

3. Proposition 3

   The cut-of rate of return for new projects is equal to the weighted average cost of capital – which is constant regardless of gearing.

   - The cut-off point for investment in the firm will in all cases be completely unaffected by the type of security used to finance the investment, equivalently, regardless of the financing used, the marginal cost of capital to a firm is equal to the average cost of capital which is in turn equal to the capitalization rate for an unlevered stream in the class to which the firm belongs.

3.The Capital Structure Decision in a World With Tax

MM acknowledged that companies and indeed individuals do have to pay taxes and as result corrected for this assumption in their 1963 version.

- most tax regimes allow for companies to offset the interest paid on debt against taxable income, the effect of this tax saving is to reduce the cost of debt.
- the introduction of taxation brings an additional advantage to using debt capital, it reduces the tax bill.
- the WACC declines for each unit increase in debt so long as the firm has taxable profits, taking to its logical extreme, the WACC is at its lowest and corporate value at its highest when the capital of the company is almost entirely made up of debt.
- for a perpetual income firm, the value V = C/WACC, as the WACC falls, the value of the company rises, benefiting shareholders.

Criticisms of the MM theory.

Notable criticism came from the:

- Barges study and
- Weston study

The Barges Study

By far the most detailed and painstaking study of the cost of capital hypothesis was done by Barges, who utilized cross-section data from three different industries: railroads, department stores and cement industries. The sample was restricted to companies listed in Moody's during the year 1956.

Two things should be noted about the Barges study at the outset:

- ❖ He took particular pains to introduce homogeneity into the sample companies, for example the choice of industries reveals stability (railroads), growth (cement) and recovery (department stores). Moreover, he eliminated from his sample firms that had sustained losses or deviated largely from the group.
- ❖ He concentrated on the relationship between the earnings yield and various debt ratios and thus did not really test the traditional hypothesis.

Barges study was meticulously designed to improve on the limitations of the first MM study.

Barges rejected the measures used by MM as biased and settled for the average cost of capital as a function of the book value debt – equity ratio.

This choice was justified on the following three reasons:

- ➢ The yield could be obtained with minimum effect from data heterogeneity.
- ➢ It enabled the researcher to eliminate the bias of the measure used by MM
- ➢ It was a control variable that could be regulated by management.

To help ensure generalizable conclusions, Barges employed two book-value ratios for leverage.

The first considered using preferred stock as part of debt while the second considered preferred stock as part of equity.

The tests on the railroad industry were concluded on both the yield hypothesis derived from Proposition II and the cost of capital hypothesis from Proposition I.

The yields were computed by dividing the three-year average net earnings (1954-1956) by the 1956 average market value.

The correlation coefficients obtained by both measures of book value were significantly smaller than those found by MM.

To wit, while MM estimated R = 0.53, Barges found the following coefficients:

Sample of 43 electrical utility companies, 1956:

$$R = 0.173 \quad \text{for} \quad \frac{\text{debt}}{\text{common stock + preferred stock}}$$

$R = 0.293$ for $\frac{\text{debt + preferred stock}}{\text{common stock}}$

On the basis of his results, Barges argued that the tests on Proposition II were inconclusive despite the verification of positive β coefficients.
However the cost of capital tests were more conclusive in that he obtained a U shaped curve thus refuting Proposition I.

For the department stores and cement industry studies, only the yield tests were conducted and the results were at variance with MM.
For example, MM had found $R = 0.53$, Barges using book values computed the following coefficients:

Sample of 63 department stores, 1956

$R = 0.068$ for $\frac{\text{debt}}{\text{common stock + preferred stock}}$

$R = 0.189$ for $\frac{\text{debt + preferred stock}}{\text{common stock}}$

Sample of 34 cement companies, 1956:

$R = 0.120$ for $\frac{\text{debt}}{\text{common stock + preferred stock}}$

$R = 0.018$ for $\frac{\text{debt + preferred stock}}{\text{common stock}}$

Relying on the results obtained from the department stores and cement industries, Barges concluded that there was no significant correlation between yield and each of the book debt-equity ratios.
Indeed, when both measures of financial risk were used, the regression line became nearly horizontal.

However, the extension of the yield test on department stores to the financial risk measure utilized by MM gave coefficients similar to those obtained by MM.

The Weston Study

Weston in his article " Weston J. Fred. A test of cost of capital propositions, Southern Economic Journal (October 1963)" attempted to improve on the specification of the functional relationship first provided by MM for the cost of capital hypothesis.
In order to achieve this he included asset size and income growth as additional independent variables, such that after tax average cost of capital was functionally dependent on the debt ratio Pd/Pr, total assets A, and per share income growth G.
Using a sample of 59 utilities for 1959, Weston estimated the following multiple-regression equation:

Sample of 59 electric utility companies, 1959: found

$R = 0.5268.$

He found the regression coefficient of Pd/Pr significantly negative, implying an inverse relationship between the average cost of capital and the leverage ratio.

