

**Corporate Strategy and Capital
Structure:
An Empirical Study of Listed
Manufacturing Firms in Saudi Arabia**

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Abstract

While there have been studies on capital structure and corporate strategy, limited research has considered the unique characteristics that influence the capital structures and corporate strategies of Saudi Arabian manufacturing firms. This thesis, therefore, intends to enrich the literature that relates capital structure to corporate strategy in the Saudi context. Informed by the literature, this research has developed a theoretical framework to study the influence of corporate strategy on capital structure. The framework could be extended to other industries with similar characteristics in Saudi Arabia in addition to other countries in the Gulf Cooperation Council.

A mixed methodology was adopted in this research that consists of quantitative analysis, supported by qualitative results where relevant. The findings of this thesis highlight three main points. First, the results on the determinants of capital structure demonstrate the significance of the cost of servicing debt, *zakat*, industry structures and the nature of assets in influencing leverage. The results indicate a negative relationship between leverage and profitability and a positive relationship between leverage and risk. Second, when considering the influence of stakeholders on capital structure, the evidence indicates that debt is strategically used as a disciplining device for managers. The findings also underline the importance of equity-holders and debt-holders, demonstrating that corporate attitudes towards debt could depend on ownership structures. Institutional and family ownership positively influence leverage. Government ownership is found to be insignificant. The results demonstrate that strong banking relationships and the availability of government loans lead to higher leverage. Limited evidence was found to support a relevant role for non-financial stakeholders. The thesis illustrates to managers the possible strategic considerations of capital structure decisions that go beyond the need for finance. Further, the evidence illustrates that Saudi bankruptcy laws require clarification and that disclosure rules ought to be more stringent.

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Chapter 1: Introduction

1.0 Introduction

This thesis investigates the relationship between corporate strategy and capital structure. The aim of the thesis is to analyse the determinants of the capital structure of manufacturing firms in Saudi Arabia and the implication of corporate strategy on capital structure for these firms. The thesis focuses on the manufacturing industry, one of the largest industries in Saudi Arabia, contributing approximately 13.4% to GDP (SAMA, 2013). Moreover, significant government support is provided to this industry. Saudi manufacturing companies can receive up to 75% of their capital in the form of Saudi Industrial Development Fund (SIDF) loans and other forms of government subsidies. Therefore, this industry presents a unique case to assess the different strategic considerations that could motivate capital structure decisions.

Within the confines of this thesis it is first important to define some key terminologies (capital structure, financial leverage and corporate strategy). The capital structure of a firm relates to the way it finances its operations. According to Brealey et al. (2009:366), capital structure is defined as the “mix of long term debt and equity financing”. Financial leverage is the degree to which firms utilise debt in their capital structure (Gill and Mathur, 2011).

Corporate strategy directs the company’s objectives and relates to how the resources of the company should be utilised (Boquist et al., 1998). Collis and Montgomery (2005:11) state that “corporate strategy formulation begins with a vision – what the company wishes to become in the distant future”. The mission of the company is then formulated, including its purpose, goals and philosophy. Measurable goals might be market share, sales growth, return on investments and that the aim, or target, is determined at the start (Cohen, 1973). Managers, therefore, take into consideration the different external factors that could influence the performance and market share of the firm (Underwood, 2002). This thesis focuses on the extent to which corporate strategies influence the capital structure decisions of Saudi manufacturing firms.

In addition, corporate strategy relates to the overall scope of an organisation and how value is added to different business units of the organisation (Johnson et al., 2008). It includes diversity of product/services or business units, and how resources are allocated between different parts of the organisation. Hence, corporate strategy is related to the expectations of the firms' stakeholders, and given that shareholders, in their position as owners of the firm, are the most important stakeholders, the firm's corporate strategy is highly related to the expectation of shareholders. This can be explicitly or implicitly reflected in the firm's mission statements.

The effect of the competitive environment on capital structure relates to how various businesses included in the firm's corporate strategy should compete in their respective markets. Thus, the competitive environment effect includes the businesses pricing strategy, differentiation/innovation, quality, and distinct distribution channels. Operational strategy is concerned with how each part of the organisation delivers effectively the firm's corporate and business strategy using the firm's resources, processes and people.

Moreover, the effect of the competitive environment on capital structure is adapted from Franck and Huyghebaert (2004), Istitieh and Rodriguez-Fernandez (2006) and La Rocca et al., (2008) to include signalling, market timing, investments and aggressiveness. The rationale for including these factors stems from the fact that the thesis investigates firms' corporate strategy and competitive environment effects are a subset of corporate strategy.

The thesis examines corporate strategy and competitive environment and ignores operational strategy. However, even though the thesis focuses on specific areas such as stakeholders and competitive environment, it is by no means exhaustive of what is covered in corporate and business strategies. As aforementioned, these strategies include, among other factors, resources allocation and diversity of products, which are not covered in the thesis. In addition, the thesis does not consider the fit between strategy, capital structure

and the impact on performance. These limitations could be addressed in future research.

The thesis utilises a mixed methodology approach, which combines both quantitative and qualitative analysis in order to assess and gain a deeper understanding of the implication of corporate strategy on the capital structure decisions of the manufacturing firms. The data sample consists of 43¹ listed manufacturing firms over a five-year period from the third quarter of 2007 to the second quarter of 2012. The quantitative analysis uses panel data (which combines cross sectional data with time series information) with two measures of leverage as dependent variables. These variables are total liabilities to total assets (TLTA) and long-term debt to total assets (LTDTA). The qualitative approach consists of semi-structured interviews with senior managers.² The semi-structured interviews constitute a significant part of the data analysis. However, the findings of the qualitative study complements the quantitative results. The qualitative semi-structured interviews address three main areas: determinants of capital structure, capital structure and stakeholders, and capital structure and competitive environment. However, because of the difficulties of quantifying some of these variables, the quantitative approach focuses only on a subset of the analysis of the semi-structured interview results. It mainly relates to the determinants of leverage using quantitative variables that proxy for profitability, size, risk and dummy variables that proxy for ownership structure and relationship banking.

1.1 Research Question

This thesis answers the following research question:

To what extent does corporate strategy influence the capital structure decisions of Saudi Arabian manufacturing firms?

¹ This represents 38% of total market capitalisation and 69% of listed manufacturing firms in Saudi Arabia, as of June 2012.

² This was conducted with senior managers and board members from ten listed manufacturing firms, three entrants and three financial institutions.

1.2 Determinants of Capital Structure

Capital structure decisions are influenced by the location, market structure, industry structure, tax regime and the nature of debt and equity markets in which a firm operates (Booth et al., 2001). Saudi Arabian firms are generally more equity-oriented than firms in developed countries. In their sample of Saudi Arabian firms, Omet and Mashharawe (2003) report an average of 9% leverage, which implies that the equity proportion of their capital structure is significantly higher than their debt proportion.

The Saudi Arabian economy presents a unique case amongst emerging markets. Islamic culture is at the core of its constitution and has significant influences on credit markets. The banking system in Saudi Arabia comprises a mix of conventional banking and *Shari'a* compliant Islamic banking (Al-Ajmi et al., 2009). Bank finance dominates the debt market, and the secondary market for sukuk (Islamic bonds) remains minimal and underdeveloped (Al-Ajmi et al., 2009). *Shari'a* compliance stipulates that accrued interest is prohibited and, therefore, Islamic banks must provide financing through equity-participation structures and short-term facilities (Mirakhor and Zaidi, 2007). Furthermore, no income taxes are levied on local firms in Saudi Arabia. Instead, they pay a 2.5% 'charity tax' or *zakat* on unused wealth over an Islamic calendar year (Al-Ajmi et al., 2009). Foreigners, however, pay corporate income tax on the non-Saudi share of their firm (Al-Sakran, 2001).

Nevertheless, one of the key considerations for the capital structure decisions taken by an individual firm is the industry structure in which it operates. Empirical studies, such as those carried out by Lev (1969) and Van der Wijst et al. (1993), reveal the importance of industry effects in shaping the capital structure of the firm. However, other strands of existent literature suggest that it is the nature of the industry and firm assets that determine capital structure (Myers, 1984; Balakrishnan and Fox, 1993). It is, therefore, relevant to consider the structure of the Saudi manufacturing industry and its influence on a firm's capital structure decisions.

Capital structure decisions play a crucial role in defining a firm's future performance and its strategic ability to face internal and/or external pressures. Corporate finance literature provides an explanation of what determines the capital structure decision of the firm by considering macro- and firm-specific factors (Rajan and Zingales, 1995; Booth et al., 2001). A capital structure decision is not only determined by the market and industry structure of the economy but is also a function of firm-specific factors such as firm size, performance, risk and ownership structure (Al-Ajmi et al., 2009). Studies on the Saudi market have examined the relevance of such factors in determining the capital structure decisions of Saudi firms (Al-Sakran, 2001; Omet and Mashharawe, 2003; Al-Ajmi et al., 2009). The findings of the thesis will, therefore, be compared and contrasted, not only with international empirical evidence, but also with the findings of Saudi-specific studies in order to contribute to the literature on the determinants of capital structure in Saudi Arabia and more specifically, in the Saudi manufacturing industry.

1.3 Capital Structure and Stakeholders

Corporate finance theories suggest that, when markets are perfect and efficient, capital structure is irrelevant for corporate strategy (Modigliani and Miller, 1958). However, upon introducing market imperfections, capital structure decisions affect a firm's value and its competitive advantage and, therefore, assume strategic importance (Hillier et al. 2008). The extent to which capital structure decisions have inextricable links with the corporate strategy of a firm has been the subject of intense debate in finance literature. Several studies provide an overview of this debate; focusing on how the nature of financial stakeholders³ and the potential interaction between managers, financial stakeholders and non-financial stakeholders⁴ influences capital structure, corporate governance activities and the value creation processes (Franck and Huyghebaert, 2004; Istitieh and Rodriguez-Fernandez, 2006; La Rocca et al., 2008; and Hillier et al., 2008). It is within the context of these interactions that a capital structure decision assumes its strategic significance.

³ Financial stakeholders include equity holders and debt holders.

⁴ Non-financial stakeholders include government, suppliers, customers, employees and competitors.

Capital structure decisions can, therefore, relate to the corporate strategy and managerial practices of an individual firm. Different strands in the literature examine the benefits and costs of capital structure decisions and their relationship with corporate strategy. The interests of managers are particularly relevant in this context. When managers are self-serving, leverage reduces managerial overinvestment in risky projects and empire building (Jensen and Meckling, 1976; Jensen 1986). By contrast, when managerial and shareholder interests are aligned, leverage may lead a firm to underinvest in positive Net Present Value (NPV) projects (Myers, 1977) or to avoid risky projects (Brito and John, 2002).

Other studies examine the influence of a firm's ownership structure on its capital structure decisions in terms of mitigating agency costs, information asymmetry, liquidity constraints, and adjustment costs (Jensen, 1986; Rajan and Zingales, 1998; Booth et al., 2001; Leary and Roberts, 2005). Hence, corporate attitudes towards debt and equity ownership structures could affect capital structure decisions. Moreover, Fan et al. (2010) argue that variations in financial institutional structures and banking concentration significantly influence capital structure decisions. Therefore, it is also important to consider the impact lending environments and debt-holders have on leverage decisions.

In addition, stakeholder theorists suggest that capital structure decisions are related to non-financial stakeholders (Hillier et al., 2008). This strand of the literature focuses on the signals conveyed by capital structure decisions to non-financial stakeholders. Additionally, it considers a firm's ability to adjust its capital structure to limit the bargaining power of suppliers (Perotti and Spier, 1993; Sarig, 1998; Kale and Shahrur; 2007), the concerns of customers (Titman, 1984) and higher wage demands by employees (Hillier, et al., 2008). Other studies highlight the significance of government support in the form of subsidies to certain industries and their influence on a firm's need for finance and its competitive advantage (Schwartz and Clements, 1999; Mitra and Webster; 2008). Therefore, the thesis will examine the significance of non-financial stakeholder considerations in impacting capital structure decisions. The thesis will then pay particular focus to the implications of the competitive environment on the capital structure decisions of Saudi manufacturing firms.

1.4 Capital Structure and Competitive Environment

The competitive environment in which a firm operates could affect capital structure decisions. Istitieh and Rodriguez-Fernandez (2006) emphasise the endogenous nature of the relationship between capital structure and the competitive environment. The authors argue that far-sighted firms ought to consider the structure of their product markets when deciding on their capital structures. Macroeconomic factors, such as the economic climate of the market, could have adverse liquidity constraints and affect the capital decision of the firm (Huang and Ritter, 2009). Market timing theorists suggest that managers take advantage of market conditions to derive the maximum value from their financial decisions (Welch, 2004; Huang and Ritter, 2009). Moreover, Istitieh and Rodriguez-Fernandez (2006) suggest that financially strong (unleveraged) firms take advantage of economic downturns to aggressively position and price their products to drive weaker (leveraged) competitors out of the market. Thus, this thesis aims to examine whether higher leverage exposes Saudi manufacturing firms to market volatility and predation.

In addition, the leverage decision of a firm has both direct and indirect influences on its asset acquisition and investment decisions, which in turn strongly influence its strategy (Hillier et al., 2008). Kovenock and Phillips (1997) claim that there is a positive and significant relationship between the increase in leverage of a recapitalising firm and its rival firms' investment. Hence, the thesis intends to test whether Saudi manufacturing firms adjust their capital structures and investments according to rival firms' leverage positions. The firm's capital structure also affects its aggressiveness toward competition, with authors predicting that leverage causes greater aggression toward competition (Brander and Lewis, 1986; Maksimovic, 1988; Showalter, 1999). On the contrary, others suggest that leverage leads to softer competition (Chevalier and Scharfstein, 1996; Glazer, 1994; Lambrecht, 2001). Therefore, the thesis endeavours to study the implications of capital structure decisions on competitive aggressiveness.

Moreover, Healy and Palepu (2001) stress the importance of disclosure rules in reducing agency costs and information asymmetry, as well as their impact on the competitive advantage of a firm. Additionally, different disclosure rules affect the manner in which information about a firm's financial position is signalled to the market where it operates. Klein et al. (2002) emphasise the importance of information asymmetry on capital structure decisions. The authors suggest that the signalling function of capital structure decisions is particularly relevant when information asymmetry is high. In addition, Istitieh and Rodriguez-Fernandez (2006) argue that information that is revealed through disclosures about capital structure decisions will be taken into account by rival firms. Therefore, firms could strategically use this decision to signal their financial strength and deter rivals from competing aggressively or entering the market (Poitevin, 1989). Accordingly, the thesis intends to investigate whether Saudi manufacturing firms use debt as a signalling tool.

1.5 Aims and Objectives

This thesis analyses the different factors that shape capital structure decisions, in the unique socio-economic and cultural context of Saudi Arabian

manufacturing firms, and their implications on corporate strategies. The thesis explores and addresses the following:

- the main determinants of capital structure decisions underpinning Saudi manufacturing firms' actions
- the ways in which capital structure decisions relate to the corporate strategies of Saudi manufacturing firms
- the implications of the competitive environment on the capital structures of Saudi manufacturing firms.
- the implications of the relationship between capital structure and corporate strategy upon academic literature, practitioners/managers and policy makers

1.6 Contribution

While there have been studies that examine the determinants of capital structure in the Saudi Arabian market, scant research has been done on the relationship between capital structure and corporate strategy in this context. This thesis addresses a gap in existing literature on the determinants of capital structure and the relationship between capital structure and corporate strategy in the context of Saudi Arabian manufacturing firms.

There are two main contributions by this thesis. The first is theoretical and the second is methodological. The theoretical contribution is in the two frameworks presented for exploring the relationship between corporate strategy and capital structure. The thesis proposes a general conceptual framework to identify and explore the relationship between corporate strategy and capital structure by also considering corporate finance determinants of capital structure. Previous studies have attempted to explain the capital structure decision by either testing corporate finance determinants of capital structure (such as size, profitability and risk) or by narrowly focusing on possible corporate strategic implications (such as the management and non-financial stakeholders). By combining both approaches, the thesis proposes a general conceptual framework that takes into account both financial and strategic elements that influence the capital

structure decision. This framework is then specifically focused, developed and adapted to include unique characteristics of the Saudi Arabian manufacturing industry in order to better explain the capital structure decision within that context. The methodological contribution is due to the fact that, to my knowledge, this is the first study to have tested the corporate strategy and capital structure in the context of Saudi Arabia using both quantitative and qualitative techniques.

While corporate finance literature has touched upon the strategic importance of debt, few studies have directly tested the relationship between capital structure and corporate strategy in this context. Moreover, the studies that have discussed the relationship between capital structure and corporate strategy have either provided an overview of the literature on the subject (Franck and Huyghebaert, 2004; Istitieh and Rodriguez-Fernandez, 2006; La Rocca et al., 2008; and Hillier et al., 2008) or have used quantitative methods to test the relationship (Nguyen, 2008). A mixed methodology approach is relevant to this research, due to the endogenous nature of the relationship. Senior managers in the firm are responsible for both capital structure and strategic decisions. As such, by directly engaging with the decision makers within the firm, this thesis contributes to the existing capital structure literature in Saudi Arabia by providing a more complete understanding (through a mixed methodology approach) of the factors that influence capital structure decisions in the manufacturing industry.

With regards to the relationship between corporate strategy and capital structure, this thesis makes unique contributions to the policy-making domain and business management. The thesis shows that bankruptcy laws are less stringent in Saudi Arabia than in western economies, and this could have implications on the behaviour of manufacturing firms. For example, firms may overinvest in risky projects. Hence, policy makers and regulators must ensure that there are clear bankruptcy rules that govern the activities of firms and establish strict priority rules in the event of bankruptcy. Moreover, disclosure rules in Saudi Arabia are less stringent than the International Financial

Reporting Standards (IFRS). Therefore, regulators must ensure that the disclosure rules become more rigorous so as to reduce information asymmetry and protect unsophisticated investors. The thesis highlights that a positive relationship exists between firms' leverage and their relationships with banks. This implies that firms ought to keep a close relationship with lenders. Nevertheless, due diligence and checks must be taken by lenders to discourage firms from increasing their leverage purely on the basis of their relationship with banks.

In addition, the general results noted in this thesis do not support the notion that the competitive environment has implications on capital structure decisions in the Saudi manufacturing industry, yet few respondents recognised that debt induces greater competitive aggressiveness and can be used as a signalling tool. Managers ought, therefore, to consider the strategic implications of the capital structure decisions of rival firms.

1.7 Organisation of the Thesis

The thesis is organised into the following chapters. Chapter two sets the theoretical grounds for the thesis and analyses of the main empirical findings of studies on developed and developing economies, as well as relevant studies that are specific to the Saudi market. Given that the theoretical framework is developed from the mainstream literature, the thesis is designed to extend the general conceptual theoretical framework by taking into account the traditional determinants of capital structure. In addition, this conceptual general theoretical framework was developed further in order to extend the knowledge and to address Saudi manufacturing firms in specific. The chapter is subdivided into sections that relate to capital structure theories: determinants of capital structure, capital structure and corporate strategy, and capital structure and competitive environment. The chapter presents a general theoretical framework for testing the relationship between capital structure and corporate strategy. Chapter three details the Saudi context and underlines cultural and industry specific considerations. Subsequently, chapter three provides a theoretical framework for the thesis and a list of the propositions that are explored. Chapter

four justifies the rationale for adopting a mixed methodology approach and describes the data sample, as well as the different data limitations and methodological issues associated with this thesis. Chapter five outlines the main qualitative and quantitative results and findings, while chapter six discusses and analyses the results and findings. Finally, chapter seven concludes the thesis. In doing so, it highlights the key contributions of this work on policy and on financial/business management, as well as this paper's limitations and recommendations for future research.

Chapter 2: Literature and Theory Building

2.0 Introduction

The literature review is divided into two sections. This chapter focuses on the first part of the literature review, which investigates corporate strategy and capital structure in general. The second (Chapter 3) part specifically focuses on the review in the context of Saudi Arabia. In this chapter, the theories of capital structure will be applied in the Saudi context. Hence, the hypotheses are discussed after considering both literature reviews at the end of Chapter 3.

With the aim of establishing the unique theoretical grounds of this thesis, this chapter uses both a macro- and micro-level approach to analyse the international literature on capital structure and corporate strategy. First, the main corporate finance theories and concepts that relate to the research topic are underlined. The chapter then examines common determinants of capital structure based on corporate finance theories and empirical studies. Capital structure decisions are then related to corporate strategies, detailing the manner in which managers and financial and non-financial stakeholders influence capital structures. Finally, the chapter hones in on studies that relate competitive environments to capital structure decisions. In doing so, it establishes a theoretical framework for testing the influence of corporate strategy on capital structure.

2.1 Theories of Capital Structure

Corporate finance literature has been concerned with the way firms finance their operations, namely, their capital structure (Modigliani and Miller, 1958). Financial leverage is the degree to which a firm utilises debt in its capital structure (Gill and Mathur, 2011). In a perfect and efficient market, financial decisions are irrelevant to the firm's value (Modigliani and Miller, 1958). Nevertheless, while the Modigliani and Miller capital structure irrelevance

proposition fails when market imperfections⁵ are introduced, it provides a base for understanding capital structure decisions (Frank and Goyal, 2007). Corporate finance theories—such as trade-off, pecking order, market timing and stakeholder—provide insights into the drivers behind capital structure decisions in imperfect markets. Below is a brief explanation of these varied theoretical perspectives.

Trade-off theory states that the optimal capital structure is a trade-off between the benefits of debt (tax shields) and the costs of debt (expected bankruptcy). To establish an optimal capital structure, companies have to balance these two opposing forces. In order to gain a deeper understanding of the capital structure decision of firms, market imperfections (such as taxation) ought to be introduced. The original trade-off theory stems from the debate over the Modigliani and Miller (1958) irrelevance propositions, which state that—in perfect and efficient markets—the choice between debt and equity is irrelevant (Frank and Goyal, 2007). Additionally, Modigliani and Miller (1963) posit that, when corporate taxation is added to their original Modigliani and Miller (1958) irrelevance proposition, firms should be 100% debt financed because of the tax advantage of debt.⁶ However, introducing bankruptcy costs into this model implies that the optimal capital structure becomes a trade-off between the tax advantage of debt and the deadweight costs of bankruptcy (Myers, 1984; Frank and Goyal, 2007).

Myers (1984) argues that firms that follow the trade-off theory set a target leverage ratio and then steadily move towards it. Graham (2003) suggests that taxes alter these targets, as firms tend to pursue the tax benefits of debt in high tax regimes. Supporting this notion, in their survey of Canadian and US firms, Graham and Harvey (2001) find that 37% of managers adhere to flexible target leverage ratios, and 10% of managers have strict targets. One of the aims of

⁵ Such as taxes, adverse selection and information asymmetry, agency conflicts, bankruptcy costs and transaction costs.

⁶ Assuming that there were no offsetting costs of debt.

the thesis is to examine whether managers of Saudi manufacturing firms have such targets in mind when deciding on their capital structures.

Dynamic trade-off theory models suggest that firms respond to market shocks by adjusting their capital structure continuously. Brennan and Schwartz (1984) find that, without adjustment costs, firms would maintain high levels of debt in order to take advantage of tax benefits. However, other studies highlight the effects of transaction costs and the implications of adjusting a firm's capital structure (Fischer et al. 1989; Goldstein et al., 2001; Leary and Roberts, 2005; Strebulaev, 2007; Byoun, 2008). Transaction costs will cause debt ratios to deviate constantly from the optimum target (Strebulev, 2007). Even minor adjustment costs could result in delays in adjusting capital structure and could therefore yield wide differences in leverage (Fischer et al. 1989).

Pecking order theory, popularised by Myers and Majluf (1984) and Myers (1984), suggests that, if debt is risk-free, then it should be no different from internal financing. However, if debt is risky, the order of preference should be retained earnings (internal equity), debt and external equity. Adverse selection problems stem from information asymmetry between owners/managers and outside investors. The former know their firm's true value, whereas outside investors do not. This results in the market mispricing the firm's claims (Klein et al., 2002). Managers would, therefore, issue equity when the firm is overvalued, and their motives could be questioned by outside investors who cannot accurately predict the value of the firm in the presence of information asymmetry.

Agency theory suggests that managers prefer internal financing to external financing (Jensen and Meckling, 1976). The theory argues that external financing requires managers to disclose project details to outside investors, and in so doing, they expose themselves to outside investor monitoring (Frank and Goyal, 2007). Therefore, Myers (2003) argues that agency costs would imply a pecking order. The theory also suggests that debt can be used in modulating the traditional conflict between the shareholders (owners) and the managers

(agents) of a firm. When ownership and control are separated, the theory demonstrates that there is a significant conflict between shareholders and management. Debt can be used not only for financing, but also as an effective disciplining device, as managers have to meet debt obligations in order to avoid bankruptcy (Jensen, 1986).

Market timing theory proposes that, when managers need financing, they examine both debt and equity markets, and they choose whichever market seems more favourable (Frank and Goyal, 2007). If neither market looks favourable, fundraising could be postponed. Conversely, if both markets look remarkably favourable, they may raise finance even if they do not require it (Frank and Goyal, 2007). Baker and Wurgler (2002) suggest that the capital structure decisions of firms are not determined by pecking order theory, but by managers' timing of the markets. Hillier, et al. (2008) demonstrate that firms tend to issue equity when market-to-book valuations are high and issue debt when market-to-book ratios are low. Managers, therefore, do not have an optimal capital structure in their sights; they simply take advantage of market conditions (Fama and French, 2002; Welch, 2004; Huang and Ritter, 2009).

Stakeholder theory suggests that a firm's non-financial stakeholders can influence the capital structure decisions of a firm. These stakeholders are defined as "parties other than debt and equity holders who have a stake in the financial health of the firm" (Hillier et al., 2008:608). Non-financial stakeholders include suppliers, customers, employees and government officials. They may not have a direct monetary stake in the firm, but they are concerned with the firm's capital structure, due to the costs imposed upon them when the firm faces financial distress (La Rocca et al., 2008). Firms implicitly take the claims of non-financial stakeholders and consider them when they take their capital structure decision, even if those claims are not specified contractually (Cornell and Shapiro, 1987). Istitieh and Rodriguez-Fernandez (2006) highlight the relevant role non-financial stakeholders play in shaping capital structure decisions. The authors posit that capital structure decisions are endogenously related to strategic behaviour in a competitive environment. Therefore, the thesis aims to

test the possible implications of non-financial stakeholders and competitive environments on capital structure decisions.

Table 2.1: Theories of capital structure**Modigliani-Miller Theorem**

Modigliani and Miller (1958)	The MM (1958) capital structure irrelevant proposition was established based on a set of assumptions about capital markets, taxation, and information asymmetry. In general, the authors assume that the firm has a set of expected cash flows which is divided among debt and equity holders. Investors create homemade leverage because it is assumed that investors and firms have equal access to financial markets. As such, the leverage of the firm has no impact on the market value of the firm. Thus, in a perfect capital market, the firm's capital structure choices do not matter. However, the MM (1958) proposition is difficult to test because debt and firm value are plausibly endogenous and are therefore driven by other factors, such as profits, growth opportunities and collateral. Hence, even though the theorem is not realistic in terms of how firms finance their operations, it provides a reasonable interpretation of much of the theory of corporate finance. Therefore it could be argued that the MM theory influences the development of the pecking-order and the trade-off theories.
Modigliani and Miller (1963)	After receiving much criticism on MM1, the authors revised their thinking and came up with a second proposition in 1963. This proposition relaxes the assumption of no taxes. Assuming that there are no bankruptcy or financial distress costs, the optimal capital structure should be 100% debt financed (Atrill, 2009).
Miller (1977)	The author revised the original MM II (1963) to consider the effect of personal and corporate taxes. The author argues that, because stocks are taxed at a relatively lower rate than bonds return, investors would be willing to accept a lower pre-tax return from stocks relative to the pre-tax return on bonds. However, Brigham and Ehrhardt (2005) argue that, although personal taxes reduce the cost of equity, there is no guarantee that they completely offset the saving from the lower cost of debt financing.

Table 2.1: Theories of capital structure - continued

Static Trade-off Theory	
Graham and Harvey (2001)	The authors conduct a comprehensive survey on the practice of corporate finance by examining issues related to capital budgeting, capital structure and costs of capital. Using a sample of 4,440 firms and 392 CFOs, questionnaires were sent out to companies in the US and Canada on 16 th February 1999. The authors find that 19% of firms do not have a target debt ratio. However, 37% of managers have a flexible target, and 10% have a strict target.
Myers (1984)	The author looks at the capital structure puzzle. The author posits that, under the static tradeoff theory, a firm has a target debt-to-value ratio and moves towards it gradually. However, under the pecking order theory, the firm has a preference for internal, rather than external, financing. If the firm issues securities, it will prefer debt over equity. In addition, the author argues that, in a pure pecking order theory, there is no well-defined target leverage.
Dynamic Trade-off Theory	
Brennan and Schwartz (1984)	The authors develop a continuous time model that takes into account risk, taxes, financing and investment constraints and how managerial decisions affect alternative financing. They then assume a costless adjustment of capital structures. The authors find that firms maintain high debt if there are no adjustment costs.
Strebulev (2007)	The author uses a simulation approach on a sample of 3,000 firms for 152 quarters to assess the firms' optimal capital structure. The finding indicates that, in the presence of frictions, firms adjust their capital structure less frequently. Hence, firms' leverages are more likely to deviate from their optimal leverage during readjustments.
Pecking Order Theory	
Jensen and Meckling, (1976)	The authors develop a theory of the ownership structure of the firm using elements from the theory of property rights, agency theory and the theory of finance. Agency theory implies that managers prefer internal, rather than external, finance. External finance exposes the company to significant monitoring.

Table 2.1: Theories of capital structure - continued

Myers (2003)	The author evaluates the four major theories of corporate finance – capital structure irrelevancy, the trade-off theory, agency theories and pecking-order theory. Agency costs suggest that firms would prefer the pecking order theory. In the pecking order theory of capital structure, firms prefer internal, rather than external, financing. If capital investment implies that external financing is needed, firms are likely to issue the safest security first. That is, firms will prefer the issue of debt, rather than equity.
Myers and Majluf (1984)	The authors evaluate a situation in which firms must issue stocks in order to raise funds for investments. Another assumption is that information asymmetry exists, which implies that managers know more about the firms' value than the investors. Using these assumptions, the model shows that firms may refuse to issue stocks and pass up valuable opportunities. In addition, in situations where external financing is needed, firms prefer debt to equity. Hence, risky debt implies that retained earnings are preferred to debt and external equity.
Fama and French (2002)	The authors test both the pecking-order and the trade-off theory in order to assess which of the two theories better predicts observed capital structures. The authors find support for both theories of capital structure.
Market Timing Theory	
Baker and Wurgler (2002)	In their sample of firms obtained from COMPUSTAT between 1968-1999 the authors find that firms are more likely to issue common stocks when the market values are high relative to both their past values and book values. Also, firms are more likely to repurchase common stocks when the market values are low. The authors conclude that the capital structure is strongly related to the firm's historical market values. Hence, the authors find that capital structure is the cumulative outcome of past attempts to time the equity market.
Hillier, et al. (2008)	The authors outline that, under market-timing theory, capital structure decisions relate to the market value of equity. Firms issue more equity when the market value-to-book of equity is high and issue more debt when the market value of equity is low.
Huang and Ritter (2009)	The authors examine a sample of US firms during the period 1964-2001. They find that firms are more likely to issue equity when the cost of equity is low. Hence, the authors argue that the historical values of the cost of equity have long-lasting effects on capital structure.

Table 2.1: Theories of capital structure – continued**Stakeholder Theory**

Hillier, et al. (2008)	The authors underline the role of non-financial stakeholders in influencing capital structure decisions. They argue that, even though non-financial stakeholders do not have a direct monetary stake in the firm, they are concerned about the firm's financial health and therefore influence capital structure through their implicit claims.
Istaitieh and Rodriguez Fernandez (2006)	The authors present an overview of the literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. The authors emphasise the role of non-financial stakeholders in influencing capital structure decisions.
La Rocca et al. (2008)	The authors analyse the literature on strategic interactions between firms' non-financial stakeholders. They identify the role of capital structure decisions in mitigating conflicts between firms' financial stakeholders (equity holders, debt holders) and management. Further, the authors underline that capital structure decisions could influence non-financial stakeholders and vice versa.

2.2 Determinants of Capital Structure

Corporate finance theories suggest that in perfect and efficient markets, capital structure decisions are irrelevant to the value of the firm (Modigliani and Miller, 1958). Capital structure decisions assume importance to firms' values when market imperfections are introduced (Barakat and Rao, 2004). Corporate finance theories suggest that market imperfections play a central role (i.e. through taxation) in influencing capital structure decisions (Graham, 1996). Other strands of the literature posit that industry effects are detrimental to capital structure decisions (Balakrishnan and Fox, 1993; Rajan and Zingales, 1995; Aivazian et al., 2005). Examining tax and industry structure attributes provides greater insight into firms' capital structure decisions (Booth et al., 2001). Moreover, firm-specific characteristics—such as profitability, size and risk—could also have an impact on capital structure decisions (Booth et al., 2001). Studies have found these factors to be significant in explaining the capital structure decisions of Saudi firms (Al-Sakran, 2001; Omet and Mashharawe, 2003; Al-Ajmi et al., 2009). One of the objectives of this thesis is to assess whether these same factors are relevant in explaining the capital structure decisions of Saudi manufacturing firms.

2.2.1 Tax Structure

Taxation is one form of market imperfection that can influence a firm's capital structure. Trade-off theory highlights the importance of taxation in determining the capital structure of a firm (Frank and Goyal, 2007). Bradley et al. (1984) demonstrate the implications of static trade-off theory on a firm's optimal leverage. The authors suggest that, according to static trade-off theory, optimal leverage would decrease when bankruptcy costs, non-debt tax shields and/or marginal tax rates to bondholders are boosted. Conversely, it would increase when the personal tax rate on equity is increased. Therefore, the tax jurisdictions under which companies operate significantly influence their leverage decisions. Studies attest to the complexity of these "tax-regime" based influences on capital structure decisions (Ozkan, 2001; Gaud et al., 2005). This strand of the literature demonstrates how aspects like dividend imputation

systems within the tax regime, tax credit systems for the investor, rates of taxation for the company and the investor and other such considerations better explain firms' leverage decisions.

Mackie-Mason (1990) argues that firms consider tax benefits when deciding between issuing substantial amounts of either new debt or new equity. The author finds that firms that are incapable of gaining from the tax advantage of debt are more inclined to issue equity. In contrast, firms that have significant taxable earnings are more inclined to issue debt. Nevertheless, Faulkender and Petersen (2006) demonstrate a contradictory result, which illustrates that firms with high taxable earnings carry less debt. The authors attribute their results to the fact that some of these firms have less access to public debt markets, due to low credit ratings, and therefore carry less debt.

Moreover, Graham et al. (1998) criticise empirical studies on the relationship between tax and leverage by stating that the relationship is spurious for common proxies of tax. The authors claim that corporate taxation is endogenous to financing decisions. By adjusting for this, the authors confirm the positive relationship between tax and debt levels. The thesis endeavours to overcome such endogeneity by directly questioning managers on the influence of taxation on their capital structure decisions.

From the above, it can be argued that taxation has significant implications on capital structure. The theoretical prediction is that firms with high marginal tax rates tend to carry more debt. However, due to cultural-specific factors, the Saudi tax system differs from other markets, altering traditional economic behaviours and incentives. Saudi firms are taxed 2.5% of their idle wealth, including long term debt, in the form of *zakat*. This minor tax requirement, along with the absence of the tax advantages of debt, could imply an insignificant effect of taxation on the capital structure decisions of Saudi manufacturing firms. However, Al-Ajmi et al. (2009) demonstrate that *zakat* is a significant determinant of capital structure in Saudi Arabia. Therefore, the proposition is that *zakat* significantly influences the capital structure decisions of Saudi firms.

Table 2.2: Studies on tax and capital structure

Bradley et al. (1984)	In this study, the authors examine a sample of 851 firms in the US from 1962 to 1981 and use cross-sectional, firm-specific data to test for the existence of an optimal capital structure. They argue that the presence of significant bankruptcy and agency costs, loss of non-debt related tax shields, and untaxed equity income would result in a positive tax advantage of debt financing. Thus the optimal leverage is a tradeoff between the tax advantage of debt and costs that are related to leverage.
Faulkender and Petersen (2006)	The authors examine a sample of 77,659 firm year observations from COMPUSTAT during the period of 1986-2000. The authors find that tax-related trade-off theory is not applicable in their sample. Their results on firm specific determinants of capital structure show that leverage is lower for firms with large taxable earnings. The authors attribute these results to public markets failing to supply debt to such firms.
Gaud et al. (2005)	The authors examine the determinants of capital structure for a sample of 104 listed Swiss companies. They find that tax related trade-off theories better explain the capital structure of Swiss firms.
Graham et al. (1998)	The authors analyse a data sample of 18,193 firm-years from COMPUSTAT from 1981-1992. They find that corporate tax status and capital structure decisions are endogenous. The authors find the relationship between capital structure and tax proxies to be spurious. Their evidence supports the notion that low tax rate firms carry less debt than high tax rate firms.
Mackie-Mason (1990)	The author analyses the tax effect on the choice between equity and debt financing, using a sample of 1418 observations from 1977 to 1984. The author finds that firms consider tax benefits in making decision on issuing debt or equity. Firms are more likely to issue equity if they cannot gain from the tax advantage of debt (or are more likely to issue debt if they can gain from the tax advantage of debt). Hence, firms with high tax rates are more likely to issue debt than those with low tax rates.
Ozkan (2001)	The author examines a sample of 390 UK firms from 1984-1996 and tests for firm-specific attributes that influence capital structure. The author finds that firms with a high level of non-debt tax shields carry less debt than other firms.

2.2.2 Industry Structure/Nature of Assets

The structure of the industry in which a firm operates could influence its leverage position. Several studies demonstrate similarities in debt levels of firms within the same industry and stress the significance of industry effects on influencing capital structure decisions (Lev, 1969; Van der Wijst et al., 1993; Hall et al., 2000). Hall et al. (2000) document evidence for this industry effect in their study of 3,500 SMEs in the UK by illustrating that companies in the same industry carry similar debt levels. In addition, firms tend to benchmark their capital structure according to the industry average debt ratio. Graham and Harvey (2001) indicate that managers have target leverage ratios in mind when deciding on their firms' capital structures.

However, Myers (1984) suggests that debt level is motivated by external demand for funding, and it is therefore unnecessary for firms to benchmark the industry average. Furthermore, Balakrishnan and Fox (1993) posit that a firm's specific needs are more significant than following the industry average. These arguments are supported by earlier empirical studies, which demonstrate the failure of industry-structural characteristics to explain the differences in capital structures between firms (Bradley et al., 1984; Spence, 1985). Spence (1985) emphasises the importance of firm-specific product market considerations in influencing capital structure decisions.⁷ Therefore, capital structure is not confined by the industry average, as firm-specific characteristics and competitive pressures have significant effects on a firm's capital structure.

Balakrishnan and Fox (1993) introduce the connection between the type of assets used in the industry and the capital. They argue that assets, which are specific to a firm, can enhance quality and competitive advantage and reduce costs. However, these firm-specific assets are often intangible and are difficult to monitor and evaluate, or use as collateral. Therefore, they impose higher costs on the firm in the event of bankruptcy. As a result, the authors suggest that there is a trade-off between asset specificity and leverage. Vilasuso and

⁷ Competitive environment considerations are explored in more detail in Section 2.4.

Minkler (2001) suggest that an optimal capital structure would be a mixture of debt and equity that minimises both the agency costs of debt and the transaction costs of specific assets. Firms would fund their specific assets with equity and their non-specific assets with debt (Williamson, 1988). This view is supported by Mocnik (2001). Accordingly, this strand of the literature claims that asset specificity influences capital structure decisions within the industry.

Nevertheless, the nature of a firm's assets also depends on the industry in which it operates. The high level of tangible assets that characterise manufacturing firms implies that firms that operate in the manufacturing industry may have, on average, a different capital structure than those that operate in industries such as the service industry. Rajan and Zingales (1995) show that a firm's leverage increases with its level of fixed assets. As the level of tangible fixed assets increases, the asset serving as collateral reduces the risk of the firm to the lenders (Rajan and Zingales, 1995; Myers, 2001). This would eventually influence the firm's capital structure by increasing its leverage. In contrast, firms in industries such as the service industry may not have enough tangible assets for banks to accept as collateral. This might force these companies to use internally-generated funds to service their capital projects. In support of this, Aivazian et al. (2005) demonstrate that leverage and tangible assets are positively related.

Hence, industry effects could significantly influence capital structure decisions. The nature of a firm's assets could determine its capital structure decisions. Manufacturing firms may have a different capital structure than firms that operate in other industries, since manufacturing firms possess tangible assets to offer as collateral for loans. Therefore, the proposition is that manufacturing firms are more likely to have greater access to credit, due to the nature of their assets, and, hence, carry more debt.

Table 2.3: Studies on capital structure and industry structure/nature of assets

Aivazian et al. (2005)	The authors study the impact of leverage on firm's investment decisions in a sample 1,035 Canadian industrial companies during the period 1982-1999. The authors find that fixed assets have a positive impact on leverage. They find that the correlation between leverage and asset tangibility is 0.613.
Balakrishnan and Fox (1993)	The authors empirically examine the relationship between firms' specialised assets and variations in their levels of leverage. They find that the main reason for the variation in firms' leverage is related to firm-specific effects. Firm-specific intangible assets (R&D) impose higher costs in bankruptcy. In addition, firms do not benchmark their leverage position but follow their individual needs.
Hall et al. (2000)	The authors test the determinants of capital structure decision based on a sample of 3,500 unquoted SMEs in the UK. They that find asset structure has an impact on leverage. Also, the authors find significant variation across industries in most of the explanatory variables.
Lev (1969)	The author assesses whether firms adjust their financial ratios to a pre-determined industry average. Using a partial-adjustment model, the author finds evidence that, periodically, financial ratios are adjusted to their industry average. The industry has an impact on the firms' capital structure.
Mocnik (2001)	The author examines the relationship between asset specificity and capital structure for a sample of Slovene manufacturing firms, using a sample of 136 firms from 1991 to 1996. Firms finance their firm-specific assets with equity due to lower transaction costs.
Rajan and Zingales (1995)	The authors investigate the determinants of capital structure by analysing the financing decisions made by public firms in the G7 countries, using a sample of 2,583 non-financial firms. Tangible fixed assets have a positive relationship on the firms' leverage. Tangible assets that serve as collateral reduces the banks' exposure to loans made to firms.

Table 2.3: Studies on capital structure and industry structure/nature of assets – continued

Spence (1985)	The author examines product market data for 1972 and finds that firms optimise their leverage according to competitive pressures. Highly competitive product markets reduce firms' deviation from optimal capital structure.
Van der Wijst et al. (1993)	The authors analyse a sample of 27 "shoptypes" covering a period of 24 years. The authors find that industry-specific effects help explain capital structure decisions.
Williamson (1988)	The author assesses the financing decision of firms and argues that firms' financing decisions depend on the type of assets they possess. Specific (or non-redeployable) assets are usually financed by equity and non-specific (or redeployable) assets are financed with debt.

2.2.3 Profitability

The profitability of a firm and its relationship with a firms' leverage depends on capital structure theory (Al-Ajmi et al., 2009). Pecking order theory argues that profitable firms depend more on internal financing to reduce information asymmetries, avoiding costly external financing (Myers and Majluf, 1984). Thus, pecking order theory predicts a negative relationship between profitability and leverage. Trade-off theory predicts that profitable firms will have more income to shield from taxes and therefore enjoy greater benefits from the tax advantage of debt (Huang and Song, 2006). Consequently, trade-off theory predicts a positive relationship between leverage and profitability.

In addition, if a significant part of the profit is in the form of free cash flows, then agency theory could also be relevant. Agency theory states that firms with high levels of free cash flows should carry debt, as it serves as a disciplining device for managers (Jensen, 1986). However, Chang (1999) opines that, when the optimal contract between managers and outside investors is translated into a combination of debt and equity, profitable firms ought to carry less debt, as the disciplining function of debt reduces the firm's need for additional finance. This suggests that there is a negative relationship between profitability and leverage. Firms with the ability to generate acceptable amounts of profits and earnings are inclined to use their internal funds to finance projects, hence, the negative relationship between profitability and leverage (Myers, 1984).

Several empirical studies find evidence in support of the negative relationship between profitability and leverage (Cassar and Holmes, 2003; Huang and Song, 2006; Tong and Green, 2005). Additionally, Fama and French (2002) state that pecking order theory is consistent with the behaviour of small growth firms, which are more inclined to use internal funding than external funding. Booth et al. (2001) also show that profitable firms in developing countries carry less debt. Moreover, using international comparisons between different firms' capital structures, Kester (1986) demonstrates a negative relationship between profitability and leverage but finds that Japanese firms use more debt than their US counterparts, despite being less profitable. The author attributes this to less

stringent disclosure rules in Japan. Accordingly, one of the aims of the thesis is to test for the relationship between leverage and profitability in a context of high information asymmetry.

Moreover, while the majority of empirical evidence points to a negative relationship between profitability and leverage, Prasad et al. (2001) argue that the market is not willing to finance companies with low profits. Therefore, a positive relationship exists between profitability and leverage.

Empirical findings from studies on the Saudi market show that the effect of profitability on capital structure is mixed. Al-Ajmi et al. (2009) find that profitability has a negative impact on leverage. This result is consistent with pecking order theory, which indicates that firms prefer to use surpluses from profits to finance their investments, or that they generally prefer internal over external funds. The results are also in line with those reported by Omet and Mashharawe (2003). However, the study by Al-Sakran (2001) shows mixed results regarding the relationship between leverage and profitability, depending on the sector. Further, the author reports a significantly negative relationship between profitability and leverage in the industrial sector, which constitutes all listed manufacturing firms (excluding firms in the cement sector) prior to the reclassification of sectors in 2007. Hence, the proposition is that there would be a negative relationship between leverage and profitability in the context of Saudi manufacturing firms.

Table 2.4: Studies on the relationship between profitability and leverage

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. The authors find that leverage is negatively related to profitability.
Al Sakran (2001)	The author studies the determinants of capital structure for 35 listed Saudi firms between 1993-1997. The author reports inconclusive results on the market level but finds that profitability is negatively related to leverage in the industrial sector.
Booth et al. (2001)	The authors study a sample of firms from 10 developing countries between 1980 and 1990 in order to assess the portability of capital structure theories across countries. They find that capital structure decisions are affected by approximately the same variables as in developed countries. Profitable firms in developing countries have less leverage.
Cassar and Holmes (2003)	The authors analyse the capital structure determinants for a sample of 1,555 small- and medium-sized Australian firms for the period 1995-1998. They find a negative relationship between profitability and leverage.
Chang (1999)	The author presents a model in which the optimal financial contract is based on factors such as taste, endowments and technology. The author postulates that projects that are more profitable can easily meet an investor's required return, and the investor, in turn, would be willing to supply the funds that the firm needs. The conclusion drawn is that profitable firms should carry less debt.
Fama and French (2002)	The authors analyse the trade-off and pecking order theory using a cross-sectional regression of firms from COMPUSTAT from 1965 to 1999. They find that more profitable firms have less debt, which indicates that there is a negative relationship between profitability and leverage.
Huang and Song (2006)	The authors analyse the characteristics of a sample of 799 Chinese firms from 1994 to 2000. Their findings reveal a negative relationship between profitability and leverage.
Kester (1986)	The author compares the ownership structure and corporate finance between US and Japanese firms and also assesses the determinants of capital structure for these firms. The sample consists of 344 and 452 Japanese and US firms, respectively, covering the period April 1, 1982 to March 31, 1983. The authors find a negative relationship between leverage and profitability for firms in the US and Japan.

Table 2.4: Studies on the relationship between profitability and leverage – continued

Myers and Majluf (1984)	The authors argue that pecking-order theory implies that firms are more likely to use internal financing to reduce information asymmetries and avoid costly external financing. Hence, profitable firms are more likely to use retained earnings than debt, which suggests that there is a negative relationship between profitability and leverage.
Omet and Mashharawe (2003)	The authors analyse the determinants of capital structure for a sample of 51 Jordanian, 30 Kuwaiti, 28 Omani and 29 Saudi firms during the period 1996-2001. The authors find that leverage is negatively related to profitability.
Prasad et al. (2001)	The authors conducted a critical survey on the influence of ownership structure, taxation and corporate strategy on the firms' capital structure decision. They find that there is a positive relationship between leverage and profitability. The reason is that the low profit implies higher risk for banks and, as such, the market might not be willing to provide funds to less profitable firms.
Rajan and Zingales (1995)	The authors investigate the determinants of capital structure by analysing the financing decisions made by public firms in the G7 countries, using a sample of 2,583 non-financial firms. They find that profitability has a negative impact on leverage.
Tong and Green (2005)	The aim of the study is to test the pecking order and trade-off theory of firms' financing decisions, using a sample of listed Chinese companies. The authors used a sample of 44 non-financial companies listed on the Shanghai and Shenzhen stock exchange from 2001 to 2002. The authors find a negative relationship between profitability and leverage. The authors find evidence that supports the pecking-order theory over the trade-off theory.

2.2.4 Size

The size of the firm can impact the level of leverage the firm can assume. Pecking order theory suggests that large firms have less information asymmetry and are capable of issuing more equity than small firms, which makes equity more favourable than debt (Kashefi-Pour et al, 2010). This would imply a negative relationship between size and leverage.

Nevertheless, corporate finance literature shows mixed evidence regarding the relationship between firm size and the level of debt. According to Heshmati (2001), listed companies enjoy easier access to the equity market than smaller companies, due to lower fixed costs. Therefore, the author finds a negative relationship between firm size and leverage. Since larger firms have lower transaction costs and less information asymmetry than smaller firms, they prefer to raise funds through equity, rather than debt, which implies that they would carry less debt than smaller firms (Wald, 1999).

In spite of the above, others find a positive relationship between leverage and the size of the firm. According to Cassar and Holmes (2003), banks focus on the ability of the company to provide appropriate tangible assets as collateral, which is either costly or limited for small firms. The authors therefore find that small firms are often forced to use internal resources and short-term debt, due to their limited access to long term financing. Fama and French (2002) find a positive relationship between a firm's leverage and its size. Hall et al. (2004) show that there is a significant negative correlation between firm size and the probability of bankruptcy. Larger firms, therefore, increase their leverage, since their expected bankruptcy cost is smaller (Rajan and Zingales, 1995).⁸ Accordingly, larger firms are likely to use more leverage than smaller firms. Chittenden et al. (1996) suggest that moral hazards and adverse selection problems are reasonably reduced in large firms, and the cost of monitoring is significantly less than in small firms. Hence, listed firms are more likely to use external financing than small firms, which suggests a positive relationship between leverage and company size. From a UK perspective, Lasfer and Levis

⁸ Rajan and Zingales (1995) refer to size as an inverse proxy for the probability of default.

(1998) find evidence of a positive relationship between size and leverage. One explanation for higher leverage for larger firms is that these firms have more access to debt and equity markets (Ferri and Jones, 1979).

The results from Al-Ajmi et al. (2009) suggest that size has a positive impact on leverage in the Saudi market. The authors attribute this result to the fact that large firms face less information asymmetry with lenders because of their heavy reliance on bank loans and their lower risk of bankruptcy, which enables them to raise debt from banks more easily (Al-Ajmi et al., 2009). The results are in line with those found by Omet and Mashharawi (2003), who demonstrate a positive relationship between size and leverage. Al-Sakran (2001), however, reports mixed results, with the relationship between size and leverage being positively significant in the industrial and agricultural sectors, negatively significant in the electrical sector and insignificant in all other sectors. Therefore, the proposition is that large Saudi manufacturing firms are likely to carry more debt.

Table 2.5: Studies on the relationship between size and leverage

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. They report a positive relationship between size and leverage. The results are attributed to the fact that large firms face less information asymmetry and have a lower risk of bankruptcy.
Al Sakran (2001)	The author studies the determinants of capital structure for 35 listed Saudi firms between 1993 and 1997. The author reports inconclusive results regarding the effect of size on leverage on the market level and a positive relationship in the industrial and agricultural sectors.
Cassar and Holmes (2003)	The authors analyse the capital structure determinants for a sample of 1,555 small- and medium-sized Australian firms for the period 1995-1998. They find that size has a positive effect on leverage. Larger firms are more likely to use debt than smaller firms.
Chittenden et al. (1996)	The authors investigate the financial structure of a sample of small firms by focusing on growth and access to capital markets. Using a sample of data collected for both listed and unlisted small firms in the UK, the authors find that there is a significant relationship between the financial structure (leverage) of small firms and profitability.
Fama and French (2002)	The authors analyse the trade-off and pecking order theory using a cross-sectional regression. They find that there is a positive relationship between leverage and size.
Heshmati (2001)	The author studies the relationship between leverage and a set of explanatory variables using a sample of 2,261 Swedish micro and small firms covering the period 1993-1997. Using a dynamic adjustment model, the author finds that size has a negative impact on leverage. This suggests that Swedish SMEs adopt debt financing to finance initial growth, but later use internally-generated equity to finance future expansion and reduce leverage.
Kashefi-Pour et al. (2010)	The test the determinants of capital structure in the context of UK firms. By examining pecking order and dynamic trade-off theories, they find that size has a negative impact on firms' leverage position.
Lasfer and Levis (1998)	The authors analyse the determinants of the leasing decisions of small and large firms in the UK. Using a sample of 3,000 UK firms from 1982 to 1996, they find a positive relationship between leverage and size of the firm.
Omet and Mashharawe (2003)	The authors analyse the determinants of capital structure for a sample of 51 Jordanian, 30 Kuwaiti, 28 Omani and 29 Saudi firms during the period 1996-2001. They report a positive relationship between size and leverage.

Table 2.5: Studies on the relationship between size and leverage – continued

Rajan and Zingales (1995)	The authors investigate the determinants of capital structure by analysing the financing decisions made by public firms in the G7 countries, using a sample of 2,583 non-financial firms. The authors state that size is a proxy for the inverse probability of default. They find that there is a positive relationship between leverage and the size of the firm for most of the countries, except for Germany, where size has a negative impact on leverage.
Wald (1999)	The author analyses the determinants of the capital structure of 4,404 firms from the UK, France, Germany, Japan and the US in 1991-1992. The author finds that size is negatively related to leverage. The results are attributed to the fact that large firms have lower transaction costs and lesser information asymmetry than small firms.

2.2.5 Risk

Both pecking order and trade-off theories predict that risk negatively impacts a firm's leverage. According to pecking order theory, investors are less able to predict the future earnings of a firm with variable earnings, which increases the cost of debt (Minton and Schrand, 1999). Trade-off theory suggests that the more firms are exposed to bankruptcy costs, the larger the incentive is to reduce their debt level. Firms with variable earnings are more prone to missing their debt commitments and thus have a higher probability of default (Minton and Schrand, 1999). Hence, lenders are disinclined to lend to firms with high earning variability and tend to charge a higher premium to such firms because of the higher probability of default (Minton and Schrand, 1999). In addition, Bradley et al. (1984) argue that the variability of a firm's value negatively influences the debt ratio when the costs of bankruptcy are significant. Consequently, the authors note a negative relationship between risk and leverage. In addition, the empirical results of Petersen and Rajan (1994) suggest that SMEs' risk and leverage are negatively related. However, Booth et al. (2001) find mixed evidence regarding the relationship between risk and leverage, reporting a negative correlation between business risk and leverage for six countries and a positive relationship for four.⁹ Other empirical studies find a positive link between risk and leverage (Jordan et al., 1998; Huang and Song, 2006). Huang and Song (2006) suggest that firms with high levels of leverage tend to engage in riskier investments.