That made the findings congruent with both MM and the traditional school of thought since the leverage is an inverse function of the per share income growth.

The Weston study also shed light on a number of interesting issues that had been ignored.

For example, three different measures of the cost capital were regressed on the leverage ratio.
In the first method, the cost of debt was imputed at full value-as in MM, however, unlike the MM results, here both the regression and correlation coefficients were significant.

In the second method, the cost of debt was imputed on an aftertax basis, resulting in a negative and negligible regression coefficient.
In the third method, preferred stock was eliminated from the numerator of the leverage ration resulting in a negative regression coefficient that was significant at the 5% level.

Some Additional Criticism of MM

Myron J Gordon in his review "Some estimates of the cost of capital to the Electric Utility Industry, 1954-57: Comment, American Economic Review (December 1967)" argued that the test of the hypothesis on a sample of regulated firms such as electric utilities, requires a different specification of the estimating equation.

Gordon agued that had MM properly modified the regression equation, they would have probably found coefficients for the preferred stock and leverage ratios to be positive and significant.
Moreover, Gordon argued that single-stage least squares estimation is a more efficient method for estimating parameters than the two-stage method used by MM.
Also, another problem was the concentration of companies with debt and preferred stock in the range between 50 and 70 percent.

Risk and Uncertainty

It is important to explore this subject, as the firm financial decision makers need to make decisions in times of certainty (full knowledge) and sometimes in times of uncertainty (no full available information).
The methodology in choosing a financing mix of the company is influenced by the credibility and reliability of the information available at hand.

Important assumptions in a world of certainty in decision-making:

- There is perfect certainty about the values of the relevant variables
- There is a perfect capital market that allows free borrowing or lending at a fixed interest rate.
- There is perfect competition in the markets for products and labor inputs, which determines prices and wages.
- The firm's production function is characterized by diminishing returns with respect to labor and time.
- The firm has a goal of maximizing the present value of the future expected profits.

The general characteristics of decision situations was proposed by Kalman J. Cohen and Richard M. Cyert, they suggest that in decision making, the following attributes always exist:

- there are two or more alternative courses of action that establish the range of the possible decisions that can be made.
- there are two or more alternative courses of action that the decision maker will consider. In order to discover these alternatives, the decision maker will engage in overt search. Such search might uncover all possible alternatives (defined in attribute 1) or a subset of them.
- there are two or more possible outcomes than can result from the actions of the decision maker in a specific case. Such possible actions can be based on objective or subjective considerations.
- there is a payoff function that defines a partial ordering of the set of possible outcomes and also establishes the utility derivable from each outcome. This utility is subjective and can be given in either ordinal or cardinal terms.
- there is some information available to the decision maker regarding the possible outcomes of a given problem. To the extent the information is complete, he operates in a world of certainty and knows that each alternative has unique outcome (solution). On the other hand, to the extent that he possesses incomplete information, he operates in a world of uncertainty (broadly defined), in this case there are two or more outcomes in one of his available alternatives.

Risk and Uncertainty (continued)

How can a distinction be made between risk and uncertainty?

Answer: in order for an event to qualify as a risk situation, it must be repetitive in nature and also possess a frequency distribution, this frequency distribution can then be used to draw observations and make inferences on the basis of objective statistical procedures.

Thus the contingencies that are commercially insurable can be classified as risk situations.

In contrast, uncertainty is said to prevail when the experiment is not replicable, thus making the situation unique. In such cases which are prevalent in most investment decisions, no observations can be drawn from frequency and distributions and make inferences.

Components of Uncertainty

Uncertainty is such a large and incomprehensible subject that in reality, it cannot be defined in a clear and unequivocal manner.

Generally speaking, there are three major components that make for the uncertainty involved in serious business decisions:

1. Uncertainty related to the unpredictability of the economic parameters in the short and long run decisions of the firm.
2. Uncertainty related to domestic and international political developments.
3. Uncertainty related to the perception of the environment and its constraints by the decision maker.

The first component of the uncertainty will be explored further, because of their relevance to this study.

In a broad sense, uncertainty related to the unpredictability in the economic parameters derives from two sources: the market place and the utility function of the decision maker.

Market-place uncertainty can be further delineated to elucidate three different sources, as follows:

(a) The uncertainty that drives from the product and labor markets. This is attributed to such things as prices of the firm's product and other related commodities, tastes and preferences, labor strikes and a host of other factors. The uncertainty of this type is reflected in the profits of the firm, when it is measurable, it is called business risk.

(b) The uncertainty that derives from the money and capital markets. This is attributed to such things as the cost and availability of funds, as well as the market view regarding the firm's balance of debt and equity and many other factors. The uncertainty of this type when focused on the firm's debt structure is typically referred to as financial uncertainty, or when measurable as financial risk. Finally, there is the uncertainty involved in the market valuation of the totality of the firm's efforts, which is reflected in the stock prices.