In the Saudi context, Al-Ajmi et al. (2009) report a negative relationship between risk and leverage. Al-Sakran (2001) and Omet and Mashharawe (2003) do not include risk in their respective studies. While theories of capital structure suggest a negative correlation between risk and leverage, empirical studies find mixed evidence in this regard. The general mixed results regarding the relationship between risk and leverage could be attributed to the inconsistency in the measure of risk and definition used to capture the

⁹ A positive relationship is found for Mexico, India, Jordan and Malaysia, and a negative relationship is found for Brazil, South Korea, Pakistan, Thailand, Turkey and Zimbabwe.

relationship between risk and leverage.¹⁰ Therefore, the proposition is that the relationship between leverage and risk would be negative.

¹⁰ Bradley et al. (1984) and Wald (1999) investigate business risk by considering the standard deviation of earnings over total assets. Studies by Booth et al. (2001) and Huang and Song (2006) use the standard deviation of earnings before interest and tax to measure business risk. Other studies use the Beta coefficient to capture the relationship of risk and leverage, arguing that it provides a more accurate prediction of a firm's systematic risk (Heinkel, 1982; Harris and Raviv, 1991, Achaya et al., 2010).

Table 2.6: Studies on the relationship between risk and leverage

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. The authors report a negative relationship between size and leverage.
Minton and Schrand (1999)	The authors use quarterly data in their sample of firms from COMPUSTAT between 1989 and 1994. They find that cash flow volatility increases the probability of firms' need to access external finance and the costs of debt.
Booth et al. (2001)	The authors analyse a sample of firms from 10 developing countries during the period 1980-1990, in order to assess the portability of capital structure theories across countries. The authors find a mixed result regarding the relationship between risk and leverage. The relationship is negative and significant for three countries (South Korea, Turkey and Zimbabwe) and positive and significant for two countries (Mexico and Jordan).
Bradley et al. (1984)	The authors examine a sample of 851 firms in the US from 1962 to 1981 and use cross-sectional and firm-specific data in order to test for the existence of an optimal capital structure. The authors find that the volatility of earnings is an important factor in determining the firms' leverage position. Firms with high earnings volatility have lower leverage. Hence, the authors find a negative relationship between risk and leverage.
Huang and Song (2006)	The authors analyse the characteristics of a sample of 799 Chinese firms from 1994 to 2000. The authors find that there is a negative relationship between profitability and leverage. The authors find a positive relationship between risk/volatility and leverage for a sample of Chinese firms.
Jordan et al. (1998)	The authors assess the link between strategy, financial policy and capital structure for a sample of SME firms from 1989 to 1993, using a combination of primary and secondary data sources. The authors find that risk has a positive impact on leverage.
Petersen and Rajan (1994)	The authors look at how the relationship between a firm and its creditors will affect the firms' leverage, availability and costs of funds. Using a survey conducted in 1988 and 1989 for a sample of 4,504 non-financial and non-firm small businesses, the authors find that firms with low earnings volatility (less risky firms) are more likely to have high debt ratio. Hence, there is a negative relationship between the risk and leverage of SME.

2.3 Capital Structure and Stakeholders

Capital structure decisions can also relate to a firm's corporate strategy through its stakeholders. These decisions assume strategic importance when market imperfections are present (La Rocca et al., 2008). Barton and Gordon (1986) argue that corporate strategy theories complement, rather than contradict, corporate finance theories and help deepen the understanding of financial decisions. Therefore, although finance and strategy are traditionally studied separately, examining the way in which these two disciplines function and interrelate is both relevant and important, due to the many connections they share (La Rocca et al., 2008). A theoretical integration between capital structure and corporate strategy can be made by studying the way financial stakeholders, managers and non-financial stakeholders interact.

2.3.1 Financial Stakeholders

The financial stakeholders of a firm have direct financial stakes in the firm. They comprise the equity and debt holders in a company. Equity holders can be family members, institutions, individuals and/or the government. Debt holders, on the other hand, can be commercials and investment banks¹¹ and/or government-backed lending/financing institutions. Accordingly, the analysis of the literature examines the manner in which different equity and debt holders and their interactions affect corporate attitudes towards leverage.

2.3.1.1 *Equity and Debt holder Conflicts*¹²

Equity and debt holder conflicts arise under the assumption that a firm's manager acts in the interest of his or her shareholders (La Rocca et al., 2008). Myers (1977) argues that high leverage causes managers to reject positive Net Present Value (NPV) investments, therefore decreasing a firm's value. Shareholders will not seek projects that exclusively benefit debt holders without benefiting them, even if they have positive NPVs. This leads managers to underinvest in positive NPV projects. The author refers to this as the "debt

¹¹ In the thesis 'banks' refers to either commercial banks, investment banks, or both.

¹² Henceforth, the terms 'shareholders' and 'equity holders' are used interchangeably and are therefore switchable.

overhang” problem. This “debt overhang” problem causes leveraged firms to reject profitable growth opportunities (Phillips, 1995). Moreover, Brito and John (2002) demonstrate that the existence of risky debt causes “underinvestment” in risky projects and, therefore, risk avoidance. Firms with high growth opportunities can eradicate their underinvestment problem by avoiding excessive risk.

In contrast, debt could cause overinvestment in risky projects. According to Brander and Lewis (1986), managers may overinvest in risky projects due to the limited liability of equity. Limited liability implies that, in the event of bankruptcy, shareholders generally receive zero payoffs. Conversely, when investments are successful, they are entitled to any profits that remain after creditors have been paid (Brander and Lewis, 1986). The limited liability of shareholders implies that, when a firm goes bankrupt, their liability is limited only to their contributed capital. As owners of the company, the priority rule states that they are the last to be paid (Brander and Lewis, 1986). Less stringent bankruptcy rules that fail to penalise excessive risk-taking encourage overinvestment, as both managers and shareholders benefit when the payoffs are greater than the costs. The payoff structure, therefore, determines the investment strategy of a firm (Brander and Lewis, 1986). It implies that shareholders can transfer the costs of unsuccessful projects to debt holders and gain most of the benefits of risky projects if they are successful (Jensen and Meckling, 1976). It is, therefore, in the interest of both managers and shareholders to engage in risky projects.

Debt overhang theory states that high leverage results in the rejection of positive NPV projects, which implies underinvestment (Myers, 1977). However, it is more plausible that, because shareholders have limited liability and bankruptcy rules are less stringent in the Saudi market, the existence of risky debt causes overinvestment. Accordingly, managers of leveraged Saudi manufacturing firms are expected to engage in risky projects that benefit the shareholders if the project is successful and transfer the cost of unsuccessful projects to debt holders, if the pay-off structure in Saudi Arabia is similar to that assumed by Brander and Lewis (1986).

Table 2.7: Studies on equity and debt holder conflicts

Brito and John (2002)	The authors re-evaluate the risk shifting model proposed by Jensen and Meckling (1976) to include unrealised growth opportunities in the final period. They demonstrate that growth opportunities may lead to the elimination of underinvestment and a reduction of risk-shifting behaviour. They extend this argument further by claiming that growth opportunities may sometimes even lead to risk avoidance.
Jensen and Meckling (1976)	The authors develop a theory of the ownership structure of the firm using elements from the theory of property rights, agency theory and the theory of finance. The authors postulate that, when shareholders have limited liability, managers could overinvest in risky projects.
Myers (1977)	The author states that the firm's assets can be viewed as a call option that depends on the future investments by the firm. Risky debt has the potential to reduce the present market value of the firm because debt induces a sub-optimal investment strategy. Managers that act in the interest of shareholders can reject positive NPV projects when leverage is high. Hence, debt is inversely related to the proportion of the value of the firm that is accounted for by real options.
Phillips (1995)	The author investigates changes in firms' production and pricing decisions in four industries where there has been an increase in firms' leverage. The author shows that competitive decisions are related to leverage. In three industries, output is negatively associated with leverage. Leverage provides a commitment not to invest in the future, as the firms pay out a significant part of their free cash flow to service debt. Leveraged firms can reject profitable growth opportunities because of the debt overhang problem.

2.3.1.2 Manager and Equity Holders' Conflicts

Conflicts between managers and equity holders arise when managers are assumed to act in their own best interests. Agency theory examines the role of debt in the conflict between shareholders and managers, especially when there is a separation of ownership and control (Jensen and Meckling, 1976). Managers, as the agents of shareholders, may have interests that conflict with those of the shareholders because they favour perks, power and empire building (Jensen, 1986). Managers may therefore use their firm's free cash flows for opportunistic purposes (Jensen, 1986). Degryse and De Jong (2006) argue that, in order to maximise firm size, managers might invest in negative NPV projects. The presence of debt discourages over-investment of free cash flows, since managers have to cover their debt obligations in order to avoid bankruptcy (Hart and Moore, 1995). Therefore, shareholders would find debt to be a significant disciplinary device.

In addition to the aforementioned disciplinary function, debt can be used to signal to the market, even in the absence of conflict, that a company can systematically meet its cash flow obligations and does not object to being supervised by creditors when making debt decisions (Ross, 1977). This signal can be valuable to shareholders and lenders in uncertain market environments and is one of the significant influences on leverage decisions (Diamond, 1991).

Accordingly, managers seek to maximise their utility, rather than align their interests with the shareholders. In so doing, they tend to invest in projects that increase their satisfaction, status and power. Managers are in a position to use their firm's free cash flows for self-serving purposes. The existence of debt is crucial because it prevents free cash flows from being wasted. It also signals to shareholders and lenders that the firm can meet its cash flow obligations to banks. Hence, Saudi manufacturing firms could use debt as a strategic disciplining tool for managers.

Table 2.8: Studies on manager and equity holders' conflicts

Degryse and De Jong (2006)	In their 1993-1998 sample of non-financial publicly listed Dutch firms, the authors find that debt is a significant disciplining mechanism for managerial agency problems.
Hart and Moore (1995)	The authors provide an analysis of the benefits and costs of debt, especially long-term debt. Their model considers a public company with assets in place and new investment opportunities. Assuming that managers have strong empire-building tendencies, the authors show that, with little or no debt, it is easy for management to invest in negative NPV projects (overinvestments). Hence, debt can discourage overinvestments of free cash flows.
Jensen (1986)	The author develops a theory that explains the benefits of debt in reducing the agency costs of free cash flows, including the process where firms can substitute debt for dividends. The author argues that the agency conflict is severe in firms with significant free cash flows. There is a further postulation that the firm's free cash flows can be used for projects that generate negative NPV.
Ross (1977)	The author develops an incentive-signaling model that provides a theory for the determination of the financial structure of the firm. In this model, firms use debt to signal their ability to meet their cash flow obligations (interest payments) and their openness to supervision from creditors.

2.3.1.3 *Family Ownership*

Family ownership can constitute a significant portion of equity, especially for firms that start out private before going public. This is usually regarded as emotional ownership, and it describes the degree to which individuals perceive that resources belong to them as a result of a personal relationship that was established in the creation process (Björnberg and Nicholson, 2012). When there is significant family control, the amount of equity that is freely available to other investors (free floating) is reduced because of the desires of family members to maintain control of the firm. Several studies have shown that firms with large family ownership have significant shareholder control (Stulz, 1988; King and Santor, 2008). In order for family owners to maintain their control, they are likely to prefer debt to equity financing (Stulz, 1998). Empirical studies support this contention. King and Santor (2008) demonstrate that family ownership has a positive impact on the level of leverage of the firm. Others have also found the relationship between family ownership and leverage to be positive (Bianco and Nicodano, 2006; Mehran, 1992). As a result, firms with significant family ownership are more likely to prefer debt to equity financing, as the latter has the potential to dilute the family's ownership stake and, thus, its control over the firm.

Moreover, family ownership and its impact on leverage could also be viewed from an information asymmetry and agency cost perspective. Lopez-Garcia and Sanchez-Andujar (2007) argue that family-owned firms have a greater level of confidentiality with regard to information than non-family-owned companies. They find the debt-to-equity ratios of family-owned enterprises to be lower than their non-family-owned counterparts. In addition, agency theories suggest that managerial ownership can act as a substitute for debt in reducing agency problems (Jensen, 1986). If this is the case, the relationship between leverage and family ownership should be negative. Agrawal and Nagarajan (1990) and Villalonga and Amit (2004) do indeed find a negative relationship between family ownership and leverage. Their findings could be attributed to the fact that family-owned companies, with owners assuming more active managerial roles,

have less incentive to use debt to reduce agency problems, since managerial and shareholder interests are aligned.

Accordingly, family ownership can be significant in shaping the capital structure of the firm. Family owners tend to be actively involved in the management of their firms, thereby reducing agency problems. Moreover, significant shareholder control is associated with family ownership. Additionally, to maintain this control, firms will prefer debt to equity to avoid the dilution of their control. However, Al-Ajmi et al. (2009) find a negative relationship between family ownership and leverage. This result, in accordance with agency theory, could be attributed to the fact that family owners actively monitor the firm and do not need to use debt to monitor and discipline their managers. Nevertheless, the proposition follows the theoretical prediction of a positive relationship between family ownership and leverage.

Table 2.9: Studies on family ownership influence on capital structure

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. The authors report a negative relationship between family ownership and leverage.
Agrawal and Nagarajan (1990)	The authors look at family ownership among top management. They find that top managers in an all-equity firm with family ownership have greater control of voting rights than those without family involvement. Hence, managerial control of voting rights and family relationships among managers are important in reducing leverage. Thus, the authors find a negative relationship between family ownership and leverage.
Bianco and Nicodano (2006)	The aim of the authors is to determine when a holding company should take out debt on behalf of its subsidiaries. The authors look at the pyramid structure of Italian holding companies, using a sample of 86 and 117 holding companies and 728 and 700 group-affiliated companies. There is a positive relationship between control-enhancing mechanisms of family owners and financial leverage. Holding companies do most borrowing against assets and lend to subsidiaries.
King and Santor (2008)	The authors examine how family ownership affects the capital structure and performance of a sample of 613 Canadian firms using a dataset from 1998 to 2005. The authors find that freestanding family-owned firms with a single share class have higher leverage. Hence, there is a positive relationship between family ownership and leverage.
Lopez-Garcia and Sanchez-Andujar (2007)	The authors look at the determinants of the financial behaviour of small family businesses and how they differ from non-family small businesses. They used as a sample 422 Spanish family businesses and 436 non-family businesses from 1997 to 2004. The leverage ratios of family-owned companies are lower (55.5%) than non-family owned companies (57.5%). The high level of confidentiality implies that family-owned companies ignore debt financing.

Table 2.9: Studies on family ownership influence on capital structure – continued

Stulz (1988)	The author assesses how managerial control of voting rights affects firm value and financing policies. Firms that have a significant proportion of their equity capital in the hands of family owners have significant shareholder control. Hence, firms are more likely to use debt than equity to raise funds.
Villalonga and Amit (2004)	The authors use a panel sample of 52,787 shareholder-firm-year observations, which represents 2,808 firm-years from 508 Fortune 500 firms during the period 1994-2000, to assess whether family-owned firms are more or less valuable than non-family owned firms based on ownership, control and management. The authors find a negative relationship between family ownership and leverage.

2.3.1.4 *Government Ownership*

Governments can also have substantial equity ownership of firms. Borisova et al. (2012) argue that governments are similar to other large investors. However, the motives of their investments might be different. The authors argue that a government's equity participation is sometimes pursued for social and political, rather than economic, objectives. This leads investors to question the motives behind the financial decisions of such firms. Moreover, Bortolotti et al. (2010) argue that governments are passive shareholders and do not actively engage in the monitoring of the firm. This implies that state-owned enterprises (SOE) are more likely to benefit from the monitoring and disciplining effect of debt. Faccio et al. (2006) argue that government owned firms are more likely to be bailed out in the event of financial distress than their non-SOE counterparts. If they have a direct monetary stake in the firm, governments will not allow them to fail (Faccio et al., 2006). Therefore, lenders are more likely to extend credit because they view such firms as having lower risk relative to their non-SOE counterparts.

In addition, Allen et al. (2005) argue that SOEs receive preferential treatment in credit terms and amounts, especially from state-owned banks and financing institutions. The authors find that Chinese SOEs receive more lending from large state-owned banks than their non-government-owned counterparts. Their results indicate a positive relationship between leverage and state ownership. Other studies support this positive relationship between government ownership and leverage (Li et al., 2009; Liu et al., 2011).

Accordingly, the theoretical prediction is that the relationship between government ownership and leverage would be positive. Yet, empirical findings on the effect of government ownership on leverage in the Saudi market are mixed. For example, Al-Sakran (2001) finds a positive effect of government ownership on leverage, while Al-Ajmi et al. (2009) reveal a negative relationship. Notwithstanding these contradictions, most research findings do indicate a positive relationship between the two. Hence, the proposition is that

government ownership in the sample of Saudi manufacturing firms used in this thesis would be positively related to leverage.

Table 2.10: Studies on government ownership and capital structure

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. The authors report a positive relationship between size and leverage. The authors attribute this result to the fact that large firms face less information asymmetry and have a lower risk of bankruptcy
Al Sakran (2001)	The author studies the determinants of capital structure for 35 listed Saudi firms between 1993 and 1997. A positive relationship is revealed between government ownership and leverage.
Allen et al. (2005)	The authors examine the effect of government ownership on leverage in a panel data sample of 1,163 Chinese listed firms from 1992 to 2000. Chinese SOEs are found to carry much higher leverage than their non-SOE counterparts.
Borisova et al. (2012)	The authors investigate the effect of government ownership on corporate debt or leverage using a sample of 43 countries in the period 1991-2010. They postulate that government ownership could increase the cost of debt if there are social and political goals imposed by the state owners, which could reduce profitability.
Bortolotti et al. (2010)	The authors analyse a sample of 802 investments by 18 Sovereign Wealth Funds in November 2009. The authors find that SWFs play a limited role in the corporate governance of firms.
Faccio et al. (2006)	The authors investigate the likelihood of government bailouts in a sample of 450 politically connected firms from 35 countries during the period 1997-2002. The authors find that politically connected firms are more likely to be bailed out than their non-connected counterparts.
Li et al. (2009)	The authors uses a unique data set to examine the role of ownership structure and institutional development in debt financing, using a sample of Chinese firms that are not publicly traded. The authors use a sample of 417,068 firm-year observations from 2000 to 2004. They find that ownership structure and institutions explain approximately 6% of the variation in the firms' leverage. The average leverage ratio for the sample firm is 57%, and about 35% of these firms employ long-term debts. The authors show that state ownership has a positive impact on leverage and the firm's access to long-term debt.

2.3.1.5 Institutional Ownership

Institutional ownership could have considerable effects on capital structure through mitigating agency costs, reducing information asymmetry, and increasing the speed of adjustment of capital structure (Michaely and Vincent, 2012). Several studies show that institutional investors actively monitor the firm, enhancing its value and reducing agency costs (Shleifer and Vishny, 1986; Huson et al., 2001). Chen et al. (2007) examine the monitoring activities of US institutional investors and find that institutional investors actively engage in monitoring and influence the decisions of the firm's managers. Therefore, institutional ownership can act as a substitute for debt in reducing agency conflicts.

In addition, these investors devote resources to collecting information (which reduces information asymmetry) in order to adhere to fiduciary and prudence standards. They are, therefore, better informed than other types of investors (Del Guercio, 1996; Allen et al., 2000). Institutional investors can mitigate the adverse selection problem by reducing information asymmetries (Michaely and Vincent, 2012). Pecking order theory states that, when information asymmetry is reduced, the cost of equity falls. Subsequently, firms with institutional owners would issue more equity.

Nevertheless, the empirical evidence on the relationship between institutional ownership and leverage is mixed. Berger et al. (1997) and Chen and Steiner (1999) find a positive correlation between institutional ownership structure and leverage. Other empirical studies find a negative effect (Crutchley and Jensen, 1999; Tong and Ning, 2004; Al-Najjar and Taylor, 2008). Tong and Ning (2004) attribute the negative relationship to the fact that institutional investors prefer firms with low leverage ratios to avoid future financial distress. Therefore, even though Al-Ajmi et al. (2009) demonstrate a positive relationship between these variables in the Saudi market, agency and pecking order theories point to a negative relationship. This is due to institutional investors replacing the monitoring role of debt, along with the reduction of information asymmetry and

ultimately the cost of equity. Hence, the proposition is that firms with institutional ownership are less likely to issue debt.

Table 2.11: Studies on institutional ownership and capital structure

Al Ajmi et al. (2009)	The authors examine the determinants of capital structure for 53 listed Saudi companies during the period 2003-2007. In this study a positive relationship is shown between institutional ownership and leverage.
Al-Najjar and Taylor (2008)	The authors investigate the relationship that exists between ownership and capital structure for firms in Jordan. They show that firms in Jordan follow determinants of capital structure similar to those in developed markets. A negative relationship between institutional investors and leverage is identified.
Berger et al. (1997)	The authors study the relationship between the capital structure of the firm and managerial entrenchment. Their sample consists of 452 industrial companies from 1984 to 1991. They argue that entrenched managers have discretion over the level of leverage choices. Their results indicate that entrenched CEOs avoid leverage. However, in relation to institutional ownership, the authors find that leverage increases when there is a significant "blockholder" with 5% or more stake in the company. Firms with "blockholders" have leverage levels that are 1 to 4 percent higher than other firms. Hence, managers take on more debt when an influential monitor is present.
Chen et al. (2007)	The authors identify the characteristics of institutional investors that monitor the firms' assets. Using a sample of all acquisition decisions covering 2,150 bids and focusing on the 1,815 completed acquisitions during January 1984 and December 2001 of US firms, the authors find independent long term institutions with large blocks of shares showing a higher activity of monitoring a related firm. Furthermore, monitoring has a greater effect from 1990 onwards.
Michaely and Vincent (2012)	The authors investigate the relationship between institutional holdings and capital structure using 122,859 firm-year observations from 1979 to 2009. Institutional shareholders impact capital structure because they alleviate agency costs, reduce information asymmetry and increase the speed of adjustment of capital structure. Institutional holdings have a significant effect on capital structure because a change in institutional holdings is negatively related to a change in capital structure. Firms tend to lower their leverage in response to an increase in institutional holdings by issuing equity, rather than debt. Hence, there is a negative relationship between the presence of institutional investors and leverage.
Tong and Ning (2004)	The authors use a panel data set of S&P 500 firms from 1997 to 2001 in order to examine the relationship between capital structure and institutional investors' choices. The authors find that leverage is negatively related to the number of institutional investors.

2.3.1.6 Relationship Banking

Bank loans are the main source of external finance for companies, regardless of their jurisdiction. These loans can be of a short or long-term nature. It is thus relevant to consider the nature of the banking environment when studying the capital structure decisions of a firm. Several studies attest to the significance of commercial banking concentration on capital structure (Petersen and Rajan, 1995; Cetorelli and Strahan, 2006; and Gonzalez and Gonzalez, 2008). In a perfect and efficient market there would be an inverse relationship between bank concentration and firm leverage (Gonzalez and Gonzalez, 2008). However, when market imperfections (such as information asymmetries) exist, Gonzalez and Gonzalez (2008) find a positive relationship between banking concentration and leverage. Similarly, Boot (2000) demonstrates that relationship banking with the borrowing firm reduces information asymmetries and facilitates a firm's access to finance.

Cetorelli and Strahan (2006) and Peterson and Rajan (1995) demonstrate that, in markets with low competition in the banking sector and a high banking concentration, relationship banking is significant. According to Petersen and Rajan (1995), firms in more concentrated credit markets can more easily access finances, due to relationship banking. Fan et al. (2010) find that legal and tax systems, as well as the preferences of lenders, help explain variations in leverage. The authors report that 'relationship banking' has a positive impact on leverage. Therefore, the proposition is that relationship banking would have a positive impact on leverage when banking concentration is high. The effect of relationship banking on leverage is largely unexplored in the Saudi manufacturing industry. Hence, by controlling for the effect of relationship banking, this thesis intends to contribute to the existent literature on the determinants of capital structure on Saudi manufacturing firms.

Table 2.12: Studies on relationship banking and capital structure

Boot (2000)	The author provides a review of the contemporary literature on relationship banking. The author analyses how relationship banking fits with the services provided by banks, together with its costs and benefits. The author concludes that relationship banking is important because it can be a value-enhancing activity. In an imperfect market, relationship banking reduces information asymmetry and increases leverage. Relationship banking has a positive impact on a firm's leverage.
Cetorelli and Strahan (2006)	The authors examine a sample of US firms from COMPUSTAT between 1980 and 1997. Their empirical findings demonstrate that access to credit is more difficult for potential entrants when credit markets are concentrated than when banking is competitive. The authors also show that lenders favor incumbent firms with strong and established relationships over entrant firms.
Degryse and Ogena (2007)	The authors empirically investigate the impact of interbank competition on bank branch orientation, using a database that contained information on bank-firm relationships. Using a sample of 645 and 9,213 borrowers (from a ban in Belgium) for the period between January 1995 and August 1997, the authors find that bank branches that face stiff competition are more engaged in relationship-based lending.
Fan et al. (2010)	The authors examine the influence of the institutional environment and corruption on capital structure for a sample of 36,767 firms from 39 countries. The authors find that relationship banking has a positive impact on leverage in jurisdiction where property laws and creditor rights are upheld.
Gonzalez and Gonzalez (2008)	The authors provide evidence on how bank concentration and institutions affect capital structure for firms in 39 countries. They analyse a sample of 12,049 firms from 1995 to 2004. The authors find that leverage increases with bank concentration.
Peterson and Rajan (1995)	The authors provide a framework that shows that the effect of competition in the credit market is an important factor in determining the value of lending relationships. The authors show that creditors are more likely to provide finances to credit-constrained firms when the credit markets are concentrated.

2.3.1.7 *Government Finance*

Government loans play a key role in influencing the capital structure decisions of firms. Government intervention is sometimes necessary, especially when credit markets reject profitable projects due to informational asymmetries (Stiglitz et al., 1993). These loans are crucial in this context, because information asymmetry is one of the defining characteristics of the Saudi market. State-owned banks and development finance institutions can provide industries that are underdeveloped with cheap financing in the presence of market imperfections (Yaron, 2004). Nevertheless, government intervention is not necessarily dependent on the existence of market failure (Yaron, 2004). Intervention in the credit market could be politically derived (La Porta et al., 2002). Benjamin et al. (2004) argue that development loan funds extend credit to businesses with the aim of furthering social objectives, such as economic growth, job creation and the promotion of businesses that do not harm the environment. However, Galindo and Micco (2004) demonstrate that private banks are more efficient than their state-owned counterparts at promoting growth and increasing leverage, especially for industries that have significant tangible assets that can be used as collateral, such as the manufacturing industry. Benjamin et al. (2004) contest such findings and emphasise that the overall benefits of such funds are sometimes difficult to quantify, due to their diversity.

Hence, government development loans are considered to be significant in influencing the capital structure decisions of firms in developing economies, such as Saudi Arabia, regardless of the efficiency of such loans. Therefore, the proposition is that government lending would constitute a significant determinant of the capital structure in the Saudi manufacturing industry.