(c) The uncertainty that derives from the characteristics of the various investment proposals and their effects on the existing structure of the firm, this is referred to as portfolio risk.

The uncertainty reflected in the utility function of the decision maker can derive from a number of sources, for example, it can come about from incorrect specification, that is, from linear, quadratic, cubic or some form of hybrid utility function.

THE EFFECT OF GEARING

The introduction of interest-bearing debt 'gears up' the returns to shareholders. Compared with the ungeared firm the geared firms returns to its owners are subject to greater variation than underlying earnings.

If profits are high, the geared firms shareholders will experience a more proportional boost in their returns compared to the ungeared firms shareholders. On the other hand, if profits turn out to be low the geared firms shareholders will find their returns declining to an exaggerated extent.

The effect of gearing can be best explained through an example. Harby plc is shortly to be established. The prospective directors are considering three different capital structures that will all result in £10m of capital being raised.

1. All equity –10 million shares sold at a nominal value of £1.
2. £3m debt (carrying 10 per cent interest) and £7m equity.
3. £5m debt (carrying 10 per cent interest) and £5m equity.

To simplify their analysis the directors have assigned probabilities to three potential future performance levels.

Probabilities of performance levels

Customer response to firms products	*Income before interest*	*probability (%)*
Modest success	0.5m	20
Good response	3.0m	60
Run-away success	4.0m	20

We can examine what will happen to shareholders returns for each of the gearing levels.

The effect of gearing

Customer response	*Modest*	*Good*	*Run-away*
Earnings before interest	£0.5m	£3.0m	£4.0m
All-equity structure			
Debt interest at 10%	0.0	0.0	0.0
Earnings available for shareholders	£0.5m	£3.0m	£4.0m
Return on shares	$\frac{0.5m}{10m}$ = 5%	$\frac{3.0m}{10m}$ = 30%	$\frac{4.0m}{10m}$ = 40%
30% Gearing (£3m debt, £7m equity)			
Debt interest at 10%	£0.3m	£0.3m	£0.3m
Earnings available for shareholders	£0.2m	£2.7m	£3.7m
Returns on shares	$\frac{0.2m}{7m}$ =3%	$\frac{2.7m}{7m}$ = 39%	$\frac{3.7m}{7m}$ = 53%

50% Gearing (£5m debt,£5m equity)

Debt interest at 10%	£0.5m	£0.5m	£0.5m
Earnings available for shareholders	0.0m	£2.5m	£3.7m
Return on shares	0.0 = 0%	2.5m = 50%	3.5m= 70%
	5m	5m	5m

Expected returns and standard deviations (risk) for Harby plc

It makes intuitive to say that year variations in income will be greater for a more highly geared firm as it experiences good and bad trading years. We can be more precise for Harby if we calculate the standard deviation of the return to shareholders under the three gearing levels.

Expected returns and standard deviations of return to shareholders in Harby plc

All equity

Return, R (%)	Probability, Pi	Return x probability
5	0.2	1
30	0.6	18
40	0.2	8
		27 Expected return, R=27 %

Return, R (%)	Expected return, R	Probability	(R-R) Pi
5	27	0.2	96.8
30	27	0.6	5.4
40	27	0.2	33.3

30% Gearing

Return, R (%)	Probability, Pi	Return x probability
3	0.2	0.6
39	0.6	23.4
53	0.2	10.6
		34.6 Expected return, R=34.6%

Return, R (%)	Expected return	Probability, Pi	(R-R)2 Pi
3	34.6	0.2	199.71
39	34.6	0.6	11.62
53	34.6	0.2	67.71
			Variance = 279.04
			Standard deviation Q= 16.7%

50% Gearing

Return, R (%)	Probability, Pi	Return x probability
0	0.2	0
50	0.6	30
70	0.2	14
		44 Expected return, R =44 %

Return, R (%)	Expected return	Probability	(R-R)2 Pi
0	44	0.2	387.2
50	44	0.6	21.6
70	44	0.2	135.2
		Variance Q2	= 544.0
			Standard deviation Q = 23.3%

Business and financial risk

Gearing (%)	Expected return to shareholders (%)	Standard deviation (total risk) (%)	Business risk (%)	Remaining Total risk due to financial risk* (%)
0 (all equity)	27	11.7	11.7	0
30	34.6	16.7	11.7	5
50	44	23.3	11.7	11.6

Capital Gearing

There are alternative measures of the extent to which the capital structure consists of debt. One popular approach is the ratio of long-term debt to shareholder's funds (the debt to equity ratio). The long tern-debt is usually taken as the balance sheet items 'amounts falling due after more than one year' and shareholder's funds is the net asset (or net worth) figure in the balance sheet.

$$\text{Capital gearing (1)} = \frac{\text{Long-term debt}}{\text{Shareholder's funds}}$$

This ratio is of interest because it may give some indication of the firm's ability to sell assets to repay debts. For example, if the ratio stood at 0.3, or 30 per cent, lenders and shareholders might feel relatively comfortable as there would be, apparently, over twice as many net (that is after paying off liabilities) assets as long-term debt. So, if the worst came to the worst, the company could sell assets to satisfy its long-term lenders.