Table 2.13: Studies on government finance and capital structure

Benjamin et al. (2004)	The authors investigate the implications of Community Development Financial Institutions (CDFIs), which include community development banks, credit unions, business and microenterprise loan funds and venture capital funds. The authors find that CDFI benefits differ between individual CDFIs. The authors report that CDFIs help promote economic growth, affordable housing, job creation and the overall health of companies.
Galindo and Micco (2004)	This study tests the efficiency of a different structure of bank ownership with regards to its ability to target manufacturing sectors that are in need of credit. More specifically, the authors look at the intervention of state-owned banks in the credit market, in order to deal with the problem of imperfect information. Using a sample of 652 observations from 1970 to 1990, the results show that government-owned banks do not help promote growth in industries that do not have collateral.
La Porta et al. (2000)	The authors analyse government ownership of large banks in 92 countries and find evidence to support the political rationale for the resource allocation of state owned banks.
Stiglitz et al. (1993)	The author examines the role of the government in the financial market. The authors also identify seven major market failures, which provide a possible rationale for government intervention. The authors provide a catalogue of government intervention, the objective of each intervention and the instruments each employs. Governments intervene in financial markets when information asymmetry exists. However, the authors report mixed evidence on the success of government intervention in credit markets.
Yaron (2004)	The author examines the reasons for establishing State-Owned Development Finance Institutions (SDFIs) and highlights the difficulties in assessing their performance and efficiency. The author argues that SDFIs often face high risk in the recovery of their loans due to high information asymmetry and political motivations, such as prioritising underdeveloped industries.

2.3.2 Non-Financial Stakeholders

A firm's non-financial stakeholder could influence the capital structure decision of a firm. Non-financial stakeholders, such as suppliers, customers and employees, do not have a direct ownership of the firm. However, they could play a crucial role in influencing capital structure decisions through their bargaining power and implicit claims. Further, governments could also have an influence on the value and capital structure of a firm through subsidies. Therefore, it is worth examining the possible considerations of non-financial stakeholders and their implications on capital structure decisions.

2.3.2.1 Government

The government, in terms of its influence on capital structure and corporate strategy, is not only limited to its role as a financial stakeholder. Rather, it could also exert influence through its role as a non-financial stakeholder. Governments often provide support in the form of subsidies to certain industries in order to protect and enable them to overcome initial competitive disadvantages and promote successful competition in the long run (Schwartz and Clements, 1999). Hence, government subsidies not only increase a firms' competitive advantage but can also have an influence on its capital structure decisions (Mitra and Webster, 2008).

Industries that are subject to subsidies face distorted competition in the product market (Chiang et al., 2008). According to Chiang et al. (2008), incumbents in some US industries, such as the telecommunication industry, receive favourable subsidies. Moreover, Mitra and Webster (2008) claim that the subsidies introduced to the US manufacturing industry that go to remanufacturers increase remanufacturing activities. Furthermore, Brander and Spencer (1985) demonstrate that export subsidies to firms in oligopolistic industries increase the profits of local firms. Accordingly, it can be argued that subsidies affect both firms' capital structures and competitive advantage. The availability of subsidies reduces the need for finance and help in increasing competitive advantage. This is particularly relevant in the context of this thesis,

as Saudi manufacturing firms receive fuel and land subsidies from the government (Peel, 2013). This implies that these firms would have lower fixed cost and that the need for finance would be reduced when subsidies are extended. Accordingly, subsidies are proposed to have a negative impact on leverage.

Table 2.14: Studies on government influence as a non-financial stakeholder on capital structure

Brander and Spencer (1985)	The authors assesses the effect of subsidies on the international markets. They argue that export subsidies can be an attractive tool for the nation that receives the subsidy, as they can improve the relative position of a domestic firm in non-cooperative rivalries with foreign firms, which enables the company to gain a market share and achieve higher profits.
Mitra and Webster (2008)	The authors examine the effect of government subsidies and analyse a two-period model involving a manufacturer who produces and sells a new product and a remanufacturer who competes with the manufacturer in the second period. The authors find that the subsidies increase remanufacturing activity. When 100% of the subsidy goes to the remanufacturer, its profits increase and the manufacturer's profits fall. When some of the subsidy is paid to the manufacturer, it creates an incentive for the manufacturer to design products that are suitable for remanufacturing.
Schwartz and Clements (1999)	The authors address a problem relating to the definition and measurement of subsidies, in addition to the reasons why government subsidies are used as a fiscal policy tool. The authors discuss the general economic effect and distributional implications. The authors use general government subsidy data for 60 countries from the United Nations' System of National Accounts (SNA) from 1975 to 1990. Subsidies can protect domestic industries against competitive disadvantages and promote long-term competition for firms. They also affect domestic resource allocation decisions, income distribution and structural adjustments.

2.3.2.2 Suppliers

Suppliers could influence a firm's capital structure through their bargaining power. Suppliers' bargaining power is measured by the amount of surplus that they can extract from the firm (Dasgupta and Sengupta, 1993). Several studies demonstrate that firms could use debt to reduce the bargaining power of suppliers (Bronars and Deere, 1991; Dasgupta and Sengupta, 1993; Perotti and Spier, 1993; Kale and Shahrur, 2007). By issuing debt, the firm commits to paying out a proportion of its surpluses to lenders and is able to limit the amount of surpluses that suppliers can extract (Dasgupta and Sengupta, 1993). Therefore, firms will carry more debt when the bargaining power of suppliers is strong (Dasgupta and Sengupta, 1993).

Perotti and Spier (1993) present a model in which a firm could use debt as a bargaining tool to reduce the claims of its suppliers by threatening to underinvest in projects that are essential for its survival if these contracts are not renegotiated. Kale and Shahrur (2007) relate the ability of a firm to use debt as a bargaining tool to supplier concentration. The authors suggest that, when supplier concentration is high, firms are at a bargaining disadvantage. However, when supplier concentration is low, firms can credibly threaten to forgo future relationship-specific investments and/or use debt to reduce the supplier's bargaining power. Therefore, the authors find a positive relationship between firms' debt levels and their degree of industry concentration, which supports the notion of debt being used as a bargaining tool. Similarly, Brown et al. (2009) demonstrate that leverage buyouts (LBOs) increase the bargaining power of a firm with its suppliers.

However, Sarig (1998) assumes that a firm's shareholders are more concerned about its financial health than its suppliers. Hence, they would not underinvest in projects that are essential for their survival. High debt would, therefore, reduce the bargaining power of a firm against its suppliers because of its weaker financial position. In this instance, a firm would adjust its capital structure by reducing leverage in order to be less vulnerable to threats by

powerful suppliers. Lower leverage would limit the bargaining power of suppliers and increase the amount of surplus available to the firm. Therefore, the author predicts that, when supplier bargaining power is strong, firms carry less debt. If suppliers of Saudi manufacturing firms are concentrated and their bargaining power is strong, firms would issue more debt. Hence, the proposition is that suppliers would have a significant influence on the capital structure decisions of Saudi manufacturing firms.

Table 2.15: Studies on suppliers' influence on capital structure

Brown et al. (2009)	The authors examine the issue of leverage buyout (LBOs) and the bargaining power of firms with their suppliers. The authors use a sample of 221 highly leveraged transactions proposed from 1980 to 2001. They find a positive relationship between leverage buyouts (LBOs) and the bargaining power of the firm with its suppliers.
Dasgupta and Sengupta (1993)	The paper looks at how firms can optimally use their debt to affect the outcome of bilateral bargaining with suppliers. The authors argue that debt may ease the underinvestment problem associated with the inability to write pre-commitment contracts. Firms can use debt to reduce the bargaining power of suppliers; the revenue allocated to suppliers will fall as the firms' leverage increases.
Kale and Shahrur (2007)	The authors examine the link between leverage and the characteristics of a firm's suppliers. Their research shows that relationship-specific investments with suppliers reduce leverage and demonstrate the positive relationship between debt levels and the degree of concentration of suppliers.
Sarig (1998)	The author examines the choice of capital structure and its effect on the bargaining position of its shareholders vis-à-vis its suppliers. High debt levels weaken the firms' bargaining power against suppliers.

2.3.2.3 Customers

Customers could also influence capital structure decisions through their bargaining power. Customers of highly leveraged firms become concerned about the level of quality and future products and services they receive, especially in periods of financial distress (Titman, 1984). The effect of bankruptcy is more pronounced for firms that market durable or unique goods as these firms impose certain irreversible costs on customers (Titman, 1984). One of the aims of the thesis is to test whether firms compromise the quality of their products during periods of economic downturn.

Moreover, Frank and Huyghebaert (2004) posit that customers account for the fact that bankruptcy can impose costs on them. The authors argue that those costs are dependent upon both the likelihood and the magnitude of the event. While the likelihood of bankruptcy is largely determined by the capital structure decisions of a firm and related aspects, such as debt ownership, maturity and covenants (Gilson et al., 1990), the scale of disruption to customers depends on direct switching costs and implicit costs (Cornell and Shapiro, 1987). Direct switching costs are related to the customer searching for a product or service that replaces the product or service provided by a bankrupt firm. Implicit costs, on the other hand, refer to aspects such as high quality or reliability provided by a firm's products that are not specified contractually but nevertheless are a very important part of the sale contract (Cornell and Shapiro, 1987). Titman (1984), therefore, argues that firms may want to avoid lower product pricing by actually adopting a more conservative leverage ratio. Hence, Saudi manufacturing firms that are concerned about customer bargaining power may carry lower leverage in order to avoid price concessions.

Table 2.16: Studies on customer influence on capital structure

Cornell and Shapiro (1987)	The authors examine the effect of implicit claims of non-financial stakeholders, including customers who expect continued services from the firm. The authors argue that customers would be reluctant to deal with highly leveraged firms due to the higher probability of bankruptcy and the discontinuation of services that they extend to customers.
Hillier et al. (2008)	The authors examine the impact of different non-financial stakeholders on capital structure. The authors argue that the probability for customers of highly leveraged firms to receive low quality products increases as the level of financial distress also increases.
Maksimovic and Titman (1991)	The authors analyse the effect and the implication of financial policy on the incentive of the firm to maintain its reputation as a producer of high quality products. The authors propose a model which shows that, in certain situations, the presence of debt will affect the firm's ability to offer high quality products, which will reduce its value. When firms have assets with high salvage value, the presence of debt may have a positive impact on their ability to offer high quality products.
Titman (1984)	The author models the impact of a firm's liquidation on its non-financial stakeholders. The author argues that customers will anticipate a reduction in the level of quality products/services in the event of liquidation. Therefore, firms would reduce their leverage in order to avoid price concessions.

2.3.2.4 *Employees*

Capital structure decisions can also affect the employees of a firm (Hillier et al., 2008). Highly leveraged firms are more likely to lay off employees than comparable firms with lower leverage (Hillier et al., 2007). In turn, employees of such firms would bargain for higher wages in order to compensate for the higher probability of lay off. Therefore, firms that are highly leveraged would have higher labour costs, as skilled employees can bargain for better contracts than in firms with low leverage (Sarig, 1998). Berkovitch et al. (2000) demonstrate that leverage is positively related to employee compensation. Hence, there will be a disincentive for the firm to increase its leverage if these labour costs are larger than the benefits of debt. Supporting this notion, Berk et al. (2010) point out that the human capital costs of financial distress are sufficient in discouraging leverage. The authors demonstrate that highly leveraged firms compensate their employees for the costs of financial distress by increasing their wages. Accordingly, it can be argued that there is a positive relationship between labour costs and leverage.

Contrary to the above, Bronars and Deere (1991) demonstrate that, when bankruptcy costs are assumed, the share of profits received by employees is negatively related to the firm's debt. Thus, the firm can use debt to reduce its surpluses and protect itself from the threat of union actions (Perotti and Spier, 1993). Several studies attest to the benefits of debt in strengthening the bargaining power of the firm against employees and reducing union threats (Dasgupta and Sengupta, 1993; Cavanaugh and Garen, 1997).

The literature concerning the impact of employees on capital structure assumes the existence of labour unions (Istaitieh and Rodriguez-Fernandez, 2006). However, labour unions do not yet exist in Saudi Arabia (Mellahi, 2007). Under Saudi labour law, it is unlawful to form or be a member of a labour union, and collective bargaining is illegal (Mellahi, 2007). Hence, this thesis aims to examine the influence of employees on capital structure in the absence of labour unions.

Table 2.17: Studies on the influence of employees on capital structure.

Berk et al. (2010)	The authors derive an optimal labour contract for a leveraged firm where perfect competitive labour and a capital market exist. In this model, the authors show that employees become entrenched and therefore face high human costs of bankruptcy. The authors postulate that wages should have significant explanatory power for firm leverage. In their model, the authors state that employees pay for the insurance provided by the labour contract by accepting lower wages. Hence, if all else remains equal, firms with higher leverage should be associated with higher wages. Thus, a firm's labour costs have a positive impact on its level of leverage.
Berkovitch et al. (2000)	The authors investigate the relationship between financial structure and managerial compensation. The authors consider a three-period model and show that managers of firms with risky debt are promised lower "golden parachutes" than those of firms that do not have risky debt. In addition, risky debt has an impact on the manager's wage if a labourer is retained by the firm. Employees of highly leveraged firms are more likely to be highly compensated than those with conservative leverage.
Bronars and Deere (1991)	The authors analyse the use of debt to protect the wealth of shareholders from the threat of unionisation. The presence of debt reduces the funds available for a potential union. Hence, the authors find that, in the presence of bankruptcy costs, employee compensation is negatively related to the firms' leverage. In addition, firms in more unionised industries use more debts.
Hillier et al. (2007)	The authors study the financial performance of UK listed companies adjacent to the announcement of permanent employee layoffs. They find that firms that have significant leverage are more likely to lay off employees than those with lower leverage.
Istaitieh and Rodriguez Fernandez (2006)	The authors present an overview of the literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. The authors find that union wages have a negative impact on the level of leverage a firm assumes. The higher the debt level, the lower the union optimal wage. The authors argue that more debt increases the chances of bankruptcy and could affect wage standards. This would put pressure on unions to lower their wage demands.

2.4 Capital Structure and Competitive Environment

Stakeholder theory implies that the overall competitive environment in which a firm operates affects its capital structure and corporate strategy (Hillier et al., 2008). Therefore, after considering non-financial stakeholders, it is important to consider the effect of competition on capital structure and corporate strategy.

2.4.1 Signalling Strategy

Adequate disclosure rules are required in order for firms to signal their financial and competitive position to the market. Studies postulate that the imposition of more stringent disclosure rules by governments can significantly reduce agency costs and information asymmetry and can protect unsophisticated investors (Leftwich, 1980; Healy and Palepu, 2001). Disclosure rules are sometimes reflected in financial statements through accounting standards, which help reduce the agency costs of the firm.¹³ According to Healy and Palepu (2001:412), “accounting standards regulate the reporting choices available to managers in presenting the firm’s financial statements”. The authors argue that stringent disclosure rules reduce information asymmetry and help protect unsophisticated investors. Similarly, Kothari (2001) demonstrates that regulated financial reports offer that is reflected through audited financial reports enables financial institutions to decide more accurately whether to advance a loan to the firm or decline it. Therefore, stringent disclosure rules are essential in reducing information asymmetry and enabling lenders and investors to accurately predict the value of a firm.

Moreover, disclosures about a firm’s capital structure could enable it to signal its financial position not only to creditors and investors, but also to competitors, especially when information asymmetry is significant (Klein et al., 2002). Istitieh and Rodriguez-Fernandez (2006) suggest that information that is revealed to capital markets through actions such as dividend payments is simultaneously

¹³ Financial statements are regarded as public goods because shareholders pay for their production while outside investors and competitors are given a ‘free ride’ regarding the use of such information.

revealed to uninformed agents, such as competitors. The authors argue that uninformed agents adapt their behaviour in accordance with the information that is revealed. Rival firms could take into account information that is revealed and adjust their capital structure decisions accordingly (Gertner et al., 1988). Firms are, therefore, cautious about revealing information that would adversely affect their competitive position. Moreover, Daves and Tucker (1993) find that more signalling occurs when market competition is high. Hence, when market competition and information asymmetry is high, the signalling function of debt assumes importance. In addition, Poitevin (1990) argues that the capital structure of highly leveraged incumbent firms is an effective deterrent to market entry, due to the signalling role of debt contracts. Accordingly, this thesis aims to contribute to the literature on the signalling function of debt in two ways. First, it tests whether disclosure rules are adequate in transmitting signals about a firm's value and financial position and establishes the level of information asymmetry that is present in the Saudi market. Second, it tests whether Saudi manufacturing firms actually use debt as a signalling tool in the presence of information asymmetry.

Table 2.18: Studies on financial signalling strategy

Daves and Tucker (1993)	The authors develop a model of a firm's decision to disclose information that affects its capital structure and competitive advantage. They posit that financial signals are positively related to market competition. The authors indicate that, in the presence of abnormal returns and information asymmetry, market competition may have a small effect on a firm's financial signals.
Healy and Palepu (2001)	The authors provide a framework for analysing managers' reporting and disclosure decisions in a capital market setting. They also review current literature on disclosure regulation, information intermediaries, and the determinant of corporate disclosure. They find that voluntary disclosure reduces information asymmetries among informed and uninformed investors. Also, stringent disclosure rules help in reducing agency costs and information asymmetry.
Klein et al. (2002)	The authors present a review of information asymmetry and the choice of debt vs. equity. They argue that information asymmetry is one of the main factors that influences a firm's choice between debt and equity. The authors emphasise the importance of debt as a signalling tool in the presence of information asymmetry by reviewing classical signalling models and extending them to pecking order models.
Leftwich (1983)	The author provides evidence of accounting measurement rules that are negotiated in private lending contracts. For some transactions, the negotiated rules are different from the regulated rules, which are based on generally accepted accounting principles (GAAP). For transactions that are not specifically mentioned in the privately negotiated rules, the regulated rules are acceptable. Hence, audited financial reports can enhance the credibility of the firm in negotiating private lending contracts.
Gertner et al. (1988)	The author analyses an informed firm's choice of financial structure when both capital markets and competitors observe the financial contract. Using a two-audience (informed and uninformed) signaling model, the authors show that rival firms take the actions of informed firms who indirectly reveal information through their capital structure into account.

Table 2.18: Studies on financial signalling strategy – continued

Istaitieh and Rodriguez-Fernandez (2006)	The authors present an overview of the literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. The authors find that competitors can use the information that firms reveal to the market and adjust their behaviour in the market place accordingly. Disclosure can have an adverse effect on competitive position.
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2.4.2 Market Timing

Market timing includes combatting competition when firms are vulnerable. It relates to different ways to attain cheap finance by assessing the economic cycle or the historical market values of the cost debt and equity (Baker and Wurgler, 2002; Istaitieh and Rodriguez-Fernandez, 2006). In combatting competition, it relates to how firms with conservative capital structures reposition their strategy to try and drive out firms that are heavily leveraged, especially during economic downturns. This is particularly relevant when other companies are trying to enter the industry. Market timing also relates to how firms can assess whether the debt or equity market is more favourable and which will have an impact on their capital structure.

Baker and Wurgler (2002) suggest that the capital structure decisions of firms are not determined by pecking order theory but instead originate from repeated attempts to time the markets. They find that the current capital structure is significantly related to historical market values. Hillier et al. (2008) argue that firms tend to issue equity when market valuations relative to book valuations are high and issue debt when market valuations relative to book valuations are low. Therefore, managers simply take advantage of market conditions to derive the maximum market value in the short term from their financing decisions (Welch, 2004; Huang and Ritter, 2009). In this way, external market shocks that affect the market value of a firm could influence capital structure decisions.

Moreover, Istaitieh and Rodriguez-Fernandez (2006) posit that financially strong (unleveraged) firms take advantage of economic downturns to position and price their products aggressively, thus driving their financially weaker (leveraged) competitors out of the market. This illustrates how market timing can be a channel through which debt relates to corporate strategies. Supporting this notion, Opler and Titman (1994) demonstrate that firms with high leverage are more prone to lose market share and have lower operating profits during recessions than their conservatively financed peers. Similarly, Chevalier and

Scharfstein (1995) and Dasgupta and Titman (1998) indicate that highly leveraged firms are vulnerable to predation from more conservatively financed peers during recessions.

Furthermore, Lambrecht (2001) finds that, in a market with bankruptcy costs and no taxes, the entry of firms into the market would depend on the financial position of incumbent firms. If incumbent firms were financially vulnerable, entrant firms would enter the market earlier. Firms exhibiting wisdom and foresight would thus evaluate market conditions carefully and time their capital structure decisions appropriately (Istaitieh and Rodriguez-Fernandez, 2006).

Nevertheless, different contractual arrangements can be used as a response to predatory strategies. Aghion and Bolton (1987) and Dewatripont (1988) argue that contractual relationships with non-financial stakeholders (such as employees, customers and suppliers) can be used to discourage the entry of new firms. In addition, Snyder (1996) suggests that contractual relationships with creditors can be used as a defence mechanism by entrant firms against the predatory practices of incumbent firms. Therefore, contractual relationships can be used as a defence mechanism for predation by both incumbent and entrant firms.

The two broad issues regarding market timing are summarised herein. First, firms with a conservative capital structure tend to reposition their strategy with the aim of driving out highly leveraged firms, especially in economic crises. In addition, new entrants will have easy access to the industry when incumbents have capital structures that are heavily leveraged. Secondly, market timing could be related to the economic cycle, historical market values and the relationship between market-to-book values. In timing the market, firms are more likely to issue equity when market-to-book valuations are high (leading to lower leverage) and issue debt when they are low (leading to higher leverage). This implies that the capital structure decisions may not be driven by pecking order theory but by the ability to time the markets. Accordingly, the thesis

intends to examine whether leverage exposes Saudi manufacturing firms to market volatility and predation in periods of economic downturn.

Table 2.19: Studies on market timing and capital structure

Baker and Wurgler (2002)	In their sample of COMPUSTAT firms from 1968 to 1999, the authors investigate the market timing decisions of firms and their relation to capital structure. The authors argue that the pecking order theory is irrelevant in deciding a firm's capital structure. Firms time their market when making capital structure decisions. They issue common stocks when the market values are high relative to both their past values and book values. Hence, the authors find that capital structure is the cumulative outcome of past attempts to time the equity market.
Dasgupta and Titman (1998)	The authors develop a model to investigate the relationship between leverage and prices and how capital structure affects competition in the product market. Their two-period model assumes that demand for a firm's product depends on its success in the first period. The authors state that firms that want to increase their leverage also consider the reactions of their competitors. A firm will be less willing to increase leverage if it believes that its competitor will respond by cutting prices. If, on the other hand, the competitor reacts by increasing their prices, the firm would increase its leverage.
Istaitieh and Rodriguez-Fernandez (2006)	The authors present an overview of the literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. They find that, during economic downturns, unleveraged firms that are financially strong aggressively position and price their products to drive out leveraged firms that are financially weak.
Lambrecht (2001)	The authors investigate the relationship between market entry, foreclosure and capital structure in a duopoly. The author finds that incumbent firms that are financially vulnerable make it easier for new entrant to enter the industry.
Opler and Titman (1994)	The authors analyse the impact of leverage on firms' market share and profitability. The authors find that firms that are in the top leverage decile in industries that experience a fall in output realise a reduction of 26 percent more than those in the bottom leverage decile. Thus, the indirect costs of financial distress are significant and positive. Moreover, during economic downturns, highly leveraged firms are more likely to generate lower profits and lose market share than firms with lower leverage.

2.4.3 Investment Strategy

The leverage decision of a firm has both direct and indirect influences on its asset acquisition and investment decisions, which in turn strongly influence its strategy (Hillier et al., 2008). Debt could induce under-investment or over-investment effects, which (both directly and indirectly) influence such strategic decisions (Hillier et al., 2008). In anticipation of an increase in investment by rival firms, a firm would increase its own leverage. Chevalier (1995) demonstrates that rivals react to the leverage decisions of their competitors by increasing their own leverage. Similarly, Kovenock and Phillips (1997) find a positive and significant relationship between the increase in leverage of a recapitalising firm and its rival firms' investment.

Brander and Lewis (1986) argue that the limited liability of shareholders implies that, if a firm declares it is bankrupt, then these shareholders get zero pay-off, but if the firm can make a fixed payment to creditors, then these same players are entitled to all the remaining profits. A direct consequence of this reasoning is that a leveraged firm's shareholders have an incentive to compete more aggressively and increase output soon after raising more debt. This, in turn, results a reduction in rivals' output (Clayton, 1999; Istitieh and Rodriguez-Fernandez, 2006). Hence, Istitieh and Rodriguez-Fernandez (2006) postulate that wise, foresighted firms anticipate these effects and choose debt contracts optimally prior to an investment decision, taking these factors into account. Therefore, prior to making an investment decision, a firm must consider its rivals' reaction to it and adjust its capital structure accordingly. This illustrates the inherent endogeneity characterising the capital structure-competitive environment linkage. Therefore, the thesis aims to investigate whether managers of Saudi manufacturing firms take their rival's investment decisions into account and appropriately adjust their capital structures.

Table 2.20: Studies on investment strategy

Chevalier (1995)	The author analyses the impact of prices after a leveraged buyout (LBOs). The author finds that prices are more likely to rise following LBOs in markets where the LBO firm's rivals have higher leverage. However, prices tend to fall following LBOs in markets in which rival firms have low leverage.
Clayton (1999)	The author develops a model that analyses the relationship between capital structure, investments, and product market decisions. The author shows that firms can use debt and investments as substitutes, especially when firms rationally increase their leverage. In addition, when firms compete on the basis of price in the product market, an increase in the leverage levels leads to lower investments and higher prices (less aggressiveness). Also, debt commits the firm to an aggressive output decision, which causes the firm's output to increase and the rival's output to decrease.
Kovenock and Phillips (1997)	The authors assess the capital structure and product market behaviour of firms. Their research focuses on whether an increase in leverage, through a leveraged buyout and recapitalisation, influences the investment decisions of recapitalising firms relative to their rivals. Using plant-level data from the Annual Survey of Manufacturers (ASM) from 1979 to 1990 and 8,214 total firm years, the authors find that capital structure affect a firm's behaviour because it conveys information about future investments made by the firm. Leverage increases the probability of closure by recapitalising firms and also leads to more aggressive behaviour by rival firms. Hence, rivals react to the leverage decision of the firm. As a firm increases its leverage, the investment of its rival also increases.
Istaitieh and Rodriguez-Fernandez (2006)	The authors present an overview of the literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. They find that shareholders of leveraged firms have a good reason to be more aggressive (by increasing output after raising non-negotiable long-term debt). This results in a reduction of the output of their rivals.

2.4.4 Competitive Aggressiveness

Overall, theories pertaining to the effect of debt on competitive aggressiveness cluster around two main views (Istaitieh and Rodriguez-Fernandez, 2006). The first is that, under certain conditions, debt will cause greater competitive aggression in firms in three main ways: output increases, due to Cournot competitive interactions; price-cutting moves in Bertrand-style competition; and increases in investment, leading to tougher competition (Brander and Lewis, 1986; Showalter, 1995, 1999). However, under certain other conditions, debt will cause less aggressive behaviour among firms for these reasons: output decreases, due to Cournot competitive interactions; price-rising moves in Bertrand-style competition; and a decrease in investment, leading to softer competition (Chevalier, 1995; Chevalier and Scharfstein, 1995, 1996; Glazer, 1994; Lambrecht, 2001; Phillips, 1995).

Hillier et al. (2008:618) posit that, “a firm’s leverage ratio will also affect the strategies of its competitors”, which could lead to more aggression through predatory pricing behaviour. Bolton and Scharfstein (1990) suggest that, in many product-market situations, a highly leveraged firm may be vulnerable to predation from its more conservatively financed peers. It is thus asserted that the latter might deliberately lower prices to levels that drive the margins of the leveraged firm so low that it is forced to declare bankruptcy or quit the market. Campello (2003) investigates whether debt leads to losses in certain periods of the business cycle, determining that, during demand busts, firms that are highly leveraged lose market share in relatively low-debt industries. Therefore, these firms are more exposed to predation. However, the author claims that these competitive dynamics are unnoticed in highly leveraged industries. This implies that, if firms in the Saudi manufacturing industry were highly leveraged, strategy would be of no relevance. However, if they were conservatively leveraged, competitive considerations would assume importance.

According to Maksimovic (1990), firms that obtain favourable loan commitments from lenders have greater incentives for more aggressive competition. A bank

loan commitment might increase the value of the borrower firm and send a clear strategic signal about its ability to respond more aggressively to a rival firm's increase in output (Istaitieh and Rodriguez-Fernandez, 2006). This implies that firms that have strong relationships with creditors and are able to obtain loan commitments are less vulnerable to predation.

Chevalier (1995) studies the impact of rival leverage on capital structure and pricing decisions, as well as predation. The author suggests that, post LBO (leveraged buy-out), a firm's prices are higher than those of less leveraged rival firms. The author also finds that prices fall for low leveraged rivals, but they increase for highly leveraged rivals.¹⁴ Accordingly, conservatively leveraged rival firms react to an increase in leverage of another firm by competing more aggressively, Conversely, highly leveraged rival firms respond to an increase in leverage of another firm by competing less aggressively. Therefore, if higher leverage leads to a situation where a Saudi manufacturing firm is more exposed to bankruptcy, it would choose to compete less aggressively.

Accordingly, the relationship between capital structure and competitive aggressiveness is two-directional (Istaitieh and Rodriguez-Fernandez, 2006). In a one-directional effect, higher leverage increases the vulnerability of firms and encourages them to follow a less aggressive competitive behaviour, leading to softer competition. In the other effect, when firms determine their leverage, they consider the softness of the competition and decide to have high levels of debt. Therefore, the thesis intends to address the two-directional relationship between capital structure and competitive aggressiveness for Saudi manufacturing firms.

¹⁴ Higher leverage reduces the probability of survival (Zingales, 1998) and makes firms less aggressive (Khana and Tice, 2000).

Table 2.21: Studies on competitive aggressiveness and capital structure

Bolton and Scharfstein (1990)	The authors present a theory of predation based on agency problems in financial contracting. They argue that optimal financial contracts must take into account the predatory threats of rival firms by balancing the benefits of deterring predation and agency costs.
Campello (2003)	The author provides evidence of the effect of capital structure on product market outcomes, using a panel of 128,133 firm-quarters distributed across 71 three-digit SIC industries during the period 1984-1996. The author finds that leverage has a negative impact on sales growth in industries in which rivals are relatively unleveraged during recession but not during boom periods. However, for firms that compete in high-debt industries, no such effects are observed.
Chevalier and Scharfstein (1996)	The authors analyse the link between capital-market imperfections and countercyclical markups. They also analyse how liquidity constraints can impact pricing behavior. Using a sample of 100 observations from 1985 to 1987, the authors find that, during recession, output prices increase relative to wages and raw material input prices. This illustrates that imperfectly competitive firms compete less aggressively during recessions. Also, firms that are financially constrained raise their prices relative to less financially constrained firms.
Dotan and Ravid (1985)	The authors study the interaction between optimal leverage of investment and debt financing. Their research develops a model in which firms facing an uncertain price must decide on their optimal level of debt and investments. They also show that firms make decisions on investments strategy and optimal financing simultaneously. The authors show that an increase in price would cause investment to increase and optimal debt to decrease.
Istaitieh and Rodriguez-Fernandez (2006)	The authors present an overview of literature that links factor product markets and capital structure. They relate modern financial theory to industrial organisation, stakeholder theory and firms' strategic management. Firms that obtain favourable loan commitments from lenders are more likely to respond to the action of their rivals' aggressive behaviour.
Khanna and Tice (2000)	The authors study how firm and market specific characteristics influence incumbent firms' response to new firms that enter their local market in the retail industry. Using data from discount department stores in the US, they find that larger and more profitable incumbents respond more aggressively to new entrants. Incumbents that are highly leveraged respond less aggressively to new entrants.

Table 2.21: Studies on competitive aggressiveness and capital structure – continued

Lambrecht (2001)	The author investigates the relationship between market entry, foreclosure and capital structure in a duopoly. The author also investigates market entry and finds that incumbents that are vulnerable due to their leverage level create a situation in which new entrants can quickly come into the industry.
Maksimovic (1988)	The author analyses the effect of competitive environments on capital structures in the context of a model of repeated oligopoly. The author produces a model that explains how capital structure determines the type of equilibrium (Cournot or collusive) in the product market. The author shows that the debt-to-equity ratio is likely to be high for firms in a concentrated industry, and leverage is expected to be low in a moderately concentrated industry.
Maksimovic (1990)	The author shows a model of competitive banks that demonstrates that the characteristics of loan contracts are affected by product market imperfections in the industry of the borrower. The model explains the value of loan commitments to the firm. The author shows that loan commitment permits the firm to be more aggressive by producing more quantity than is necessary in response to a rival's output decision.
Poitevin (1989)	The author assesses the financial signaling and the "deep-pocket" arguments between the incumbent firm and new entrant. The author looks at a model in which the entrant's and the incumbent's financial structures are endogenous. The model stipulates that both firms have to finance a fixed expenditure before production starts, assuming that, in equilibrium, the incumbent is equity financed, but the new entrant must issue debt to signal its quality to investors. The author shows that the difference in the capital structure between these two firms would provide an incentive for the incumbent to engage in aggressive predatory practices, such as price wars, in order to exhaust the finances and cause the entrant to be bankrupt.
Showalter (1999)	The authors analyse the use of strategic debt and price competition, using a sample of 1,641 manufacturing firms obtained from COMPUSTAT from 1975 to 1994. The author uses a cross-sectional firm-level linear regression model and finds that the average debt-to-asset ratio is approximately 25% percent. The maximum value of debt-to-asset is 236.3%, which implies that some firms have more debt than assets in their capital structure. Hence, the author concludes that strategic debt use and price competition is widespread in their sample of manufacturing firms. Demand uncertainty has a significant effect on leverage, and cost uncertainty has a significant negative impact on leverage.

Table 2.21: Studies on competitive aggressiveness and capital structure – continued

Stenbacka (1994)	The author uses a model to investigate the effect of debt on reducing tacit collusion in the oligopolistic industry (in the context of infinitely repeated Bertrand competition) and how debt can be used as a strategic tool by incumbents. The author shows that the optimal financial structure of an oligopolistic industry greatly depends on the relationship between the negative incentive effect and the tax savings effect of debt financing relative to equity financing. Debt reduces the ability to sustain tacit collusion due to the negative incentive effect of debt. To overcome this incentive, an oligopolistic industry must reduce prices. This, in turn, will reduce profits. The author also shows that debt could be used as a strategic mechanism by an incumbent cartel to make it difficult for potential entrants to penetrate the market.
Zingales (1998)	Using a sample of all Interstate Commerce Commissions (ICC) filing in the US from 1976 to 1985, the author looks at the effect of pre-deregulation levels of leverage and their impacts on the survival of firms in the trucking industry. After controlling for various measures of inefficiency in the industry, highly leveraged firms are less likely to survive the de-regulation shock. The author finds the mean leverage level to be 40%, with a median of 35%. High levels of leverage have a negative effect on a firm's survival because of price reduction and a decline in investments. In addition, the author finds that, from 1982 to 1984, higher leverage resulted in an aggressive reduction in the price.

2.5 Summary

The analysis of the literature began by examining different determinants of capital structure. The literature pointed to the significance of taxation in influencing capital structure decisions. Studies emphasised the importance of tax regimes in impacting firms' leverage positions (Ozkan, 2001; Gaud et al., 2005; Faulkender and Petersen; 2006). Al-Ajmi et al. (2009) demonstrate that *zakat* is, in fact, a significant determinant of capital structure in their sample of Saudi Arabian firms. In addition, capital structure decisions are influenced by the nature of the industry in which a firm operates. This review demonstrated that firms in the same industry have similar debt levels (Van de Wijst et al., 1993, Hall et al., 2000).

However, other scholars argue that industry effects are irrelevant. Instead, firm-specific characteristics better explain capital structure decisions (Rajan and Zingales, 1995; Myers, 2001; Aivazian, 2010). Accordingly, firms in industries with significant tangible assets, such as the manufacturing industry, tend to carry more debt. Pecking order theory suggests a negative relationship between profitability and leverage (Myers and Majluf, 1984). Studies on the Saudi market have demonstrated that firms with higher profitability have lower leverage (Omet and Mashharawe, 2003; Al-Ajmi et al., 2009). Moreover, according to pecking order theory, larger firms exhibit lower information asymmetry and risk of bankruptcy and are therefore able to carry more debt. Studies on the Saudi market report a positive relationship between size and leverage (Omet and Mashharawe, 2003; Al-Ajmi et al., 2009). Additionally, based on the analysis of the literature, the prediction is that risk would have a negative impact on leverage (Minton and Schrand, 1999; Al-Ajmi et al., 2009).

Following this, the review then examined the literature that relates corporate strategy to capital structure. The analysis indicated that debt could lead to conflicts between equity and debt holders (Jensen and Meckling, 1976; Myers, 1977). The thesis intends to address whether debt would cause manufacturing firms to overinvest in risky projects. In contrast, others have argued that debt

can be used to mitigate agency problems that arise between managers and equity holders (Brander and Lewis, 1986; Jensen, 1986). Accordingly, the thesis aims to assess whether the use of debt is motivated by Saudi manufacturing firms' need to discipline management.

Further, the review indicates that the different ownership structures of the firm could impact corporate attitudes towards leverage. The thesis intends to address how different ownership structures relate to manufacturing firms' capital structure decisions. The literature points to family-owned firms seeking debt in order to avoid diluting their equity shareholding (King and Santor, 2008). Studies on the Saudi market, however, show that the relationship is negative (Al-Ajmi et al., 2009). In addition, the prediction is that government ownership would have a positive relationship with leverage, as banks and government lending institutions arguably favour such firms (Allen et al., 2005). Nonetheless, while Al-Ajmi et al. (2009) demonstrate a positive relationship between institutional ownership and leverage, the prediction is that firms with institutional ownership are likely to carry less leverage since they reduce information asymmetry and replace the monitoring effect of debt (Michaely and Vincent, 2012).

One of the aims of the thesis is to address the gap in the current literature on the determinants of capital structure by incorporating the impact of relationship banking and government lending on manufacturing firms' leverage positions. Through the examination of studies on lending environments, the review indicated that firms with strong banking relationships are more likely to carry debt (Gonzales and Gonzales, 2008). The credit market could also include government lending institutions. Studies on the significance of government lending institutions on capital structure indicate that governments extend more loans to underdeveloped industries when credit market imperfections penalise these industries, due to information asymmetry (Yaron, 2004). Thus, government lending could positively impact firms' capital structures.

However, the government has an influence on capital and corporate structure both as a financial and non-financial stakeholder. One of the aims of the thesis is to address the gap in the literature on the determinants of capital structure by accounting for non-financial stakeholder influences on capital structure. Government subsidies extended to firms in the Saudi manufacturing industry help reduce their need for external finance and promote their competitive advantage (Mitra and Webster, 2008; Peel, 2013). Other financial stakeholders—such as suppliers, customers and employees—could also influence a firm's capital structure through their bargaining powers (Titman, 1984; Kale and Shahrur, 2007). However, labour unions do not exist in Saudi Arabia. Therefore, it would be of interest to test the applicability of this theory in this context.

The literature finally examines studies on capital structure and corporate strategy in the product market. The thesis aims to examine the extent to which competitive environments relate to the capital structure decisions of Saudi manufacturing firms. The review emphasises the importance of disclosure rules and the signalling function of capital structure decisions in the presence of information asymmetry (Healy and Palepu, 2001; Klein et al., 2002; Istitieh and Rodriguez-Fernandez, 2006). Accordingly, this thesis aims to contribute to the literature on the signalling function of debt in two ways. First, it tests whether disclosure rules are adequate in transmitting signals about a firm's value and financial position. Second, it tests whether Saudi manufacturing firms actually use debt as a signalling tool.

Studies on market timing influences on capital structure show that capital structure decisions may not be driven by pecking order theory, but by the firm's ability to time the market (Baker and Wurgler, 2002). Other studies indicate that firms time the markets in order to take advantage of periods of economic downturns, during which highly leveraged firms are vulnerable (Istitieh and Rodriguez-Fernandez, 2006). The thesis aims to test whether managers of Saudi manufacturing firms take their rival's financial and investment decisions

into account and appropriately adjust their capital structure. Further, Istaitieh and Rodriguez-Fernandez (2006) indicate that the relationship between capital structure and competitive aggressiveness is two-directional. The analysis of the literature demonstrates that manufacturing firms with strong banking relationships are more able to obtain loan commitments (Maksimovic, 1990). Hence, they are less vulnerable to predation and more likely to respond to aggressive competitive behaviour from their rivals. However, higher leverage leads to a situation where a Saudi manufacturing firm is more exposed to market volatility, and the anticipation of this would lead to softer competition. Therefore, the thesis aims to assess whether managers of Saudi manufacturing firms recognise the implications of capital structure decisions of rival firms and whether it leads to higher or lower aggressiveness in competition.

Figure 2.1 provides the conceptual theoretical framework to illustrate the relationship between corporate strategy and capital structure that was adapted from La Rocca et al. (2008). The developed theoretical framework, which relates to Saudi Arabian manufacturing firms, is illustrated in Figure 3.1 in Chapter 3.

Figure 2.1 shows a line under the main headers and single or double arrowed lines. The framework shows that corporate strategy and capital structure are influenced by financial stakeholders (equity and debt holders) and non-financial stakeholders (government, suppliers, customers and employees). In addition, the determinants of capital structure (tax, nature of assets, size, industry target, profitability and risk) are also included in the theoretical framework.

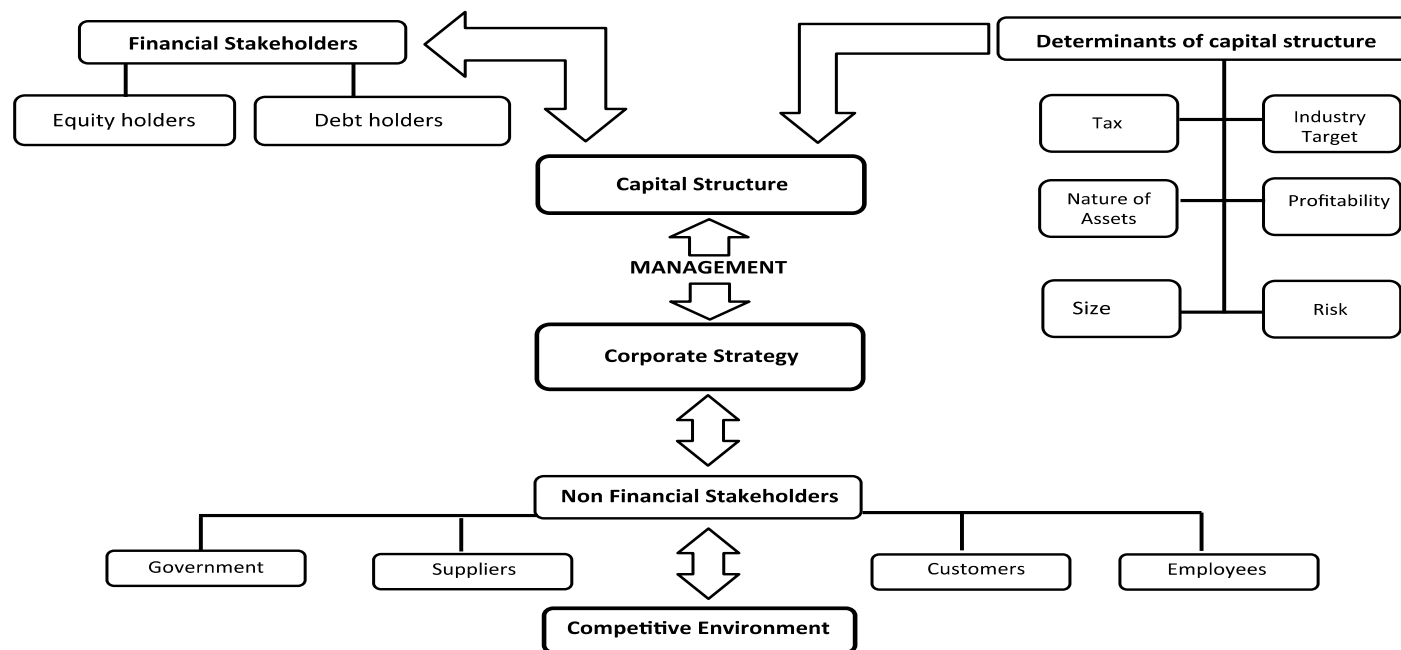
The single lines show the composition of the key factors. For instance, the two single lines under financial stakeholders indicate that the equity holders and debt holders are the two financial stakeholders considered in the theoretical model. The same applies to non-financial stakeholders and determinants of capital structure.

The double arrows illustrate that the variables are correlated (even though there is also the possibility of a one-directional relationship), and one can influence

the other, and vice versa. The double lines between financial stakeholders and capital structure imply that the levels of debt and equity determine the firms' capital structure. However, the capital structure decision of the firm, influenced by the firm's corporate strategy, could affect a firm's debt and equity proportions. For instance, a corporate strategy that calls for a change in product aggressiveness could imply that the level of debt has to change, which would affect the capital structure of the firm.

In addition, the double arrows between corporate strategy and non-financial stakeholders imply that non-financial stakeholders, if influential, can have a direct impact on the firms' corporate strategy. However, if the firms' corporate strategy, via management, is influenced by financial stakeholders, then this would have implications for non-financial stakeholders.

Figure 2.1: Theoretical Conceptual Framework



Adapted from La Rocca et al. (2008)

Chapter 3: Saudi Context

3.1 Saudi Arabian Background

The Saudi Arabian economy is oil-rich, with oil revenues accounting for 58% of its Gross Domestic Product (GDP) in 2011 (SAMA, 2013). The Kingdom possesses around 18% of the world's proven oil reserves (OPEC, 2013). It is also the world's largest exporter of oil. The Kingdom's GDP in 2011 was \$557 Billion, the highest of all OPEC members (OPEC, 2013). The rise in oil prices in recent years and government stimulus policies for the non-oil sector have played a key role in strengthening the Kingdom's economic position, with GDP growing by 7.1% in 2011 (SAMA, 2013).

Table 3.1: Fact Sheet on The Kingdom of Saudi Arabia

Population (million inhabitants)	28.17
Land area (1,000 sq. km)	2,150
Population density (inhabitants per sq. km)	13
GDP per capita (\$)	20,505
GDP at market prices (billion \$)	577.69
Value of exports (billions \$)	360.09
Current account balance (billion \$)	141.09
Proven crude oil reserves (billion barrels)	265.41
Proven natural gas reserves (billion cu. m.)	8,151
Crude oil production *(1,000 b/d)	9,311
Marketed production of natural gas (billion cu. m.)	92.26
Refinery capacity (1,000 b/d)	2,107
Output of petroleum products (1,000 b/d)	1,856.7
Oil consumption (1,000 b/d)	2,714
Exports of petroleum products (1,000 b/d)	902.2

Source: OPEC Annual Statistical Bulletin 2012

With government policies that aim to stimulate the non-oil sector, the Kingdom's non-oil sector grew by 5.1% in 2011 (SAMA, 2013). Table 2.2 provides a summary of the outlook from OPEC in 2012. According to the Saudi Arabian Monetary Agency (SAMA) in its 2013 annual report, the contribution of the private sector to GDP was 25.6% in 2011, while the contribution stemming from the government sector to GDP was evaluated at 16.4%. The manufacturing industry rose by 4.4%, contributing as much as 12.6% to GDP (SAMA, 2013).

This highlights the significance of the manufacturing industry in Saudi Arabia.

Manufacturing firms are defined for the purposes of this thesis as firms listed in the Saudi Arabian stock market (Tadawul) that are manufacturing-based or have a manufacturing arm (see Appendix 1 for list of manufacturing companies used in this thesis). Manufacturing firms are chosen from different sectors (petrochemical, food, industrial investment and cement), owing to the fact that these companies receive substantial government support through financing institutions, such as the Public Investment Fund (PIF) and the Saudi Industrial Development Fund (SIDF). The government has sought to provide further incentives for this industry in lower growth cities, which are as follows.

Table 3.2: Summary of SIDF Classification of Economic Cities

Category	City	Maximum loan term	SIDF loan percentage
First Category	Including the major cities of Riyadh, Jeddah, Dammam, Jubail, Makka, Yunbo and Ras Al-Khair	15 years	50%
Second Category	Including the cities of some economic advantages, namely Qassim, Al-Ihssa, Rabigh, Taif, Kharj Industrial City, Sudair Industrial City and Madinah, (except Yunbou)	20 years	60%
Third Category	Including economically less developed cities, such as Hail, Northern borders, Tabouk, Jizan, Najran, Al-Baha and Assir	20 years	75%

Source: *sidf.gov.sa*

The capital provided by the SIDF can account for as much as 75%, with a maximum loan term of up to 20 years. Manufacturing projects established in lower growth (third category) cities receive up to 25% more SIDF financing than those established in major cities (first category). These figures indicate, strongly, that the location of manufacturing projects would have a significant bearing on, and relevance to, capital structure formations. Firms that take full advantage of SIDF loans, by locating their projects in economically less developed cities, tend to benefit from greater access to government finance. This, they are able to reduce the cost of debt accrued, while achieving higher

leverage. The above account is central to the thesis hypothesis and offers a basis on which to assess and explore (with reference to empirical support) the manner and extent to which Saudi manufacturing firms can be shown to be heavily debt-financed, with government loans dominating their capital structures.

Moreover, the government of Saudi Arabia has set further incentives to the manufacturing industry in the form of government investment funds. Particularly relevant to the manufacturing industry is the Public Investment Fund (PIF). The PIF provides support either through lending or through equity participation. Furthermore, the PIF has established new companies, which are fully owned by the fund, including the Saudi Stock Exchange (Tadawul). Government support can therefore take the form of equity ownership of the firm. Beyond this, the government provides manufacturing firms with fuel subsidies that help enhance and promote their competitive advantage. However, in 2013, the government rolled back this program due to an increase in government subsidy bills. Importantly, the government has begun to revise its fuel subsidies, particularly in the context cement and petrochemical sectors (Peel, 2013). This thesis, therefore, aims to investigate, assess and address the manner in which government support influences capital structures, as well as the corporate strategies of Saudi manufacturing firms, principally (for the purposes of this thesis research focus) through the use of loans, equity participation and subsidies.

In addition to government finance and support, firms can seek external funds from commercial banks. The banking system in Saudi Arabia represents a mixture of conventional banking and *Shari'a* compliant Islamic banking (Al-Ajmi et al., 2009). Bank finance dominates the debt market and can be contrasted with the secondary market for sukuk (Islamic bonds) which, to date, remains minimal and underdeveloped (Al-Sayari, 2003; Al-Ajmi et al., 2009). The banking sector has, nonetheless, shown considerable growth, reflecting broader trends in the Saudi economy during the period of 2008-2011 (SAMA,

2013). The banking sector also managed to insulate itself from the broader shocks of the global financial crisis, including the debt crisis of the Eurozone (SAMA, 2013). According to SAMA (2013), the growth in bank deposits (for the private and public sectors) is mainly attributed to the increase in net domestic government expenditure. There were 23 commercial banks operating in the Kingdom as of 2011 (SAMA, 2013). This implies a high level of commercial banking concentration. When considering the lending behaviour of banks, the SAMA (2013) report shows that short-term, medium and long term lending have increased, but the increase is significantly larger for long-term lending. This provides evidence to support the claim that banks are more willing to provide loans, especially long-term loans to private sectors. The report also shows that the manufacturing industry received 13.5% of total bank credit extended to the private sector as of 2011, which is the second highest share of credit (the commerce industry is the first highest) (SAMA, 2013). The above findings indicate that, while industries with tangible assets are more likely to obtain significant loans from banks, those with fewer tangible assets (such as the services industry) obtain relatively more meager amounts.

The Capital Market Authority (CMA) is responsible for regulating and developing the Saudi capital market. A total of 150 firms were listed in the Saudi Stock Exchange (Tadawul) by the end of 2011 (SAMA, 2013). Such listed firms are obliged to abide by the disclosed rules of the Saudi Organization for Certified Public Accountants (SOCPA). Pertinently, Iqbal (2012) contends that, compared to the International Financial Reporting Standards (IFRS), the disclosure rules in Saudi Arabia are relatively less stringent and onerous. The objective of SOCPA is full convergence with the IFRS and, currently, SOCPA is modelling its accounting standards on those of the IFRS. The global financial crisis has further strengthened the case for greater convergence of global financial reporting standards. However, it should be noted that differences still exist between the two in major areas. For instance, under the IFRS, there is a presumption that application of IFRS would lead to fair presentation, but that is not the case under SOCPA accounting standards. Also, International

Accounting Standards 1 (IAS 1) require companies to make specific disclosures for departures from the IFRS, but this is not required under SOCPA. In addition, IAS 1 requires disclosure of critical judgments made by management in applying accounting policies, another requirement that is absent under the terms of the SOCPA. Therefore, this thesis aims to address the consequences of less stringent disclosure rules and their implications on capital structure decisions and, additionally, the strategies of manufacturing firms.

Capital structure considerations are also influenced by the Islamic finance culture that drives the Saudi economy (Al-Ajmi et al., 2009). Saudi Arabia is characterised as an Arab Islamic state. Therefore, the Holy Qur'an and the traditions of the Prophet Mohammed (peace and blessings upon him) define its constitution. Islamic *Shar'ia* law governs Saudi Arabia's legal system. Bankruptcy laws based on the Bankruptcy Preventive Settlement Law (1996) remain, to many observers, uncertain and unclear (Markaz Research, 2013). Debtors and creditors are expected to settle any disputes with each other. When a consensual resolution to a given dispute cannot be achieved among the parties, a court will decide on the settlement based on *Shari'a* laws (Markaz Research, 2013). Therefore, the absence of strict bankruptcy laws could have significant implications on firms' attitudes towards risk. Additionally, unclear bankruptcy laws make it difficult to assess the costs associated with financial distress (Markaz Research, 2013). In addition, the Saudi legal system prohibits the formation of labour unions, and collective bargaining is illegal (Mellahi, 2007).

The Islamic financial system is dedicated to the elimination of payments and receipt of interest (or *riba*, in all its forms) (Hassan and Lewis, 2007). In this way, it differs significantly from the main financial tools and instruments on which western financial systems are typically founded. As a consequence, the concept of "Islamic banking" was born. The Saudi Arabian Monetary Agency (SAMA) is responsible for monitoring and regulating financial institutions in Saudi Arabia. The banking system in Saudi Arabia constitutes a complex

combination of conventional banking and *Shari'a* compliant Islamic banking, the latter stipulating that interest is prohibited. There are five strict rules that define *Shari'a* compliance or compliance with Islamic Law (Lewis and Algaoud, 2001). These are summarised in Table 3.3 below.

Table 3.3: Rules of *Shari'a* Compliance

1. *Riba* is prohibited in all transactions, which implies the prohibition of interest.
2. Business and investment must comprise solely *halal* (legal, permitted) activities. Therefore, Islamic banks cannot finance activities or items that are *haram* (forbidden), such as the trade of alcohol and pork meat.
3. *Maysir* (gambling) is prohibited, and transactions must be free from *gharar* (speculation or unreasonable uncertainty). Moreover, the element of speculation, *gharar*, involving excessively risky activities, is strictly prohibited. Examples of this include short-selling, speculative businesses and trading in futures on the stock market.
4. *Zakat* is a compulsory levy that constitutes one of the five basic pillars of Islam and amounts to 2.5% on assets held for one full year; it is to be paid to benefit society.
5. All activities should be in line with Islamic principles, and a *Shari'a* board is to be appointed to supervise and advise on the propriety of transactions.