There is a major problem with relying on this measure of gearing. The book value of assets can be quite different from the saleable value. This may be because the assets have been recorded at historical purchase value (perhaps less depreciation) and have not been revalued over time. It may also be due to the fact that companies forced to sell assets to satisfy creditors often have to do so at greatly reduced prices if they are in a hurry.

Second, this measure of gearing can have a range of values from zero to infinity and this makes inter-firm comparisons difficult.

The measure shown below puts gearing within a range of zero to 100 per cent as debt is expressed as a fraction of all long-term capital.

$$\text{Capital gearing (2)} = \frac{\text{Long-term debt}}{\text{Long-term debt + Shareholder's funds}}$$

These ratios could be further modified by the inclusion of 'provisions' and deferred taxation. Provisions are sums set aside in the accounts for anticipated loss or expenditure, for example a bad debt or costs of merger integration. Deferred tax likewise may be included as an expected future liability.

The third capital gearing measure, in addition to allowing for long-term debt, includes short-term borrowing.

$$\text{Capital gearing (3)} = \frac{\text{All borrowing}}{\text{All borrowing + Shareholders funds}}$$

Many firms rely on overdraft facilities and other short-term borrowing, for example commercial bills. Technically, these are classified as short-term. In reality many firms use the overdraft and other short-term borrowing as a long-term source of funds. Furthermore, if we are concerned about the potential for financial distress, then we must recognize that an inability to repay an overdraft can be just as serious as an inability to service a long-term bond.

To add sophistication to capital gearing analysis it is often necessary to take into account any cash (or marketable securities) holdings in the firm. These can be used to offset the threat that debt poses.

A measure of gearing, which is gaining prominence, is the ratio of debt to the total market value of the firm's equity (also called the debt to equity ratio (market value).

$$\text{Capital gearing (4)} = \frac{\text{Long-term debt}}{\text{Total market capitalization}}$$

This has the advantage of being closer to the market-value-based gearing measures (assuming book long-term debt is similar to the market value of the debt). It gives some indication of the relative share of the company' s total value belonging to debt holders and shareholders.

It is plain that there is a rich variety of capital gearing measures and it is important to know which measure people are using – it can be very easy to find yourself talking at cross- purposes.

Income Gearing

The capital gearing measures rely on the appropriate valuation of net assets either in the balance sheet or in a revaluation exercise. This is a notoriously difficult task to complete with any greater certainty. Try valuing a machine on a factory floor, or a crate of raw material. Also the capital gearing measures focus on a worst-case scenario: ' what could we sell the business assets for if we had to, in order to pay creditors?'

It may be erroneous to focus exclusively on assets when trying to judge a company's ability to repay debts. Take the example of a successful advertising agency. It may not have a saleable asset at all, apart from a few desks and chairs, and yet it may be able to borrow hundreds of millions of pounds because it has the ability to generate cash to make interest payments. Thus, quite often, a more appropriate measure of gearing is one concerned with the level of firm' s income relative to its interest commitments.

$$\text{Interest cover} = \frac{\text{Profit before interest and tax}}{\text{Interest charges}}$$

The lower the interest cover ratio the greater the chance of interest payment default and liquidation. The inverse of interest cover measures the proportion of profits paid out of interest – this is called income gearing.

DOES THE COST OF CAPITAL (WACC) DECREASE WITH HIGHER DEBT LEVELS?

Arnold demonstrated the effect of higher debt levels on cost of capital, examples follow below.

The question of whether the cost of capital decreases with higher debt levels is obviously crucial to the capital structure debate. If the WACC is diminished by increasing the proportion of debt in the financial structure of firm then company value will rise and shareholders' wealth will increase.

The firm's cost of capital depends on both the return needed to satisfy the ordinary shareholders given their opportunity cost of capital, Ke, and the return needed to satisfy lenders given their opportunity cost of capital Kd. (We will ignore taxes for now.)

WACC = Ke We + Kd Wd
Where:
We = proportion of equity finance to total finance;
Wd = proportion of debt finance to total finance.

If some numbers are now put into this equation, conclusions might be possible about the optimal debt level and therefore the value of the firm. If it assumed that the cost off equity capital is 20 per cent, the cost of debt capital is 10 per cent, and the equity and debt weights are both 50 per cent the overall cost of capital is 15 per cent.

WACC = 20 % x 0.5 = 10 % x 0.5 = 15 %

If it is further assumed that the firm is expected to generate a perpetual annual cash flow of £1m, then the total value of the firm is:

$$V = \frac{Ci}{WACC} = \frac{£1m}{0.15} = £\,6.667m$$

Finance revolves around what happens next, that is, when the proportion of debt is increased. So, let us assume that the debt ratio is increased to 70 per cent through the substitution of debt for equity. Four possible consequences are considered.

Scenario 1 The cost of equity capital remains at 20 per cent

If shareholders remain content with a 20 per cent return, the WACC decreases:

WACC = Ke We + Kd Wd

WACC = 20 % x 0.3 + 10 % x 0.7 = 13 %

If the cost of capital decreases, the value of the firm (and shareholder wealth) increases:

$$V = \frac{Ci}{WACC} = \frac{£1m}{0.13} = £7.69m$$

Under this scenario the debt proportion could be increased until it was virtually 100 per cent of the capital. The WACC would then approach 10 per cent.

Scenario 2 The cost of equity capital rises due to the increased financial risk to exactly offset the effect of the lower cost of debt

In this case the WACC and the firm's value remain constant.

WACC = Ke We + Kd Wd

WACC = 26.67 % x 0.3 + 10 % x 0.7 = 15 %

Scenario 3 The cost of equity capital rises, but this does not completely offset all the benefits of the lower cost of debt capital.

Let us assume that equity holders demand a return of 22 per cent return at a 70 per cent gearing level:

WACC = Ke We + Kd Wd

WACC = 22 % x 0.3 + 10 % x 0.7 = 13.6 %

In this case the firm, by increasing the proportion of its finance which is in the form of debt, managers to reduce the overall cost of capital and thus to increase the value of the firm and shareholder wealth.

$$V = \frac{Ci}{WACC} = \frac{£1m}{0.136} = £7.35m$$

Scenario 4 The cost of equity rises to more than offset the effect of the lower cost of debt

WACC = Ke We + Kd Wd

WACC = 40 % x 0.3 + 10 % x 0.7 = 19 %

$$V = \frac{Ci}{WACC} = \frac{£1m}{0.19} = £5.26m$$

The first of the four scenarios presented above is pretty unrealistic. If the proportion of debt that a firm has to service is increased, the riskiness of the shares will presumably rise and therefore the shareholders will demand a higher return. Thus, there are three other scenarios left. It is around these three possibilities that the capital structure debate rumbles.

ADDITIONAL CONSIDERATIONS

Financial distress

A major disadvantage for a firm taking on high levels of debt is that it increases the risk of financial distress, and ultimately liquidation. This may have a detrimental effect on both the equity and the debt holders.

Financial distress: where obligations to creditors are not met or are met with difficulty

The risk of incurring the cost of financial distress has a negative effect on a firm's value, which offsets the value of tax relief of increasing debt levels. These costs become considerable with very high gearing.

Even if a firm manages to avoid liquidation its relationships with suppliers, customers, employees, and creditors may be seriously damaged. Suppliers providing goods and services on credit are likely to reduce the generosity of their terms, or even stop supplying altogether, if they believe that there is an increased chance of the firm not being in existence in a few months' time.

The situation may be similar with customers. Many customers expect to develop close relationships with their suppliers, and plan their own production on the assumption of a continuance of that relationship, for example motor manufactures. If there is any doubt about the longevity of a firm it will not be able to secure high-quality contracts.

In the consumer markets customers often need assurance that firms are sufficiently stable to deliver on promises, for example package holiday companies taking bookings six months in advance.

Employees may become demotivated in a struggling firm as they sense increased job insecurity and few prospects for advancement.

The best staff will start to move to posts in safer companies. Bankers and other lenders will tend to look upon a request for further finance from a financially distressed company with a prejudiced eye – taking a safety – first approach – and this can continue for many years after the crisis has passed.

Management find that much of their time is spent 'fire fighting' – dealing with day – to – day liquidity problems – and focusing on short – term cash flow rather than long- term shareholder wealth.

The indirect costs associated with financial with financial distress can be more significant than the more obvious direct costs such as paying for lawyers, accountants and for refinancing programmes. Some of these indirect and direct costs are shown below

Costs of financial distress

Indirect examples	*Direct examples*
*Uncertainty in customer's minds about dealing with this firm – lost sales, lost goodwill.	* Lawyer's fees * Accountant's fees * Court fees * Management time
*Uncertainty in suppliers' minds about dealing with this firm – lost inputs, more expensive trading terms.	
*If assets have to be sold quickly the price may be very low.	
*Delays, legal impositions, and the tangles of financial reorganization may place restrictions on management action, interfering with the efficient running of the business.	
*Management may give excessive emphasis to short- term liquidity, e.g. cut R & D and training, reduce trade credit and stock levels.	
*Temptation to sell, morale, tendency to examine possible alternative employment.	

*To converse cash, lower credit terms are offered to customers, which impacts on the marketing effort.