All Islamic banks and banking practices must conform to the aforementioned rules. Accordingly, Islamic banks provide financing through equity-participation structures and short-term facilities, thus helping to align the interests of stakeholders. This, in turn, assists in the reduction of agency costs (Mirakhor and Zaidi, 2007). There are a certain number of basic financial contracts that are acknowledged to be *Shari'a* compliant by most *Shar'ia* boards. These structures include profit and loss sharing contracts, such as *musharaka* (partnership) and *mudaraba* (joint venture); rent contracts, such as *ijara* (leasing); deferred payment or sales structures, such as *murabaha* (cost-plus financing); *bai al salam* (advanced purchase); and *bai bi-thamin ajil* (deferred payment financing) (Mirakhor and Zaidi, 2007). Examples of such contracts are shown in Table 3.4 below.

Table 3.4: Financial Contracts that are *Shari'a* Compliant

1. *Musharaka* (partnership) contracts are the preferred mode of financing, due to their close adherence to the principles of profit and loss sharing. In these contracts, partners contribute capital to projects and profits are shared between partners on a pre-agreed-upon ratio, whereas losses are shared in the exact proportion to the capital invested by each party.
2. *Mudaraba* (finance by way of trust) is a partnership agreement in which one partner (*rab al-mal*) finances the project, while the other (*mudarib*) manages it. Profits are distributed according to a fixed, predetermined ratio.
3. *Murabaha* (cost-plus financing) contracts are observed to be very close to conventional banking operations. In such contracts, the bank agrees to buy goods or assets from a third party and then resells them to its client with a mark-up.
4. *Ijara* (leasing) is like a conventional lease. It is the sale of *manfa'a* (the right to use goods) for a specific period. In this contract, the bank buys and leases out an asset for a rental fee, and the ownership risk and responsibility of maintenance and insurance rests with the bank for a predetermined period.
5. *Bai Al Salam* (advance purchase) is the purchase of goods for forward payment.
6. *Bai bi-thamin ajil* (deferred payment financing) is a contract that involves a credit sale of goods on a deferred payment basis. The bank purchases a contract to buy goods on a deferred payment basis and sells the goods back to the customer at an agreed-upon price.
7. *Istisnaa* (commission manufacture) is a contract that is similar to *bai bi-thamin ajil*. However, in this contract, one party agrees to buy the goods, and the other undertakes to manufacture them according to agreed-upon specifications. According to Mirakhor and Zaidi (2007), this type of contract is frequently used to finance construction and manufacturing projects.
8. *Sukuk* (participation securities) are the Islamic banking alternative to a bond. While the interest rate is at the core of the bond issuance and trading in conventional banking systems, *sukuk* are structured in such a way that the issue is based on the exchange of an asset for a specified financial consideration.

The aforementioned contracts provide an example of different ways in which Islamic banks can operate in a *Shari'a* compliant manner, even in the absence of interest. Mirakhor and Zaidi (2007) posit that the profit-sharing concept of these contracts promotes greater stability in financial markets. In addition to providing finance, the structure of these contracts helps to reduce and mitigate agency problems. Specifically, agency theory argues that debt might be useful to the extent that it mediates and tempers agency conflicts. Relevant reasons for this tempering function may be attributed to a variety of factors, including: the role debt plays in binding the firm (by compelling it to make periodic payments, both of interest and principal); constraints on managers from consuming perks; and the need for organisations to become more efficient,

thus, reducing the probability of bankruptcy (Jensen, 1986). Along these lines, Mirakhor and Zaidi (2007) argue that an extension of this concept could be drawn from Islamic finance contracts, specifically through invocation of relevant principles, such as *ijara sukuk*, based on leased assets. The *ijara sukuk* are securities of equal domination of each issue, representing physical durable assets tied to an *ijara*, or lease contracts. Similarly, the authors claim that *mudaraba* or *murabaha sukuk* can be structured to reduce the 'gambling for resurrection' attitude that some managers have, especially when close to bankruptcy, by aligning the interests of both parties. Accordingly, *Shari'a* compliance provides a strategic advantage in reducing agency costs.

Moreover, one of the key elements in Islamic finance is the payment of 'charity tax' or *zakat*.¹⁵ In the Kingdom, there are no income taxes levied on local firms. Instead, these firms pay a 2.5% 'charity tax' or *zakat* on unused wealth over an Islamic calendar year (Al-Ajmi et al., 2009). The Department of *Zakat* and Income Tax (DZIT) is responsible for managing and enforcing the payment of *zakat* and income tax. The tax due must be paid within three months of the taxpayer's year-end. Penalties are imposed for non-registration, failure to file a tax return, delays in payment, and evasion (KPMG, 2012). Saudis pay the *zakat* on their share of the *zakat* base, while non-Saudi shareholders pay income tax on their share of taxable income (Al Sakran, 2001). If the *zakat* base is negative or lower than the adjusted net income for the year, *zakat* is imposed on the adjusted net income. However, if both are negative, no *zakat* is due (Al Sakran, 2001; Al-Ajmi et al., 2009).

In the presence of a minimal tax advantage of debt, corporate finance theories suggest that there would be no appreciable difference in terms of choosing between debt and equity (Barakat and Rao, 2004). The manner in which *zakat*

¹⁵ According to Al Sakran (2001), the *Zakat* Base = (share capital + retained earnings or accumulated deficit + Saudi Industrial Development Fund and Public Investment Fund loans + long term loans + notes payables and advances if used to finance fixed assets + adjusted net income for Saudi income tax and *zakat*) - (net fixed assets + properties under construction + dividends distributed during the year not exceeding retained earnings at the beginning of the year + investments in other Saudi companies + Saudi government bonds + adjusted deficits).

is calculated implies that long-term loans are included in the *zakat* base and, therefore, do not provide a tax advantage. The unique tax structure in Saudi Arabia provides grounds for testing the applicability of corporate finance theories in the context of the Saudi manufacturing industry.

3.2 Summary

The characteristics of the Saudi economy and its manufacturing industry provide a unique context for testing corporate finance theories on capital structure, as well as theories that relate capital structure to corporate strategies. The distinct features that have come to characterise the Saudi manufacturing industry offer the ‘contextual’ grounds for testing the above discussed theoretical framework. Table 3.5 provides an overview of these characteristics. It is important to note, however, that while Table 3.5 refers and relates, primarily, to the manufacturing industry in Saudi Arabia, such finding may also be applicable to other Saudi industries, particularly those that receive similar forms of government support.

Table 3.5: Main characteristics of the Saudi Manufacturing industry

Government support in the form of equity, subsidies or SIDF loans (up to 75% of capital).
Low interest rates.
High banking concentration.
Significant tangible assets.
Significant information asymmetry due to less stringent disclosure rules.
Unclear bankruptcy laws.
Dual mix of conventional and Islamic banking.
Low taxes levied on local firms (2.5% <i>zakat</i>).

The required payment of *zakat* implies that leverage would increase a firm’s tax liability. Accordingly, if *zakat* were found to be a significant determinant of capital structure, profitable firms would also opt to carry less leverage, precisely in order to reduce their tax liability (Al-Ajmi et al., 2009). Moreover, the SAMA (2013) report demonstrates that the manufacturing industry received 13.5% of total bank credit extended to the private sector as of 2011. Therefore, industry effects are accounted for as possible determinants of capital structure.

Shari'a compliant contracts that characterise Islamic banking can provide further support in reducing agency problems, emphasising the role of debt as a disciplining device in this context (Mirakhor and Zaidi, 2007). Accordingly, the thesis intends to assess whether, and the extent to which, the use of debt is motivated by Saudi manufacturing firms' need to discipline management. In addition, according to SAMA (2013), the Saudi banking sector is highly concentrated, with just 23 commercial banks operating in the Kingdom as of 2011. Gonzales and Gonzales (2008) demonstrate a positive relationship between banking concentration and leverage. Hence, it can be argued that relationship banking assumes greater importance in this context. The thesis, therefore, also aims to assess the influence of relationship banking on capital structure. The analysis also accounts for the possibility of obtaining debt from international sources.

In addition, studies on the significance of government lending institutions on capital structure indicate that governments extend more loans to underdeveloped industries when credit market imperfections penalise these industries (i.e. in the event of information asymmetry) (Yaron, 2004). Thus, the Saudi government lending through SIDF is predicted to be particularly significant in the Saudi manufacturing industry. However, government support can occur in the form of equity participation, reducing the need for external finance. The government can also be a non-financial stakeholder of a firm. If government subsidies provide an advantage that reduces a firm's need for finance, this would also impact its capital structure decisions. The thesis also endeavours to assess, and account for, the bargaining power of customers, employees and suppliers. However, the absence of labour unions may well suggest that employee influence is less prevalent in this context.

Furthermore, given the existence of significant information asymmetry in the manufacturing industry, a consequence of less stringent disclosure rules than those enforced under the IFRS, one might more plausibly argue that pecking order theories offer a better rationale and explanation of the capital structure

decisions of Saudi manufacturing firms. The thesis also aims to assess whether SOCPA disclosure rules are adequate in transmitting information about a firm's value and financial positions. Additionally, it aims to test whether Saudi manufacturing firms do, in fact, rely upon and use debt as a signalling tool. It is also important to note that capital structure decisions may not be adequately captured or explained by pecking order. Rather, decision making might be more appropriately comprehended and evaluated with reference to the ability of managers to time the market, thus enabling them to take advantage of favourable costs of debt or equity (Baker and Wurgler, 2002). The thesis will, accordingly, seek to examine whether Saudi manufacturing firms take strategic advantage of economic downturns when deciding whether to avail themselves of debt and equity or when considering whether to engage in predatory behaviour. The relationship between debt and competitive aggressiveness is also accounted for. Hence, the thesis aims to test the Saudi-specific theoretical framework shown below.

The specific theoretical framework is shown in Figure 3.1 below. The framework is divided into three categories—determinants of capital structure, capital structure and stakeholders, and capital structure and competitive environment. The determinants of capital structure focuses on the relationship between (zakat, industry target, nature of assets, profitability, size and risk) and capital structure.

In general, Saudi manufacturing firms are more likely to be debt oriented, with the cost of serving debt insignificant to the capital structure decisions of firms. Zakat is a significant consideration in the firms' capital structure decision, and these firms have an industry-specific capital structure. The nature of firms' assets has a positive impact on leverage, and profitable firms have less debt. The larger the firm, the higher the leverage. In addition, there is a negative relationship between the firm's business risk and its level of debt.

Capital structure and stakeholders investigate the relationship between financial (equity and debt holders) and non-financial (government, suppliers, customers, and employees) stakeholders¹⁶ and capital structure.

In general, highly leveraged Saudi manufacturing firms are more likely to overinvest in risky projects in the absence of strict bankruptcy laws, and these firms are likely to be shari'a compliant. Debt is used as a tool to discipline management. In conclusion, debt can have an impact on the actions of management (debt as a discipline tool), or management can have an impact on debt (shari'a compliance and weak bankruptcy laws). This accounts for the double arrow between capital structure and management.

Financial stakeholders can have an influence on a firm's capital structure. Different types of shareholders can influence the capital structure of a firm. Family-owned firms and those with significant government ownership are likely to have high levels of debt. However, firms with large institutional ownership are less likely to have high levels of debt. As a general characteristic, Saudi manufacturing firms are more likely to have high levels of debt when it is easily accessible and available. The firms are also more likely to have access to international funding. When there is strong banking relationship between the banks and the firms, the level of debt will increase. Firms with access to government loans will have high levels of debt.

Non-financial stakeholders are also expected to have an impact on a firm's capital structure. Government support, in the form of subsidies, has an impact on leverage. Suppliers and customers are also likely to have an impact on the capital structure of firms. The quality of a firm's product is compromised during periods of economic downturn, and employees are less likely to have an impact on the capital structure decisions of firms. Capital structure and competitive

¹⁶ A firm's management can have a financial stake (as shareholders) and can also be classified as non-financial (employees) stakeholders. Management can influence the firm's direction via its capital structure decision and the corporate strategy that the firm adopts. Hence, it is appropriate to have management in-between capital structure and corporate strategy in both the general theoretical framework and the specific theoretical framework.

environment assess the impact of the product strategy the firms adopt (market timing, investment strategy, aggressiveness and signaling strategy) on the firms' capital structure.

There is a gap in the existing literature between corporate strategy and capital structure in which existing the framework does not consider the financial determinant of capital structure (La Rocca et al., 2008). Rather, it only focuses on explaining the capital structure decision from a strategic perspective. This framework contributes to academic literature by considering both financial and strategic components that define the capital structure decisions of firms. Moreover, the Saudi-specific framework is – to my knowledge – the first to take into account the unique characteristics that define the Saudi economy and its manufacturing industry.

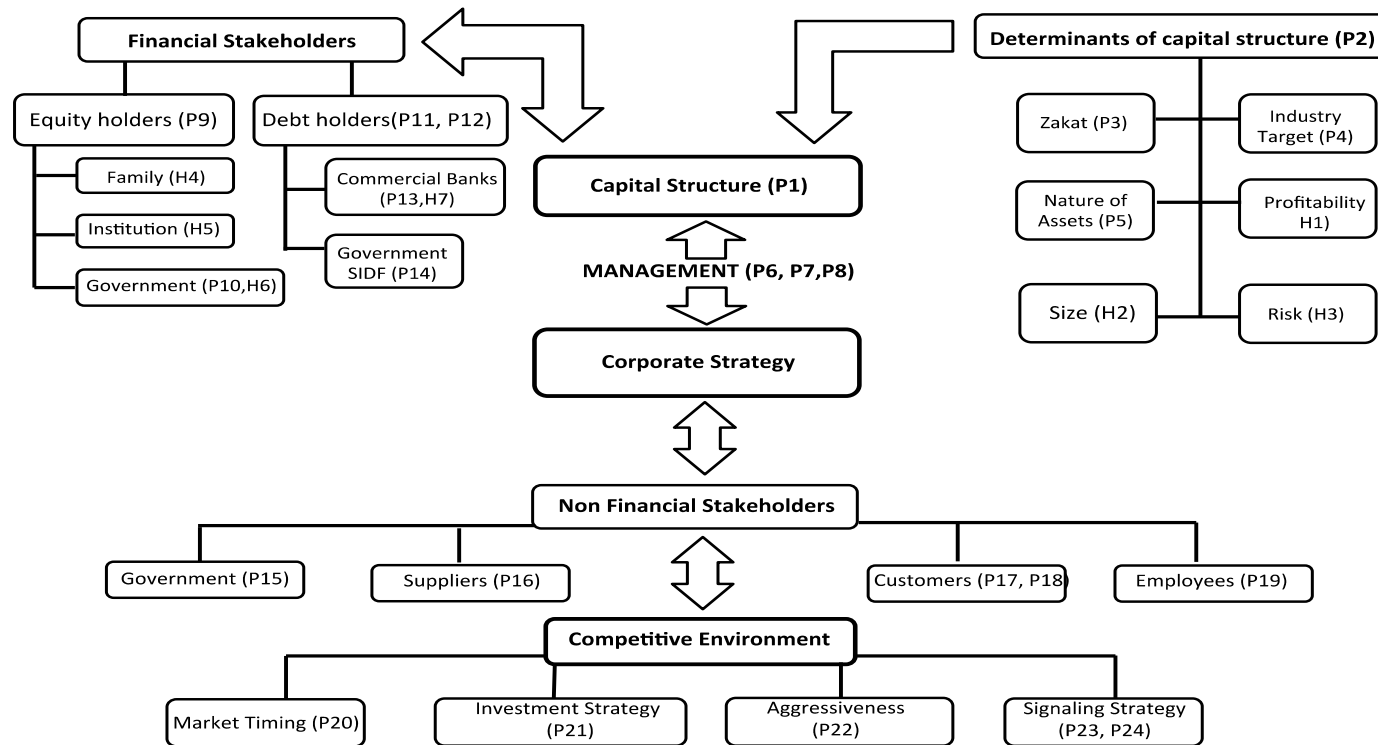
The proposed developed theoretical framework can be generalised to other Gulf Cooperative Council (GCC) countries, (such as UAE, Bahrain, Kuwait, Oman, and Qatar) and can be applicable to them as these countries share the same professional, managerial and organisational structure and other characteristics as Saudi Arabia. Like Saudi Arabia, GCC countries are non-tax paying economies which make these countries as a whole, an interesting case in assessing the determinants of capital structure of firms that operating in these countries (Sbeiti, 2010). Modigliani and Miller (1963) conclude that in the presence of tax there is an optimal capital structure. Hence, the GCC countries provide the ideal environment within which to test the impact of market imperfections such as taxation on the determinant of capital structure.

Moreover, GCC countries have distinct characteristics compared to other emerging market economies. For instance, the level of development of the capital market in Saudi and the remaining GCC economies is low, with low bankruptcy costs as equity capital is mainly controlled by influential and wealthy private individual/sector (Sbeiti, 2010). Sbeiti, (2010) also finds that firms in the GCC generally have lower leverage compared to those in developed

economies. In addition, the macroeconomic structure is largely similar in the GCC economies (Aleisa and Shotar, 2002). These countries also have similar Islamic and Arab culture and the practice of Islamic banking is a common trend in the GCC. As a result of these similarities, it is relevant to extend it to other industries within the Saudi context as well as other GCC countries as mentioned above.

3.3 Theoretical Framework

Figure 3.1: Developed Theoretical Framework for Saudi Arabia



In order to understand the relationship between corporate strategy and capital structure, the thesis aims to address both the quantitative hypotheses and the qualitative propositions in Table 3.6. In the mixed methods research question, the qualitative data is used to help explain or support the initial quantitative phase (Creswell and Plano Clark, 2007). Houtz (1995) starts with the quantitative hypotheses and uses the qualitative interviews to explore the quantitative results in more depth. Hence, the qualitative research tries to develop theories based on what is observed in a specific situation.

Qualitative propositions do not require the need of a hypothesis prior to the start of the investigation process. Nevertheless, they allow the researcher to study subjective experience directly. This results in the use of hypothesis-generating research using grounded theory methodology. The grounded theory allows the researcher to begin research without the need to test a hypothesis. Hypotheses are developed based on what the participants discuss in the interview. The methodology questions participants about their subjective experience and generates a hypothesis from the answers provided. In this thesis, hypotheses about corporate strategy and capital structure were developed based on the answers provided by participants in the semi-structured interview.

3.7 Propositions

Table 3.6: List of Qualitative Propositions and Quantitative Hypotheses

Part A: The Determinants of Capital Structure

	Justification
Proposition 1. Saudi Arabian manufacturing firms are more likely to be debt-oriented.	Booth <i>et al.</i> (2001) demonstrate that the total debt ratio for their sample of firms from developing countries is significantly lower than that of developed countries. Omet and Mashharawe (2003) report even lower debt ratios in their sample of Saudi Arabian firms, with an average of 9% leverage. Beck <i>et al.</i> (2002) attribute the empirical observation of low leverage ratios in developing countries to the difficulties companies in such economies face when accessing external funds. In the context of Saudi Arabian manufacturing firms, government loans in the form of SIDF dominate the capital structure decision. These loans can constitute up to 75% of the capital structure of manufacturing firms. Therefore, the prediction is that firms in the manufacturing industry would have a more debt-oriented capital structure than is empirically observed at a market level.
Proposition 2. The cost of servicing debt is insignificant to the capital structure decision	Market timing theory suggests that managers actively time the markets when deciding on their capital structure, examining both debt and equity markets and basing their decision on whichever market seems more favourable (Baker and Wurgler, 2002). If the cost of debt were low, firms would choose to carry more debt. Low interest commercial loans, as well as government loans (in the form of SIDF that characterise the Saudi capital market), imply that the cost of debt is less important in this context than in other jurisdictions.
Proposition 3. <i>Zakat</i> is a significant consideration for the capital structure of Saudi manufacturing firms.	The trade-off theory of capital structure highlights the importance of taxation in determining the capital structure of the firm (Frank and Goyal, 2007). The theory states that the firm's optimum leverage ratio is a trade-off between the tax advantage of debt and the costs of financial distress. Studies attest to the complexity of these "tax-regime" based influences on capital structure decisions (Ozkan, 2001; Gaud <i>et al.</i> , 2005). The tax structure of the Saudi Arabian market suggests that local companies are obliged to pay 2.5% tax on idle wealth in the form of <i>zakat</i> . Regardless of the fact that taxation within the context of Saudi Arabia is minimal, trade-off theory suggests that it is, nonetheless, one of the main factors that has traditionally influenced capital structure decision(s).
Proposition 4. There exists an industry-specific target optimal structure.	Trade-off theory suggests that a firm gradually moves towards a target leverage ratio (Myers, 1984). Empirical studies attest to the importance of industry effects in shaping the capital structure of a firm (Lev, 1969; Van der Wijst <i>et al.</i> , 1993). Graham and Harvey (2001) provide empirical evidence to suggest that managers have target leverage ratios in mind when making the capital structure decision.
Proposition 5. The nature of	Balakrishnan and Fox (1993) argue that capital structure is not confined to an industry average, as firm-specific needs

<p>the assets in the Saudi manufacturing industry has a positive impact on leverage.</p>	<p>are more significant. Studies indicate that there is a positive relationship between high levels of tangible fixed assets and leverage (Rajan and Zingales; 1995; Myers, 2001). The high level of tangible fixed assets that characterise the Saudi manufacturing industry could therefore have a positive impact on leverage.</p>
<p>Hypothesis 1. Firms that are profitable are likely to carry less debt. Hence, ROA has a negative impact on leverage.</p>	<p>Pecking order theory argues that profitable firms depend more on internal financing to reduce information asymmetries and avoid costly external financing (Myers and Majluf, 1984). The theory predicts a negative relationship between profitability and leverage. Al-Ajmi <i>et al.</i> (2009) demonstrate that profitability has a negative impact on leverage in their sample of Saudi Arabian firms. Hence, the prediction is that profitable firms are likely to carry less debt.</p>
<p>Hypothesis 2. Larger firms are likely to carry more debt. Hence, the natural logarithm of total assets has a positive impact on leverage.</p>	<p>Pecking order theory suggests that large firms exhibit lower information asymmetry and, therefore, equity is more favourable than debt (Kashifi-Pour <i>et al.</i>, 2010). However, Rajan and Zingales (1995) argue that large firms increase their leverage, since their expected bankruptcy cost is smaller. Omet and Massharawe (2003) and Al-Ajmi <i>et al.</i> (2009) demonstrate that the relationship between size and leverage is positive in the Saudi market. Therefore, the proposition is that firms that are large in size are likely to carry more debt.</p>
<p>Hypothesis 3. Firms with high business risk are more likely to carry less debt. Hence, beta has a negative impact on leverage.</p>	<p>According to pecking order theory, the future earnings of firms with higher business risk are difficult to predict. Therefore, the cost of debt increases for such firms (Minton and Schrand, 1999). Thus, firms with high business risk are more likely to carry less debt.</p>

Part B: Capital Structure and Stakeholders	
Proposition 6. In the absence of strict bankruptcy laws, highly leveraged firms would overinvest in risky projects.	Bankruptcy laws would result in managers overinvesting in risky projects, transferring the costs of unsuccessful projects to debt holders while benefiting from the gains of successful projects (Jensen and Meckling, 1976; Brander and Lewis, 1986). Therefore, in the absence of strict bankruptcy laws, higher leverage would lead to overinvestment in risky projects.
Proposition 7. Saudi Arabian manufacturing firms are more likely to be <i>Shari'a</i> compliant.	Saudi Arabia is characterised as an Islamic nation, with the rule of <i>Shari'a</i> law at the centre of its constitution. <i>Shari'a</i> compliance implies that there is a strict cap (33%) on the level of debt that firms can obtain from conventional loans. When the 33% conventional debt ceiling is violated, firms risk being excluded from <i>Shari'a</i> compliance (Al-Ajmi <i>et al.</i> , 2009). Mirakhor and Zaidi (2007) argue that the profit sharing concept of <i>Shari'a</i> -compliant contracts promote greater stability in financial markets, while helping to mitigate agency problems by aligning the interest of the financial stakeholders of the firm. Hence, the proposition is that Saudi Arabian manufacturing firms are more likely to be <i>Shari'a</i> compliant.
Proposition 8. Debt is used as a tool for disciplining management.	Agency theorists argue that conflicts may arise between managers and equity holders when managers use the firm's free-cash flows for opportunistic purposes (Jensen and Meckling, 1976). Managers may therefore over-invest in negative NPV or risky projects for self-serving purposes, such as perks, power and empire building (Jensen, 1986). Debt can serve as a disciplining device that discourages managers from over-investing the firm's free-cash flows, since managers have to meet their debt obligations and are monitored by financial institutions (Jensen, 1986; Hart and Moore, 1995).
Proposition 9. The shareholders of the firm significantly influence the capital structure decision.	The ownership structure of a firm can have significant implications on its capital structure decisions (Rajan and Zingales, 1998; Booth <i>et al.</i> , 2001). In the context of Saudi Arabian manufacturing firms, shareholders can influence capital structure decisions through their appetite for debt and their preference for <i>Shari'a</i> compliance.
Hypothesis 4. Family-owned firms are likely to carry more debt. Hence, family ownership has a positive impact on leverage.	Family-owned firms would carry more debt in order to avoid the dilution of their equity stake and control of the firm (King and Santor, 2008). The proposition follows the general empirical findings and theoretical prediction of a positive relationship.

<p>Hypothesis 5. Firms with significant institutional ownership are likely to carry more equity. Hence, institutional ownership has a negative impact on leverage.</p>	<p>Institutional ownership could lead to lower information asymmetry and replace the disciplining role of debt. Chen <i>et al.</i> (2007) demonstrate that institutional investors actively monitor the firm's activities. In this way, institutional ownership can act as a substitute for debt in reducing agency problems. Michaely and Vincent (2012) assert that institutional owners devote considerable resources to collecting information, which, in turn, reduces informational asymmetries and the cost of equity. The proposition follows the theoretical prediction of a negative relationship.</p>
<p>Hypothesis 6. Government-owned firms are likely to carry more debt. Hence, government ownership has a positive impact on leverage.</p>	<p>In Saudi Arabia, government financial institutions, such as the SIDF, provide loans to manufacturing firms, regardless of their ownership structure. However, Allen <i>et al.</i> (2005) argue that governments tend to prioritise government loans to SOEs. Therefore, the predication is that the relationship between government ownership and leverage would be positive.</p>
<p>Proposition 10. Saudi manufacturing firms are more likely to carry more debt when debt is easily accessible or available.</p>	<p>Capital market imperfection can influence capital structure decisions. Studies argue that firms would rely on internally generated funds rather than debt—if external credit were costly or difficult to access (Beck <i>et al.</i>, 2002; Cassar and Holmes, 2003). Therefore, if debt is easily accessible in this market, Saudi manufacturing firms would carry more debt.</p>
<p>Proposition 11. Saudi manufacturing firms are more likely to have access to international funding.</p>	<p>The multinational nature of some Saudi manufacturing firms implies that credit is not restricted to the local market. The prediction is that they would have access to international funding but would prefer local finance.</p>
<p>Hypothesis 7. Saudi manufacturing firms with strong banking relations are more likely to carry more debt. Hence, relationship banking has a positive impact on leverage.</p>	<p>Banking relationships can significantly affect the capital structure decisions of a firm in markets with concentrated banking (Petersen and Rajan, 1995; Cetorelli and Strahan, 2006; and Gonzalez and Gonzalez, 2008). The Saudi Arabian banking sector is highly concentrated with only 23 banks operating in the kingdom as of 2011 (SAMA, 2013). Therefore, it can be argued that relationship banking resumes importance in this context.</p>
<p>Proposition 12. Saudi manufacturing firms that have access to government loans are more likely to carry more debt.</p>	<p>Galdino and Micco (2004) contend that government intervention, through the provision of loans and other forms of assistance, helps to promote growth and increases leverage. This is especially true for industries that have significant tangible assets that can be used as collateral. This feature characterises the manufacturing industry. In the context of Saudi Arabia, the SIDF provides manufacturing firms with low interest loans of up to 75% of capital paid over 20 years. Therefore, the availability of government loans is predicted to have a positive impact on leverage.</p>

<p>Proposition 13. Government subsidies significantly influence capital structure decisions of Saudi manufacturing firms.</p>	<p>Schwartz and Clements (1999) contend that governments extend subsidies to domestic industries to enable them to overcome initial competitive disadvantages and promote successful long-run competition. In Saudi Arabia, land and fuel subsidies play a major role in the manufacturing sector, particularly in the petrochemical and cement sectors (Mahdi, 2011a; Mahdi, 2011b; Peel, 2013). Accordingly, government subsidies are proposed to have a significant influence on the capital structure decisions of Saudi manufacturing firms.</p>
<p>Proposition 14. Suppliers are more likely to influence the capital structure of Saudi manufacturing firms.</p>	<p>Several studies suggest that firms can use debt to reduce the bargaining power of suppliers (Bronars and Deere, 1991; Dasgupta and Sengupta, 1993; Perotti and Spier, 1993; Kale and Shahrur, 2007). By issuing debt, the firm commits to paying out a proportion of its surpluses to lenders. It is, thereby, able to limit the amount of surpluses that suppliers can extract through their bargaining power (Bronars and Deere, 1991; Dasgupta and Sengupta, 1993). Therefore, supplier bargaining power could potentially impact the capital structure of Saudi manufacturing firms.</p>
<p>Proposition 15. The quality of products of Saudi manufacturing firms is compromised in periods of economic downturn.</p>	<p>Hillier <i>et al.</i> (2008) argue that, in periods of financial distress, customers may receive inferior products. Therefore, the prediction is that Saudi manufacturing firms would compromise the quality of their products during periods of economic downturn.</p>
<p>Proposition 16. Customers are more likely to influence the capital structure of Saudi manufacturing firms.</p>	<p>Customers of highly leveraged firms bargain for price concessions due to the higher likelihood of bankruptcy associated with leverage. Titman (1984) argues that customers are unwilling to deal with firms that have a high probability of bankruptcy. In turn, a firm would reduce its leverage in order to avoid price concessions resulting from the bargaining power of its customers. The prediction is that customers of a highly leveraged Saudi manufacturing firm would impact the firm's leverage through their bargaining power.</p>
<p>Proposition 17. Employees are less likely to have an influence on the capital structure decisions of Saudi manufacturing firms.</p>	<p>Highly leveraged firms are more likely to lay off employees in the event of financial distress (Hillier <i>et al.</i>, 2008). In turn, employees of highly leveraged firms bargain for better contracts in order to compensate for the implicit costs of financial distress (Sarig, 1998). Perotti and Spier (1993) argue that the firm can respond to the bargaining power of trade and labour unions by increasing its leverage, thereby reducing its surpluses and protecting the firm from the threat of unions. Labour unions, however, do not exist in the context of Saudi Arabia. Therefore, the prediction is that employees would have little influence on the capital structure decisions of Saudi manufacturing firms.</p>

Part C: Capital Structure and Competitive Environment	
Proposition 18. Leverage exposes Saudi manufacturing firms to market volatility and predation in periods of economic downturn.	Deesomak <i>et al.</i> , (2004) and Kashefi-Pour <i>et al.</i> , (2010) claim that there is an inverse relationship between risk and leverage during economic downturns. Istaitieh and Rodriguez-Fernandez (2006) posit that financially strong (unleveraged) firms can time the market and take advantage of economic downturns to position and price their products aggressively to drive their weaker (leveraged) competitors out of the market. Hillier <i>et al.</i> (2008) state that firms tend to issue equity when market valuations relative to book valuations are high. They also tend to issue debt when market-to-book valuations are low. Therefore, highly leveraged manufacturing firms are more exposed to market volatility and predation during periods of economic downturn.
Proposition 19. Competitors influence the capital structure and investment strategies of Saudi manufacturing firms.	Kovenock and Phillips (1997) assert that firms adjust their capital structure in response to the leverage decisions of rival firms. Istaitieh and Rodriguez-Fernandez (2006) argue that farsighted firms would take this into account and adjust their capital structure accordingly. Therefore, the prediction is that Saudi manufacturing firms would take into account rival firms' capital structure decisions and adjust their capital structure and investments accordingly.
Proposition 20. Debt induces greater competitive aggressiveness.	Debt will cause greater competitive aggression in firms in three main ways: output increases due to Cournot competitive interactions; price-cutting moves in Bertrand-style competition; and increases in investment, leading to tougher competition (Brander and Lewis, 1986; Maksimovic, 1988; Showalter, 1995, 1999). Therefore, the prediction is that managers would recognise that debt.
Proposition 21. Disclosure rules would affect the capital structure and competitive advantage of Saudi manufacturing firms.	Stringent disclosure rules have significant implications in mitigating agency costs and reducing information asymmetry (Healy and Palepu, 2001). In the context of Saudi Arabia, listed firms abide by the disclosure rules of the Saudi Organization for Certified Public (SOCPA). These are less stringent than the International Financial Reporting Standards (IFRS) (Iqbal, 2012). Accordingly, more stringent disclosure rules would affect the capital structure and competitive advantage of Saudi manufacturing firms.
Proposition 22. Saudi manufacturing firms use debt as a signalling tool.	Klien <i>et al.</i> (2002) argue that debt can be used as an effective signalling tool for firms to convey their financial position to both creditors and competitors when information asymmetry is high. Therefore, the proposition is that debt would be used as a signalling tool in this context.

Chapter 4: Methodology

4.0 Introduction

This chapter justifies the philosophical rationale for adopting a mixed methodology approach and describes the data sample, as well as the different data limitations and methodology issues. The chapter is sub-divided into five sections. Sections 4.1 and 4.2 outline the philosophical discussion of this research and the research design, respectively. Sections 4.3 and 4.4 discuss the qualitative approach and quantitative technique, respectively. This will enable the reader to become acquainted with the data collection and analysis process. Finally, Section 4.5 considers the various ethical issues encountered during the data collection process.

4.1 Philosophical Discussion

The thesis combines both positivist and phenomenologist methodologies in order to adopt a pragmatic approach and provide evidence that addresses the concerns of practitioners (Shaw et al., 2010). The advantage of the pragmatic approach is that it is able to incorporate both the phenomenologist and positivist perspectives (Creswell 2003). It is therefore more flexible and responsive to the demands of a specific research question/problem. It is therefore more practical than either the phenomenologist or the positivist approaches.

The positivist approach suggests that social reality is independent from human perception, and the phenomenologist approach takes the idea that social reality is a construct that is formed within people's minds and is therefore subjective. Positivist research only records those facts that can be collected and analysed independently (May, 1997), whilst phenomenologist research focuses on the subjectivity of the individuals/groups participating in the study (Creswell, 2003). Both use different data sets; the positivist approach uses quantitative data analysis, whilst the phenomenological approach focuses on qualitative factors, such as the beliefs, perceptions and opinions of a study's participants, which may be subjective.

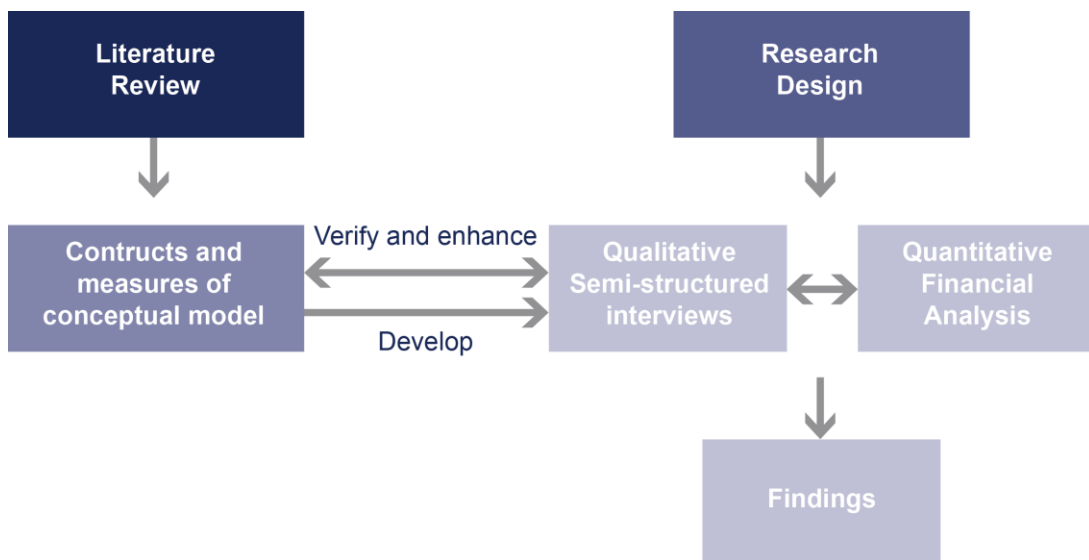
There are advantages to both of these approaches. The positivist approach is useful for testing hypotheses and identifying causal relationships between variables, which can be used as predictive tools (Burrell and Morgan, 1979). Phenomenologist research, by contrast, focuses on analysing individual human subjectivities and can be more responsive to the idiosyncrasies of the subjects involved in the research.

Accordingly, this thesis adopts a pragmatic approach. It uses a combination of both qualitative (semi-structured interviews) and quantitative research methods. The qualitative research provides supports for the quantitative findings. Hence, the methods complement each other and provide a comprehensive analysis of the specific questions of the research.

4.2 Research Design

The design of the research that is followed in this study is illustrated in the figure below:

Figure 4.1: Research Design



The research design relates to the plan for conducting the study, and different books on qualitative research provide different designs that researchers can use. Hence, a thorough understanding of the broader issues would facilitate the research design (Morse and Richards, 2002)

With regards to this thesis, the propositions and hypotheses are derived from the literature and contextual reviews in Chapters 2 and 3. This is in line with recommendations by Creswell (2003), whereby a mixed method approach deals with propositions and hypotheses using qualitative and quantitative data collection, testing and analysis. The research-hypothesised model is constructed by comparing and evaluating past studies in the general literature, along with those obtained from studies specifically related to Saudi Arabia (when relevant). The research follows the quantitative model outlined by Al-Ajmi et al. (2009), which uses panel data to combine cross-sectional data with time series information. Their approach utilises general models for panel data that enable the researcher to produce empirical estimates of the relationship between leverage (dependent) and firm-specific (independent) variables with versatility (Al-Ajmi et al., 2009). A model that includes these effects can be estimated in one of two ways. The random effects model estimates the coefficient matrix under the assumption that the individual and/or group effects are uncorrelated with the other independent variables (Hausman, 1978). In contrast, the fixed effects model relaxes these restrictions. Since there is no justification for the effects to be treated as uncorrelated with the other regressors, the random effects model may suffer from inconsistency due to omitted variables (Hausman, 1978). In order to have an indication of the correlation between the effects and the independent variables, Hausman (1978) outlines a test concerning the relation between the effects and the regressors. The quantitative model is formulated as follows:

$$Y_{it} = \alpha_i + \tilde{\beta} X_{it} + \varepsilon_{it} \text{ (fixed effect model)}$$

$$Y_{it} = \alpha_i + \tilde{\beta} X_{it} + (\varepsilon_{it} + \mu_i) \text{ (random effect model)}$$

Moreover, as per Al-Ajmi *et al.* (2009), the hypotheses were tested by pooling the data using the following model:

$$Y_{iy} = \alpha_i + \tilde{\beta} X_{it} + \varepsilon_{it} \text{ (pool model)}$$

where, Y_{it} is the leverage measure of firm i in year t , $\tilde{\beta}$ is a row vector of slope coefficients of the regressors, and X_{it} is a column vector of firm-specific variables for firm i in year t , which represents the explanatory variables.

4.3 Qualitative Approach

Shaw et al., (2010) argue that mixed methods research provides evidence that embraces real world concerns better than either quantitative or qualitative research approaches in isolation. Hence, in order to gain a greater conceptual framework and enhance the validation of this research, a mixed methodology is adopted. Moreover, the research creates measures and constructs that are related to the Saudi Arabian context, identifying the variables that relate to the research question and providing greater insight into the research objective, while permitting topics of significance to emerge (Rubin and Rubin, 1995). The research analyses the intricacies of capital structure formation in Saudi manufacturing firms and discusses the capital structure links with corporate strategies. The extent of the influence of both financial and non-financial stakeholders is examined. Additionally, this research analyses and discusses the manner in which corporate strategic considerations relate to the capital structure decisions of Saudi manufacturing firms.

4.3.1 Qualitative Sample

The research uses semi-structured interviews for the qualitative sample. Thirteen manufacturing firms from the petrochemical, food, industrial investment and cement sectors were interviewed.

Companies were obtained from the Saudi Arabia stock markets, and a list of top executives in these firms was made. Initially, getting these executives to commit to the interview process proved difficult, as top management—such as CEOs, CFOs, financial managers and board members—in the Kingdom are very wary of conducting interviews. In addition, I had no previous relationship with them, and this created difficulties getting access to them. To increase my chances of getting more executives to commit to the interview, I resorted to using personal

connections through an influential family member who helped in convincing these executives to do the interviews.

The interviews took place in two different cities: Riyadh and Jeddah. The difficulty in obtaining interviews with senior management in Saudi Arabia lies in both the sensitivity of their positions and the time constraints that these managers have. Obtaining interviews with firms in the cement sector was particularly difficult, as many were busy negotiating terms of fuel subsidies with Aramco, a controversial issue at the time (Mahdi, 2011b).

Three managers from financial institutions were interviewed in order to get their perspective on the different issues that affect capital structures. This approach was employed with the aim of gaining a deeper understanding of the factors that influence their lending decisions and assessing whether the theory could potentially be applicable to other industries. However, only the results obtained from the perspective of the manufacturing firms are used to confirm or refute the propositions.

4.3.2 Semi-structured interviews

In relation to the four qualitative semi-structured interview methods—face-to-face, e-mail, telephone and online messenger services—Opdenakker (2006) argues that face-to-face interviews have a distinct advantage over the others because they can provide “social cues”, such as intonation, voice and body language, that send important signals and provide extra information to the interviewer. However, like Novick (2008), the author recognises that the importance of these cues depends on the research objectives.

The interview program was not purely based upon the relatively rigid pre-determined questions and prompts. Rather, the open-ended, discursive nature of the interviews permitted an iterative process of refinement, whereby lines of thought identified by earlier interviewees could be taken up and presented to later interviewees. The entire process of collecting the data took approximately 6 months. Each interview commenced with an introduction about the researcher’s personal background, the aims of the research and issues of

confidentiality. The interviews, on average, lasted 30-60 minutes in length. During this time, senior managers were asked 20-30 questions about the company's capital structure, the different stakeholders that influence the company's capital structure decisions and the extent to which corporate strategy influences the company's capital structure decisions. Apart from their knowledge and views on the questions asked, the interviewees were encouraged to elaborate on the process and complexities of the knowledge management experienced inside their companies (Saunders et al., 2009).

The interviews were designed to facilitate memory recall. An interview protocol was adapted from Wengraf (2001) to guide the interviews. All interviews were conducted in English. All participants asked to remain anonymous for the purpose of the interview, and no recording was allowed, due to the sensitivity of their positions. However, to facilitate the process of analysis, careful notes were made during the interviews and transcribed verbatim immediately after the interview took place, in accordance with Saunders et al., (2009). After the post-interview transcription was made, the interview respondents were provided with the opportunity to review their statements and return comments relating to any misrepresentation of their views. A total of five interview transcripts were returned. There were no amendments made by the interviewees.

In addition, a contact summary form (Miles and Huberman, 1994) was adapted to summarise the main themes, concepts, issues or questions arising from the interviews. The use of this form allowed for adjustments to the interview protocol to be made, as new themes emerged while the data was collected. A sample of the contact summary form is attached in Appendix 2.

The interviews were specifically designed to explore the corporate strategy and capital structure decisions. In the process, they sought to develop a deeper understanding of manufacturing firms in Saudi Arabia. The industry—sectors and respondents, together with respondents by sectors—are shown in Tables 4.1 and 4.2 below.

Table 4.1: Industry, Sectors and Respondents

Industry	Sectors Represented	Respondents
Manufacturing	Petrochemical	4
Manufacturing	Food	2
Manufacturing	Industrial Investment	2
Manufacturing	Cement	5
Financial Institutions	Financial	3
Sum		16

Table 4.2 lists the respondents by sectors/industries. In the analysis, references will be made to respondents in their respective sectors.

Table 4.2: Respondents by Sectors¹⁷

Sector	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
Petrochemical	Financial Manager	Financial Manager	Board Member	Chairman	
Food	CFO	Board Member			
Industrial Investment	Financial Manager	CFO			
Cement	CFO	Board Member	CFO	CFO	CFO
Finance	CRO	CEO	CEO		

4.3.3 Qualitative Data Analysis Procedure

Themes that emerged in the initial readings were helpful in providing future directions for organising a framework for approaching a deeper level of data reduction and analysis. In organising and managing the data analysis process, the decision was made to analyse the content of each interview under three separate themes. These themes were as follows:

- Determinants of Capital Structure
- Capital Structure and Stakeholders

¹⁷ CFO is the Chief Financial Officer, CRO is the Chief Risk Officer and CEO is the Chief Executive Officer.

- Capital Structure and Competitive Environment

Once the data was clustered under the four themes, the coding process began.

In qualitative research, questions can be framed and analysed from a grounded theory approach, and most qualitative studies focus on this approach (Creswell, 2012).

The approach aims to avoid contaminating existing theoretical frameworks by discovering theories, concepts, hypotheses, and propositions that are 'grounded' in the collected data. Emphasis is on generating theory, rather than verifying it. More particularly, the emphasis is on generating theory that will be relevant to the research being undertaken. The application of the grounded theory approach evolved through four different phases. These phases are as follows:

Identifying critical instances: This stage involved highlighting key passages of transcripts.

Open coding: This stage involved identifying, naming, categorising and describing phenomena found in the text. It was necessary to carefully work through all transcripts and to divide the data into meaningful categories. These categories were based on a theme or variable that isolated information given by the interviewee. The units of coding were individual statements given by the interviewees regarding their respective knowledge of management strategy, processes and culture, as well as the factors that affect knowledge creativity in those enterprises. Each statement in the interview data was individually coded and built into common themes.

Axial coding: This stage involved refining the initial list of categories, deleting and then amalgamating some. It was necessary to make connections between the categories and to define their properties. Some categories emerged with high frequency. These were, in turn, connected to many of the other emerging categories.

Selective coding: At this stage, three different categories were chosen as core categories. Thereafter, all the other smaller categories were related to the core ones. The essential idea was to develop a framework around which everything else was dropped.

4.4 Quantitative Approach

The quantitative approach aims to complement the findings of the semi-structured interview. Using panel data, the analysis considers two measures of leverage to be dependent variables: total liabilities to total assets (TLTA) and long term debt to total assets (LTDTA). The independent variables use numerical parameters that proxy for profitability, size and risk. They also use dummy variables that proxy for ownership structure and relationship banking.

4.4.1 Type of data and Sampling Technique

This research utilises quantitative secondary financial data obtained from companies' published financial statements, which are available on the Saudi Stock Exchange (Tadawul)'s official website. The study targeted all Saudi manufacturing listed companies available in the market for 5 years or more. It is a cross sectional investigation, where firms are studied to gain an understanding of their typical capital structure behaviour. The time horizon was chosen due to the absence of research that covers this period of global recession. Furthermore, there was a trade-off between sample size and the length of the sample period. Hence, the data was chosen in a way that optimises the number of observations and the length of the sample period.

This research used systematic sampling, with three major parameters: the number of firms out of total selected population, the number of sectors and the contribution of market capitalisation. Under each of these, the primary objective was to include all manufacturing companies listed for more than five years from the total population as a sample. As a whole, a total of 150 firms were listed in the Saudi Stock Exchange (Tadawul) by the end of 2011 (SAMA, 2013). From these companies, only 62 firms are in the manufacturing industry. 43 of which were chosen, representing a considerable percentage of the total population

(69% as of June 2012). The sample is based on quarterly data, which makes up a total of 20 observations for each variable. Furthermore, market capitalisation of the 43 companies used in the study represents 38% of total market capitalisation¹⁸.

4.4.2 Data and Data collection

Data has been collected directly from firms' financial statements available on the Saudi Stock Exchange's (Tadawul) official website (www.tadawul.com.sa). The data was manually aggregated in Excel spread sheets for further calculations of the proposed variables. These variables included two measures of leverage (long-term debt-to-total assets and total liabilities-to-total assets) and other independent variables that account for size, profitability and risk, along with dummy variables for ownership structure (government, family and institution) and a dummy variable for relationship banking. Table 4.1 provides a summary of the variables used in the regression analysis.

¹⁸ Market capitalization data was obtained from the Saudi Stock Exchange's (Tadawul) official website (www.tadawul.com.sa) in June 2012.

Table 4.3: Variables Used

	Proxy/Source	Symbol	Expectations
Dependent Variables			
	Total liabilities-to-total asset	TLTA	
	Long-term debt-to-total assets	LTDTA	
Independent Variables			
Profitability	Return on Assets	ROA	-
Size	Total Assets	SIZE	+
Risk	Beta	Beta	+
Family Ownership	Ownership Structure	FAM	+
Government Ownership	Ownership Structure	GOV	+
Institutional Ownership	Ownership Structure	INST	+
Relations Banking	Banking Behaviour	RB	+
Definitions:			
Risk	Beta estimated from the regression of stock returns with market returns.	Quantitative	
Profitability	$(\text{Net Income}/\text{Total Assets}) \times 100$	Quantitative	
Size	Natural Logarithm (Total Assets)	Quantitative	
Relationship Banking	Dummy (1= If company's board member is also in bank's board, 0=otherwise)	Dummy	
Institutional Ownership	Dummy (1= Institution present, 0=otherwise)		
Family Ownership	Dummy (1= Family present, 0=otherwise)	Dummy	
Government Ownership	Dummy (1= Government present, 0=otherwise)	Dummy	

The two measures of leverage used in this thesis are long-term debt-to-total assets (LTDTA) and total liabilities-to-total assets (TLTA). These are shown in Table 4.1 above. These variables are consistent with those used by Al-Ajmi et al. (2009). According to Rajan and Zingales (1995:1429) “the use of total liabilities-to-total total assets fails to consider the fact that there are some assets that are offsets by specific non-debt liabilities”. However, to account for the deficiency in this variable, another measure (LTDTA) was also used as a dependent variable.

Rajan and Zingales (1995) point out that the purpose of the analysis should determine which measure is appropriate. Even though the firm’s total liabilities-to-shareholder equity is widely regarded as the most general measure of leverage, this measure is not utilised in the analysis because it is not a good measure of default risk; the higher the ratio, the higher level of debt. Rajan and Zingales (1995) indicate that the inclusion of items used for transaction instead of financing purposes, like accounts payables and pension liabilities, could result in leverage being overstated. Thus, it is a more conservative measure of leverage.

Various independent variables were used in this thesis; they are briefly described below.

Profitability

The static trade-off theory predicts the existence of a positive effect of profitability on capital structure (Myers and Majluf, 1984). However, the pecking order theory predicts a negative relationship between profitability and capital structure (Modigliani and Miller, 1963). Studies by Al-Ajmi et al. (2009), Al-Sakran (2001) and Omet and Mashharawe (2003) have measured profitability using a firm’s return on assets (ROA) in their study of the determinant of leverage.

Size

Financial theory suggests that larger firms are more diversified and less prone to bankruptcy, have better access to credit markets and hence tend to

incorporate more debt in their capital structures (Rajan and Zingales, 1995). However, the pecking order theory suggests that large firms exhibit low information asymmetry in financial markets and are able to issue more equity than small firms, increasing their preference for equity relative to debt (Al-Ajmi et al., 2009). Studies by Al-Ajmi et al. (2009), Al-Sakran (2001) and Omet and Mashharawe (2003) use the natural logarithm of total assets as a measure for size.

Risk

The thesis uses beta as a measure of risk, rather than standard deviation of earnings scaled by total assets, as beta measures systematic risk, while standard deviation includes both systematic and unsystematic risk. This variable is obtained by regressing the return on the stock of the firm and the return on the market index. Hence, it is calculated as follows.

$$\beta_s = \frac{Cov(r_s, r_m)}{Var(r_m)}$$

$Cov(r_s, r_m)$ is the covariance of the return of the stock of the firm and the return on the market index. $Var(r_m)$ is the variance of the return on the market index.

Dummy Variables

The ownership structure for family, government and institutional shareholders is represented by dummy variables, as described in Table 4.1 above. The methodology is similar to the one used by Al-Ajmi et al. (2009). In addition, relationship banking is also represented by a dummy variable, as described in Table 4.1 above.

4.4.3 Measurement, Validity and Generalisability

The quantitative data was collected from credible governmental sources. Because the sample represents a significant percentage of the total population (38% of market capitalisation and 69% of total listed manufacturing firms as of June, 2012), it could be stated that the findings can be generalised for firms in the industry. For the quantitative approach, corporate strategy is measured by a

set of numerical variables, shown in Table 4.1, which captures factors such as risk, ownership structure and relationship banking. The variables were tested to ensure that there is no multicollinearity among the independent variables that would affect the significance of the variables in the regression. In addition, to avoid the possibility of heteroskedasticity, the pooled model was estimated using White-Corrected standard errors. These tests ensure that the coefficients of the independent variables are not biased, due to incorrect standard errors. However, for the qualitative semi-structured interviews, the responses were measured by stating whether the findings/impacts are mixed (implying that the response is evenly split among respondents) or have a majority impact (i.e., more than 50% of the respondents are in agreement on the issue). The qualitative approach was therefore used to gauge strategic considerations by directly engaging with the decision makers of the firm.

In the UK, qualitative research has been accused of “being largely irrelevant, weak in validity and a waste of public funds” (Hammersley, 2008, p. 3). This therefore points to the fact that validity is important because it tests how accurate the information is and how closely it matches reality. Internal generalisation is an important issue for qualitative research because the validity of the conclusion greatly depends on internal generalizability (Maxwell, 2010). From this perspective, relying on a single interviewee’s coding is highly problematic and creates significant problems for assessing the reliability and validity of the data.

Generalisation is regarded as an act of reasoning; it involves making broad inferences from particular observations (Polit and Beck, 2010). It is a quality standard that is more related to quantitative than qualitative research. Polit and Beck (2010) state that generalization issues are sometimes ignored/misrepresented in both types of research.

Therefore, decisions about data collection and analysis were reviewed with two university colleagues and the researcher’s supervisor. The reliability of the categories developed in the data analysis was further measured by having others read the interview transcripts to see if they would classify them in the

same way. The results were considered to be reliable by the three independent readers.

4.4.4 Data Analysis procedure

For the purpose of the data analysis, data has been moved through different stages before being imported and used in the data analysis program. Firstly, data collected from financial statements has been entered manually in the Microsoft Excel sheet. Then the independent variables have been calculated using Excel as proposed above. In this stage, the data was ready for the regression and was thus moved to the data analysis econometric software (Eviews).