Some factors influencing the risk of financial distress costs

The susceptibility to financial distress varies from company to company. Here are some influences:

1. The sensitivity of the company's revenues to the general level of economic activity:

   If a company is highly responsive to the ups and downs in the economy, shareholders and lenders may perceive a greater risk of liquidation and/ or distress and demand for a firm, which is less sensitive to economic events.
2. The proportion of fixed to variable costs: A firm, which is highly operationally geared, and which also takes on high borrowing, may find that equity and debt holders demand a high return for the increased risk.
3. The liquidity and marketability of the firm's assets: some firms invest in a type of asset which can be easily sold at a reasonably high and certain value should they go into liquidation. This is of benefit to the financial security holders and so they may not demand such a high-risk premium. A hotel chain, for example, should it suffer a decline in profitability, can usually sell hotels in a reasonably active property market. On the other hand investors in an advertising agency, with few saleable assets, would be less sanguine to rises in gearing.

4. The cash-generative ability of the business: Some firms produce a high regular flow of cash and so can reasonably accept a higher gearing level than a firm with lumpy and delayed cash inflows.

Illustration below shows that the optimal gearing level for firms shifts along the spectrum depending on key characteristics of the underlying business.

- The characteristics of the underlying business influences the risk of liquidation/ distress, and therefore WACC, and the optimal gearing level

Characteristics	*Food retailer*	*Steel producer*
Sensitivity to economic Activity	Relatively insensitive economic fluctuations	Dependent on general economic prosperity
Operational gearing	Most costs are variable	Most costs are fixed
Assets liquidity	Shops, stock, etc., easily Sold	Assets have few/ no alternative uses. Thin Secondhand market.
Cash- general ability	High or stable cash flow	Irregular cash flow
Likely acceptable Gearing ratio	HIGH	LOW

2.3 Summary

The theories discussed above form a good basis for the analysis of the company's gearing ratio to be explored in Chapter 4.
The theories are not conclusive in their affirmation of a particular gearing level for a company, it suffices to say that other considerations as discussed above are equally important in determining the approach to capital structure management.

Chapter Three: Case Analysis of Aspen Pharmacare

3.1 Introduction

This chapter discusses the corporate profile of Aspen Pharmacare, the industry within which the company operates, the strategic alliances and agreements entered into in line with the company's growth strategy.
The products and services offered by Aspen Pharmacare are also discussed.

3.2 Case Study

This section will deal about the services and products offered by Aspen Pharmacare Group of companies, of which this research process was based on, will cover briefly the nature of industry Aspen Pharmacare operates in.

Aspen Pharmacare is Southern Africa's largest JSE-listed generic pharmaceutical company and is a major supplier of branded pharmaceutical and healthcare products to the local and selected international markets.

Aspen Pharmacare is also the largest manufacturer of generic pharmaceutical products on the African continent and was recently placed second in the 2002 Sunday Times Top 100 companies.

Capitalizing on the strong foundation of the Aspen Pharmacare's South African business, the company has positioned itself for global expansion.

Strategic investments have also been made in Europe and Australia where the Group has a growing business, all these acquisitions and expansions will require capital injection, either in the form of equity or debt, thus impacting on the company's capital structure.

Aspen Pharmacare recently entered into a joint venture agreement with an economic empowerment company called Pan African Medical procurement and Suppliers (Pty) Ltd (PAMPAS) to form a company called Aspen Pharmacare Africa (Pty) Ltd. (APA)

Together the two partners combine through each of their core strengths and competencies to produce a dynamic, innovative company, which is poised to become

a leading supplier in the provision of pharmaceutical products on the African continent.

With its comprehensive and diverse product portfolio, which covers most therapeutic categories and dosage forms across tablets, capsules, antibiotics, creams, ointments, injectables and suppositories, this company intends expanding its presence into new African territories through a market driven approach and the selection of appropriate partners.
In this regard, globally competitive pricing, high quality medicines and accessible distribution remain key areas of focus for the enterprise.

Corporate Profile

The value of APA is represented by three key components:

1. A substantial intellectual property base comprising patents, trademarks and pharmaceutical dossiers.
2. Manufacturing facilities capable of producing substantial volumes of high quality, low cost pharmaceuticals and
3. Committed employees who provide know-how, innovation, entrepreneurship and productivity.

Manufacturing

There are two pharmaceutical manufacturing plants aligned to APA.
Its flagship factory Aspen Pharmacare Lennon, based in Port Elizabeth which is the largest pharmaceutical manufacturer in the southern hemisphere and is the heart of its generic business, manufacturing over 30 tons of finished products daily.

Aspen Pharmacare East London is the site of the Group's important penicillin plant as well as a specialized aerosol facility.
An international quality oral contraceptive facility has been commissioned at the East London site.

Research and Development

The Aspen Pharmacare new business development unit is responsible for identifying and sourcing new molecules for APA to bring to the market.
Aspen Pharmacare's pharmaceutical research laboratories are focused on the core activity of developing products that are the first-to- market in South African generic sector.
The laboratories possess experience in formulating new dosage forms.

Regulatory

The Aspen Pharmacare regulatory division has developed sophisticated systems to constantly monitor and prioritise requirements at an individual product level.
These systems also allow for a detailed business management of this function in an effort to move staff away from the typical reactive approach and to focus them on key business needs.
This is essential to achieving success given Aspen Pharmacare's large product range.
The regulatory division works closely in cooperation with the South African Medicines Control Council bringing to market new products that conform to the highest quality.

Generics

Aspen Pharmacare is the leading supplier of generic medicines to the private and public sectors.
The broad range of pharmaceuticals the Group is able to supply at affordable prices has achieved this leadership position.

The introduction of new legislation in South Africa compelling generic substitution is expected to lead to an increase in the use of generic medicines.

The product range is the core of the Group's public sector business, which is serviced by the supply of state tenders, public sector hospitals and parastatal institutions.
Aspen Pharmacare's range of generic products is extensively used in the treatment of cardiovascular, central nervous system, anti-infective and dermatological conditions.

Over-the-Counter (OTC) products

These are pharmaceuticals that can be purchased without a prescription.
OTC products are marketed exclusively through pharmacies.
Increasing trends in self-medication is the company's focus area.

Aspen Pharmacare has built particular strength in the niche natural product sector. Another area of emphasis is in lifestyle intervention products that provide a greater sense of well being for users. Aspen Pharmacare has embraced this trend and is well positioned to support it through its extensive range of 'lifestyle' products.
As such, the Formule Naturalle range was recently acquired and is expected to enhance the company's strength in natural products.
Slimming products, anti-cellulite products, hangover remedies, vitamins and minerals all fall into this category and are enjoying considerable growth.

Fast Moving Consumer Goods (FMCG)

These are non-scheduled products that are marketed through retail chains and specialist outlets.
The fast moving consumer goods division markets a number of well known and trusted products household brands, amongst which are Lennon Dutch medicines, Safyr Bleu, Prep, Guronsan C, Vitrace and Playboy deodorants and Nutrikids which are found on the shelves of hypermarkets, supermarkets and cash and carry outlets.

Enhanced trade relationships, marketing and supply chain efficiencies, as well as product line extensions are all elements that have been addressed to bolster the FMCG activities.

Export

The company exports products to over 30 countries worldwide. 337 dossiers are registered in foreign countries; most of these are in Africa (sub-Sahara and North Africa) with the next strongest market being Asia Pacific, followed by Central America, the Middle East and North America.

One of management's objectives is to create an export business that is able to deliver predictable and recurring profitability and to become a true global player.

The International operation aims to make a major thrust into various countries and considerable resources are being allocated to ensure rapid penetration into these markets.

The export growth has been increased by the fact that the Group boats the Medicines Control Council standards, operates within the largest market in Africa where labor costs are relatively low and has a broad product offering.

Ethicals

These are drugs of original research; these include a number of well-established brands, namely; Ativan, Doloxene and Microval to name but a few.
The ethical business is a leader in the categories of female healthcare, tranquilisers, hypnotics and cardio-vascular medicines.
A number of co-marketing agreements have been concluded with multinational companies in terms of which the company distributes leading ethical products.

Healthcare through alliances

Aspen Pharmacare has well-established relationships with a number of the leading multinational pharmaceutical companies.

Agreements allowing for the production of antiretroviral were concluded with Bristol Myers Squibb for the generics of their products Zerit and Videx, with GlaxoSmithKline for the generics of Combivir, AZT and 3TC and with Boehringer

Ingelheim for the production, distribution and sale of nevirapine (marketed worldwide by Boehringer Ingelheim as VIRAMUNE)

A twelve year co-marketing agreement was concluded with Novartis South Africa (Pty) Limited allowing the company to market a basket of Novartis products.

A right of use of intellectual property and mutual co-operation agreement for Southern Africa was concluded with Generics (UK) Limited and Merck generics RSA (Pty) Limited, both subsidiaries of the international Merck generics Group.
The intellectual property includes all existing dossiers, those currently in development and any of those which are developed or may be in the process of development over the next five years, bolstering the company's pipeline of dossiers and giving it depth and continuity for the future.

3.3 Summary

It is quite clear that Aspen Pharmacare's growth strategy is by entering the international markets, it has achieved this through strategic alliances and acquisitions of local companies in the country markets it has penetrated.
As the biggest JSE listed generic pharmaceutical manufacturer, the company is poised to play a leading role in the provisional of generic drugs to the healthcare sector in line with the government's strategy of promoting use of generic substitutes.
The above analysis of the company leads nicely to the analysis of the company's financial statements in the next chapter, this is consistent with one of the research objectives of the study, which is to calculate the gearing ratio.

Chapter Four: Analysis of the Financial Statements

4.1 Introduction

As previously stated under the research objectives and research methodology, this chapter analyzes the company's financial statement in order to compute the gearing level.

There is no sufficient information to be able to calculate the cost of capital, cost of equity and cost of debt; the study is confined to calculating the gearing ratio.

4.2 Analysis of Aspen Pharmacare of financial statements (Observations)

The following is the extract of the Group's balance sheet for the years 2001 and 2002.

	Reviewed 30 June 2002 R'000	Restated Audited 30 June 2001 R'000
Assets		
Non-current assets	697 527	598 944
Property, Plant and Equipment	151 179	146 789
Goodwill	99 981	104 477
Intellectual property	284 797	138 092
Investments and loans	144	2 954
Long term receivables	8 481	11 310
Deferred taxation asset	152 945	190 362
Current Assets	817 586	575 059
Inventories	292 443	185 395
Trade and other receivables	341 079	254 458
Cash and cash equivalents	184 064	135 206
Total assets	1 515 113	1 174 003

EQUITY AND LIABILITIES

Capital and reserves		
Share capital	57 545	51 429
Non-distributable reserves	229 241	180 238
Retained income	403 332	186 170
Treasury shares	(75 807)	75 755
Ordinary shareholders equity	614 311	342 082
Minority interest	17 118	10 697
Non-current liabilities		
Interest-bearing borrowings	128 875	176 065
Non interest-bearing deferred payables	135 428	55 956
Retirement benefit obligations	9 321	9 885
	905 053	594 685
Current liabilities	610 060	579 318
Trade and other payables	351 143	276 007
Interest-bearing borrowings	86 029	201 831
Non interest-bearing deferred payables	60 522	22 625
Taxation	30 169	3 800
Current provisions	82 197	75 055
Total equity and liabilities	1 515 113	1 174 003
Number of shares in issue (net treasury shares) 000's	351 517	349 422
Net asset value per share (cents)	174.8	97.9

Gearing Ratio calculations

Only the long-term debt (interest bearing) and shareholders funds will be taken into for the purpose of calculating the gearing ratio.

Please note that non interest-bearing deferred payables have been ignored even though they are appearing under non-current liabilities in the balance sheet.

Had they been considered, the gearing ratios below would have changed significantly for the 2002 financial year (would be 43%) and less so for the 2001 financial year.

Year 2001:

$$\text{Gearing ratio} = \frac{\text{long-term debt}}{\text{shareholders funds}}$$

$$= \frac{176\,065}{342\,082}$$

$$= 51.47\%$$

Year 2002:

$$\text{Gearing ratio} = \frac{\text{long-term debt}}{\text{shareholders funds}}$$

$$= \frac{128\,875}{614\,311}$$

$$= 20.98\%$$

4.3 Summary

The gearing ratio needs to be looked at in comparison to the company peers in the industry, so as to best establish the norm of the industry, it is only then that a conclusive statement can be made as to whether the company gearing strategy is appropriate or not.

Chapter Five: Recommendations and Conclusions

5.1 Introduction

This chapter wraps up the extensive work carried out in the development of this dissertation; it is appropriate that conclusions are made.

5.2 Conclusion

- The two financial years in consideration show contrasting gearing ratios, this can be attributed to the fact that in year 2002, a significant proportion of the non-current liabilities is made up of non-interest bearing debt, and as such this has been excluded from the calculation of the gearing ratio. Whether it was a good decision on the part of the company to forgo the tax shield benefits of interest bearing debt is questionable.
- The gearing ratio needs to be looked at in comparison to the company peers in the industry, so as to best establish the norm of the industry, it is only then that a conclusive statement can be made as to whether the company gearing strategy is appropriate or not.
- It is evident that the company is flush with cash, this is borne by the fact that the aggressive acquisition strategy was financed largely by internal funds.
- The point above agrees with the Pecking Order theory that says that companies would prefer to finance their investments with internally generated funds before seeking external financing, and that in the event that external funding is required, debt will be higher in the pecking order than equity.
- It is impossible to determine what the company's optimal capital structure should be, this is consistent with contemporary theory on this subject, in that all the research work done has failed to produce definitive conclusion on what the ideal capital structure of a firm should be, but rather that such factors as financial distress should be taken into consideration when a financing method is required.
- By not using the 'cheap' advantages of debt, the shareholders forgo wealth-maximizing opportunities, this is not acceptable unless there is good communication flow between the shareholders and management and that the former supports the management in the decisions taken by the latter.

- The business risk Aspen Pharmacare is exposed to is no similar to any other pharmaceutical firm in South Africa, this being the macro-economic dynamics, government policies of the day and so on.
- Aspen Pharmacare understands the local generic market far better than it's competitors and therefore is better poised to ward off threats from the multinationals and to this end has built a solid critical mass that will make entry for new businesses difficult.

4.3 Summary

Aspen Pharmacare is a solid and financially sound business, it will continue to grow and expand it's operations organically and through strategic alliances.
The government's intended healthcare strategy to promote use of generic drugs and the company's good understanding of local conditions gives it a competitive advantage over it's competitors.
The company needs to vigorously penetrate the African market, this market holds a massive potential, as many African countries are starting to embrace democratic principles and liberalizing their economies.
The South African government is playing a key role in the transformation and development of the African continent, to this end, Aspen Pharmacare must leverage its competencies to build a strong presence in Africa and raise the barriers of entry for new competitors.

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