Despite the identification of the parameters and their influence on the capital structure literature, there is no single model that is appropriate for such research. Yet, most studies have regressed a ratio of debt-to-equity against several variables (Al-Sakran, 2001; Al-Ajmi et al., 2009). A pooled cross sectional estimation is conducted, since the study contains observations over a certain time period for different firms. In addition, the Pooled Ordinary Least Squares (OLS) method is used to accomplish this step as it allows for the investigation of unique dynamics by a time order and reveals unobserved heterogeneity. Bevan and Danbolt (2004) indicate that an issue of over-estimate biasness and, thus, misspecification of the significance of coefficients, may arise when using Pooled OLS due to failure in controlling time-invariants. However, this has been taken into consideration when indicating the significance of variables. The model used is a pooled panel regression of the firm's leverage against the return on assets, size, beta and ownership structure and relationship banking dummies:

$$\text{Leverage}_{iy} = \alpha_i + \tilde{\beta}_1 \text{Beta}_{it} + \tilde{\beta}_2 \text{ROA}_{it} + \tilde{\beta}_3 \text{Size}_{it} + \tilde{\beta}_4 \text{Government}_{it} + \tilde{\beta}_5 \text{Institution}_{it} + \tilde{\beta}_6 \text{Family}_{it} + \tilde{\beta}_7 \text{Relationship Banking}_{it} + \varepsilon_{it} \text{ (pool model)}$$

The regression analysis is conducted for the Pooled Ordinary Least Squares (Pooled OLS) and the Pooled OLS using White-corrected standard errors. The

reason for this is that, because the data is time series data, there is a higher probability that there exists heteroscedasticity¹⁹ in the error terms. This is a violation of the Classical Linear Regression Model assumption (White, 1980). Heteroscedasticity stipulates that the variance of the error terms is not constant as the dependent variables change. To correct for this, the research followed a correction technique called the White method (it was proposed by White) (1980). The regressions were tested for the overall significance of the model using the F statistic and its probability value (*P*-value), as well as for individual variables using T-Statistic and *P*-values. In addition, the correlation between variables is shown in the correlation matrix that assesses whether multicollinearity²⁰ is present in the variables. The Hausman test was also conducted for both independent variables, and the fixed effects model was rejected in favour of random effects.

4.5 Ethical Issues

Certain ethical issues may arise with respect to this study. Firstly, data was entered manually from firms' financial reports, and the variables were then calculated using Excel. This means that human error could yield misleading results, despite the fact that the data has been inspected three times. Only published financial data is used, hence, it is assured that the analysed data is used only for the research purpose and is not discussed with third parties for the purpose of commercial transactions or any other purpose. In addition, keeping the required level of confidentiality has been ensured in all aspects of research in accordance with the ethical guidelines of Brunel University, and interviewees were presented with a "Participants Information Sheet" (See Appendix 2). The participants were informed about the research aims and objectives and the scope of the interviews and were sent a confirmation of anonymity and confidentiality.

¹⁹ Heteroscedasticity is a violation of the OLS assumptions. It states that the error terms are not constant as the independent variable moves (White, 1980).

²⁰ Multicollinearity is a violation of the OLS assumptions. It states that the independent variables are highly correlated in the regression model. (O'Brien, 2007).

Chapter 5: Results and Findings

5.0 Introduction

This chapter will provide a preliminary description of the main findings of the research on capital structure and corporate strategy in the context of Saudi Arabian manufacturing firms. An in-depth analysis and discussion will be made in Chapter 6. The findings are divided into two parts. Section 5.1 will highlight the main semi-structured interview results, and Section 5.2 will outline the main quantitative regression results (using several numerical and dummy variables).

The semi-structured interview results are divided into three main parts – determinants of capital structure, capital structure and stakeholders and capital structure and competitive environment. The quantitative analysis uses two measures of leverage: long-term debt-to-total asset (LTDTA) and total debt-to-total asset (TDTA). The above-mentioned measures were used as dependent variables, and several independent variables were used in a Pooled Ordinary Least Squared (OLS) regression model.

5.1 Semi-Structured Interview Results

The semi-structured interview assessment was made from two perspectives: the firms' perspective and the lenders' perspective. The firms' perspective, which is represented by the sample of manufacturing firms, provides the results for four main sectors: petrochemicals, food, industrial, and cement. To obtain the lenders' perspective, a sample of three respondents from different financial institutions was used. However, only the results obtained from the perspective of respondents from manufacturing firms are used to confirm or refute the propositions.

5.1.1 Determinants of Capital Structure

Respondents were questioned on the impact of different market, industry and firm-specific factors that could influence a firm's capital structure decisions. Table 5.1 provides a summary of the semi-structured interview results that relate to the determinants of capital structure.

Table 5.1: Interview results on the determinants of capital structure²¹

Propositions	Petrochemical	Food	Industrial Investment	Cement	Financial	Result
1. Saudi Arabian manufacturing firms are more likely to be debt- oriented.	More debt than equity. Use of right issue to increase equity.	Debt and equity equal. Use of right issue to increase equity.	Mixed	More debt than equity. Majority have at least 50% leverage.	More debt than equity. Little use of bonds and capital market issues.	Accept
2. The cost of servicing debt is insignificant to the capital structure decision.	Majority: it has influence	All: it has no influence	Mixed	Majority: it has an influence	Majority: it has no influence	Reject
3. <i>Zakat</i> is a significant consideration for the capital structure of Saudi manufacturing firms.	All: important	Mixed	Mixed	Majority: it is not important	Mixed	Reject
4. There exists an industry-specific target optimal capital structure. ²²	Majority: Exists	All: Exists	Mixed	Majority: Exists	N/A	Accept
5. The nature of the assets in the Saudi manufacturing industry has a positive impact on leverage. ²³	All: Significant	All: Significant	Mixed	Majority: Significant	Significant R&D and high intangibles have less leverage. ²⁴	Accept

²¹ Majority implies more than 50% of the respondents, and mixed implies that the response is evenly split between the respondents.

²² Results are obtained from questions on the determinants of capital structure and optimal capital structure.

²³ A total of four respondents did not address this question.

²⁴ Only Respondent 3 provides an answer to this question.

The results of Table 5.1 show that Saudi Arabian manufacturing firms are more likely to be debt oriented. The majority of respondents claim that the cost of debt is a significant influence on capital structure decisions, despite the relatively cheap financing options available to manufacturing firms. There is also considerable evidence to support the proposition that Saudi manufacturing firms are more likely to be *Shari'a* compliant. The importance of *zakat* is more prominent in the petrochemical industry. Nevertheless, the general findings do not support the significance of *zakat* in determining the capital structure of Saudi manufacturing firms. Moreover, the findings indicate that managers believe that there exists an optimal capital structure that consists of a mix of debt and equity. However, the optimum capital structure varies depending on the size of the project and the minimum equity level stipulated by creditors. Finally, the general findings point to a positive relationship between the nature of (tangible) assets in the manufacturing industry and leverage.

5.1.2 Capital Structure and Stakeholders

Respondents were questioned on the impact of different financial stakeholders on capital structure. Table 5.2 provides a summary of the semi-structured interview results.

Table 5.2: Interview summary - financial stakeholders²⁵

Propositions	Petrochemical	Food	Industrial Investment	Cement	Financial	Result
6. Without strict bankruptcy laws, highly leveraged firms would overinvest in risky projects.	All: Bankruptcy laws insignificant	Mixed	Mixed	Majority: Bankruptcy laws insignificant	Majority: Bankruptcy law is not clear and does not protect the firm. Insignificant	Accept ²⁶
7. Saudi Arabian manufacturing firms are more likely to be <i>Shari'a</i> compliant.	Majority: in compliance	All: in compliance	All: in compliance	Majority: in compliance	Majority: in compliance	Accept
8. Debt is used as a tool for disciplining management.	All: respondents use debt as disciplining tool	All: respondents use debt as disciplining tool	Mixed	Majority: Do not use debt as disciplining tool	All: respondents agree that debt is used as disciplining tool	Accept
9. The shareholders of the firm significantly influences the capital structure decision.	Majority: Shareholders have influence	Mixed	All: Shareholders have influence.	Majority: Shareholders have influence. Influence comes from dividend pay-out.	Majority: Shareholders have influence. They are more effective for private companies	Accept
10. Government Owned firms are likely to carry more debt.	Majority: no influence	All: no influence	All: no influence	Majority: no influence	N/A	Reject

²⁵ Majority implies more than 50% of the respondents, and mixed implies that the response is evenly split between the respondents.

²⁶ The first part of the proposition that relates to the absence of strict bankruptcy laws is supported. Overinvestment in risky projects is supported by the quantitative results on business risk.

Table 5.2: Interview Summary - Financial Stakeholders – continued

Propositions	Petrochemical	Food	Industrial Investment	Cement	Financial	Result
11. Saudi manufacturing firms are likely to carry more debt when debt is easily accessible/ available.	Majority: Debt is easily available and has no influence on capital structure	All: Debt is easily available and has no influence on capital structure	Mixed	Majority: Availability of debt influences capital structure decisions	Mixed	Reject ²⁷
12. Saudi manufacturing firms are likely to have access to international funding.	All: Use external debt	All: Not used	Mixed	Majority: Not used	Majority: Rarely used	Accept
13. Saudi manufacturing firms with strong banking relations are likely to carry more debt.	All respondents: state that it has effect on leverage	All respondents: state that it has effect on leverage	Mixed	Majority: State that it has an effect on leverage	All respondents: state that it has effect on leverage.	Accept ²⁸
14. Saudi manufacturing firms that have access to government loans are likely to carry more debt. ²⁹	All: significant influence	All: significant influence	All: significant influence	All: significant influence	All: significant influence	Accept ³⁰

²⁷ While the majority of respondents claim that debt is easily available, the majorities state that the availability of credit has no influence on capital structure.

²⁸ The result is further validated by the quantitative results on the relationship between relationship banking (dummy variable) and leverage.

²⁹ Results are obtained from questions on capital structure formation and the effect of government support on capital structure.

³⁰ The result is further validated by the quantitative results on the relationship between government ownership (dummy) and leverage.

The results from Table 5.2 indicate that bankruptcy laws in Saudi Arabia are unclear and have little influence on the capital structure decisions of manufacturing firms. There is also considerable evidence to support the proposition that Saudi manufacturing firms are more likely to be *Shari'a* compliant. The results show that the majority of respondents claim to have used debt as a disciplining device, a finding that is in line with agency theories of capital structure. Moreover, the findings indicate that the shareholders of any firm have a significant influence on its capital structure decisions. Nevertheless, there is little evidence to support the proposition that government owned firms are likely to carry more debt. The results also indicate that the majority of Saudi manufacturing firms find that their capital structure decision does not depend on the availability of credit. The findings demonstrate, equally, that the majority of manufacturing firms have access to both local and international funding, with local funding being preferred. The results also support the significance of relationship banking in facilitating access to credit for Saudi manufacturing firms. Furthermore, the findings indicate that the most significant influence on the capital structure decisions of Saudi manufacturing firms is the availability of government loans in the form of SIDF loans. All respondents claimed that they have either used, or are currently using, SIDF loans to fund their projects.

Respondents were also questioned on the influence of non-financial stakeholders on capital structure. Table 5.3 provides a summary of the semi-structured interview results.

Table 5.3: Interview Summary- Non-Financial Stakeholders³¹

Propositions	Petrochemical	Food	Industrial Investment	Cement	Financial	Result
15 Government Subsidies significantly influence the capital structure decisions of Saudi manufacturing firms. ³²	Mixed	Mixed	Mixed	Majority: Not significant	Majority: Not significant	Reject
16. Suppliers are more likely to influence the capital structure of Saudi manufacturing firms.	Majority: no influence	All: no influence	Mixed: influence through lines of credit	Majority: no influence	Mixed: influence depends on extension of lines of credit.	Reject
17. The quality of products of Saudi manufacturing firms is compromised during periods of economic downturn.	Majority: no impact	Mixed	All: no impact	Majority: no impact	N/A	Reject
18. Customers are more likely to influence the capital structure of Saudi manufacturing firms.	Majority: no influence	All: no influence	Mixed: influence through lines of credit	Majority: no influence	Mixed: influence depends on extension of lines of credit	Reject
19. Employees are less likely to have an influence on the capital structure decision of Saudi manufacturing firms.	All: no influence	All: no influence	All: no influence	Majority: no influence	Majority: no influence	Accept

³¹ Majority implies more than 50% of the respondents, and mixed implies that the response is evenly split between the respondents.

³² The results are obtained from the responses on the effect of the government on capital structure. Respondents that do not mention subsidies are considered to find them insignificant.

The results from Table 5.3 indicate that suppliers and customers have little influence on the capital structure decisions of Saudi manufacturing, unless they are extended lines of credit. Moreover, the findings do not support the proposition that the quality of products in the manufacturing industry is compromised in periods of economic downturn. The vast majority of evidence suggests that employees have no influence on the capital structure decisions of a firm. Finally, the results indicate that, although government subsidies are important to some firms, the majority of respondents point to government financial support (SIDF) as being significant in impacting capital structure decisions. Hence, the findings indicate that the stakeholder theory does not generally apply in the context of the Saudi manufacturing industry.

5.1.3 Capital Structure and Competitive Environment

Respondents were questioned on the manner in which the competitive environment relates to capital structure. Table 5.4 provides a summary of the semi-structured interview results.

Table 5.4: Interview summary- capital structure and competitive environment³³

Propositions	Petrochemical	Food	Industrial Investment	Cement	Financial	Result
20. Leverage exposes Saudi manufacturing firms to market volatility and predation during periods of economic downturn.	Mixed	Mixed	All: has an impact	Majority: has an impact	Majority: Has an impact	Accept exposure to volatility Reject predation ³⁴
21. Competitors influence the capital structure and investment strategy of Saudi manufacturing firms.	Majority: No impact	All: No impact	Mixed	Majority: No impact	Majority: Has impact. Herding behaviour by firms.	Reject ³⁵
22. Debt induces greater competitive aggressiveness.	Mixed	Mixed	All respondents: No impact	Mixed	Majority: has an impact	Reject
23. Disclosure rules affect the capital structure and competitive advantage of Saudi manufacturing firms.	Majority: It has no impact	Majority: It has an impact	Majority: It has an impact	Majority: It has an impact ³⁶	Majority: It has an impact.	Accept
24. Saudi manufacturing firms use debt as a signalling tool.	Majority: Debt used as a signalling tool.	All: Not used as a signalling tool	Mixed	Majority: Debt is not used as a signalling tool.	Majority: Debt is not used as a signalling tool.	Reject

³³ Majority implies more than 50% of the respondents, and mixed implies that the response is evenly split between the respondents.

³⁴ None of the respondents refer to predatory behaviour in periods of economic downturn.

³⁵ Only Respondent 2 from the industrial investment sector made reference to the positive relationship between rival firms' leverage and investment strategy.

³⁶ Respondent 3 rightly mentioned the need to follow CMA rules. However, the respondent failed to address the issue, directly or otherwise, of how transparency affects capital structure and competitive advantage.

The findings from Table 5.4 illustrate that, while the majority of respondents agree that higher leverage exposes manufacturing firms to market volatility, no reference was made to the predatory behaviour of rival firms during periods of economic downturn. The results indicate that the majority of respondents do not consider competitors to have an influence on their capital structure and investment strategy. Moreover, while some respondents recognise the effect of higher leverage in inducing greater competitive aggression, the evidence indicates that the majority of respondents do not support the relationship between debt and competitive aggression. The results show that greater information transparency through more stringent disclosure rules would affect the capital structure and competitive advantage of manufacturing firms. Respondents fear that a greater level of transparency would hinder their competitive position. However, there is little evidence to support that debt is used as a signalling tool to reflect the financial position of the firm to rival firms. Thus, there is little evidence to support the relationship between capital structure and competitive environment in the context of the Saudi manufacturing industry.

5.2 Quantitative Findings

The quantitative approach uses two definitions of leverage, (total liabilities-to-total assets (TLTA) and long term debt-to-total assets (LTDTA), as dependent variables. In testing the determinants of leverage, three numerical independent variables were used to proxy for profitability, size and risk. To capture the impact of ownership structure (family, institutional and government) and relationship banking, four additional dummy variables were included in the regression. Table 5.5 outlines descriptive statistics, the correlation matrix of the two dependent variables (LTDTA and TLTA) and the seven (7) independent variables.

Table 5.5: Descriptive statistics and correlation matrix

	LTDTA	TLTA	ROA	SIZE	BETA	GOV	FAM	INS	RB
Panel A: Descriptive statistics									
Mean	0.14	0.37	0.03	18.78	0.88	0.49	0.28	0.4	0.42
Sum	123.37	317.84	21.62	16154.33	756.98	420	240	340	360
Median	0.07	0.37	0.02	19.98	0.89	0.00	0.00	0.00	0.00
Maximum	0.65	0.8	0.2	23.42	2.8	1.00	1.00	1.00	1.00
Minimum	0.00	0.00	-0.09	13.47	-1.63	0.00	0.00	0.00	0.00
Sum Sq. Dev.	41.17	154.61	1.33	310373.06	826.41	420	240	340	360
Std. Dev.	0.17	0.21	0.03	2.84	0.43	0.5	0.45	0.49	0.49
Skewness	1.19	0.1	2.17	-0.37	0.17	0.05	0.99	0.43	0.33
Kurtosis	3.47	1.87	11.62	1.6	5.11	1.00	1.97	1.18	1.11
Jarque-Bera	212.37	47.29	3333.61	90.02	163.89	143.33	177.08	144.54	143.76
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Observations	860	860	860	860	860	860	860	860	860
Cross sections	43	43	43	43	43	43	43	43	43
Panel B: Correlation coefficients									
LTD/TA	1.00	0.64	-0.28	-0.08	0.30	0.12	0.24	0.29	0.25
TL/TA	0.64	1.00	-0.34	-0.32	0.24	0.00	0.30	0.38	0.34
ROA	-0.28	-0.34	1.00	0.08	-0.24	0.19	-0.22	-0.02	0.04
Size	-0.08	-0.32	0.08	1.00	-0.08	0.12	-0.18	-0.21	-0.07
Beta	0.30	0.24	-0.24	-0.08	1.00	-0.02	0.11	0.05	0.03
Govt.	0.12	0.00	0.19	0.12	-0.02	1.00	-0.09	-0.03	0.40
Fam.	0.24	0.30	-0.22	-0.18	0.11	-0.09	1.00	0.03	0.21
Inst.	0.29	0.38	-0.02	-0.21	0.05	-0.03	0.03	1.00	0.09
RB	0.25	0.34	0.04	-0.07	0.03	0.40	0.21	0.09	1.00

The findings indicate that profitability and size are negatively correlated with the two dependent variables. With the exception of size, all the variables have positive skewness. However, the Jarque-Bera tests show that the variables are not normally distributed. The mean values are all positive, with a mean leverage of 14% and 37% for LTDTA and TLTA, respectively. Al-Ajmi et al. (2009) report slower leverage ratios of 10% and 28% for LTDTA and TLTA respectively. The minimum leverage is 0% for both measures, but the maximum leverage for the sample is 65% and 80% for LTDTA and TLTA, respectively. Overall, the correlations among independent variables are not too high and do not cause multicollinearity concerns.

Table 5.6: Regression results with total liabilities to total assets (TLTA) as dependent variable

	Pooled OLS	Pooled OLS with White-Corrected Standard Errors	Random Effect	Fixed Effect
Constant	0.51*** (0.00)	0.51*** (0.00)	0.09 (0.21)	0.49*** (0.00)
Profitability	-1.85*** (0.00)	-1.85*** (0.00)	-0.33*** (0.00)	-1.78*** (0.00)
Size	-0.01*** (0.00)	-0.01*** (0.00)	0.01*** (0.01)	-0.01*** (0.00)
Risk	0.06*** (0.00)	0.06*** (0.00)	0.01** (0.04)	0.08*** (0.00)
Family Ownership	0.05*** (0.00)	0.05*** (0.00)	0.10** (0.05)	0.05*** (0.00)
Government Ownership	-0.01 (0.46)	-0.01 (0.42)	-0.04 (0.42)	-0.01 (0.45)
Institutional Ownership	0.13*** (0.00)	0.13*** (0.00)	0.15*** (0.00)	0.13*** (0.00)
Relationship Banking	0.12*** (0.00)	0.12*** (0.00)	0.13*** (0.01)	0.12*** (0.00)
Adj. R-Square	0.43	0.43		
F-Statistics	93.37	93.37		
Prob.(F-Stats)	(0.00)	(0.00)		
Chi-Squared Statistics			19.54	
Chi-Squared (df)			3	
Prob.			(0.00)	

The results in Table 5.6 outline the regression results for the dependent variable (TLTA) and the seven independent variables. The results show the pooled sample, the pooled sample using the White-corrected standard errors and adjustments for fixed and random period effects. The adjusted R-squared indicates that approximately 43% of the variation in leverage is explained by the variables in the equation. In addition, the F-statistics show that the overall regression is significant at the 1% level, as the P-values are less than 1%.

Table 5.7: Regression Results with Total liabilities to total assets (LTDTA) as dependent variable

	Pooled OLS	Pooled OLS with White-Corrected Standard Errors	Random Effect	Fixed Effect
Constant	-0.02 (0.53)	-0.02 (0.50)	-0.02 (0.53)	-0.05 (0.16)
Profitability	-1.24*** (0.00)	-1.24*** (0.00)	-1.24*** (0.00)	-1.13*** (0.00)
Size	0.00 (0.31)	0.00 (0.32)	0.00 (0.31)	0.00 (0.29)
Risk	0.08*** (0.00)	0.08*** (0.00)	0.08** (0.00)	0.11*** (0.00)
Family Ownership	0.05*** (0.00)	0.05*** (0.00)	0.05** (0.00)	0.05*** (0.00)
Government Ownership	0.04 (0.00)	0.04 (0.00)	0.04 (0.00)	0.04*** (0.00)
Institutional Ownership	0.09*** (0.00)	0.09*** (0.00)	0.09*** (0.00)	0.09*** (0.00)
Relationship Banking	0.05*** (0.00)	0.05*** (0.00)	0.05*** (0.00)	0.05*** (0.00)
Adj. R-Square	0.28	0.28		
F-Statistics	49.87	49.87		
Prob.(F-Stats)	(0.00)	(0.00)		
Chi-Squared Statistics			23.40	
Chi-Squared (df)			3	
Prob.			(0.00)	

Table 5.7 shows the regression results for the dependent variable (LTDTA) and several independent variables. The results show the pooled sample, the pooled sample using the White-corrected standard errors, and adjustments for fixed and random period effects. The adjusted R-squared indicates that approximately 28% of the variation in leverage is explained by the variables in the equation. However, the model with the dependent variable (TLTA) has a stronger explanatory power than the one with LTDTA. In addition, the F-statistics show that the overall regression is significant at the 1% level, as the p-values are less than 1%.

Table 5.8: Summary of regression results

Hypotheses	Regression Result (TL_TA)	Regression Result (LTD_TA)
Hypothesis 1. ROA has a negative impact on leverage	Accept	Accept
Hypothesis 2. Natural logarithm of total assets has a positive impact on leverage	Reject	Reject
Hypothesis 3. Beta has a negative impact on leverage	Reject	Reject
Hypothesis 4. Family ownership has a positive impact on leverage	Accept	Accept
Hypothesis 5. Institutional ownership has a negative impact on leverage	Reject	Reject
Hypothesis 6. Government ownership has a positive impact on leverage.	Reject	Accept

5.2.1 Profitability

The results shown in Tables 5.6 and 5.7 show that profitability is negatively related to leverage. The results in Table 5.6 show that a 1% increase in profitability results in a 1.85% decrease in leverage (TLTA) for the pooled OLS. When leverage is defined as LTDTA, as shown in Table 5.7, the decrease in leverage for a 1% increase in profitability is 1.24%. The results for the random and fixed effect were also negative and significant for both measures of leverage. These findings show that firms with higher profitability have lower leverage, and these results are significant at the 1% level. The results also show that Saudi manufacturing firms reduce their leverage as they become

more profitable. In addition, the reduction in the leverage is more pronounced when leverage is defined as total liability-to-total assets (TLTA), rather than long-term debt-to-total assets (LTDTA). This finding is consistent with Hypothesis 1, which states that ROA has a negative impact on leverage. It is also consistent with the pecking-order theory, which argues that profitable firms depend more on internal financing in order to reduce information asymmetries and avoid costly external financing (Myers and Majluf, 1984). The theory predicts a negative relationship between profitability and leverage.

5.2.2 Size

The results of the impact of size on leverage depend on the measure of leverage used. The results in Table 5.6 show that, for the pooled OLS and the White-corrected standard errors, leverage (TLTA) for larger firms is lower by approximately 1% than for smaller firms, and these results are significant at the 1% level. Even though the results for the fixed effect are consistent with those of the pooled OLS, the findings of the random effect shows that size has a positive impact on leverage. However, when using the firms' long-term debt-to-total asset (LTDTA) as the dependent variable, the results in Table 5.7 show that the relationship between size and leverage is insignificant. Therefore, the proposition of large firms carrying more debt is refuted. Hence, the findings are not consistent with Hypothesis 2, which states that the natural logarithm of total assets has a positive impact on leverage.

5.2.3 Risk

The results shown in Tables 5.6 and 5.7 demonstrate a positive and significant relationship between risk and leverage. The results for the pooled sample and the pooled sample with White-corrected standard errors show that leverage (TLTA) is 6% and 8% higher for riskier firms when leverage is defined as total liability-to-total assets (TLTA) and long term debt-to-total assets (LTDTA), respectively. These results are significant at the 1% level and show that Saudi manufacturing firms with significant business risks are more likely to carry more debt. The results are inconsistent with Hypothesis 3, which states that Beta has a negative impact on leverage.

5.2.3 Family Ownership

Dummy variables were used to assess the effect of family ownership on leverage. Firms that have a family ownership structure that is greater than 10% are considered to be family-owned. The results for family ownership in Tables 5.6 and 5.7 show that firms that have large family ownership blocks carry more debt than those that do not. The results for the pooled sample and the sample with White-corrected standard errors show that firms with family ownership carry 5% more debt on both measures of leverage than those that do not have family ownership, and these results are significant at the 1% level.

Hence, for the sample of Saudi manufacturing firms, the result is consistent with Hypothesis 4, which states that family ownership has a positive impact on leverage. It is also consistent with the findings by Stulz (1988), who states that family-owned firms would carry more debt in order to avoid the dilution of their equity stake and control.

5.2.4 Institutional Ownership

Dummy variables were used to assess the effect of institutional ownership on leverage. Firms that have an institutional ownership structure that is greater than 10% are considered to be institutionally owned. The results for institutional ownership in Tables 5.6 and 5.7 for the pooled sample and the sample with White-corrected standard errors show that firms with family ownership carry 13% more debt, when leverage is measured as total liabilities-to-total assets, and 9% more debt, when leverage is measured as long-term debt-to-total assets; these results are highly significant at the 1% level. Hence, the results for the sample of Saudi manufacturing firms do not support Hypothesis 5, which states that institutional ownership has a negative impact on leverage.

5.2.5 Government Ownership

Dummy variables were used to assess the effect of government ownership on leverage. Firms that have a government ownership structure that is greater than 10% were considered to be government owned.

The results shown in Table 5.6 indicate that, when leverage is measured as total liability-to-total assets, government ownership has no impact on firms' leverage decisions. However, when leverage is measured as long-term debt-to-total assets, as shown in Table 5.7, government ownership has a positive and significant influence on leverage. Firms with government ownership are, on average, 4% more levered than those without government ownership, and the result is significant at 1%. This finding is consistent with Hypothesis 6, which states that government ownership has a positive impact on leverage. According to Booth et al., (2001), the effect of government ownership on capital structure largely depends on the jurisdiction in which the SOEs operate. However, in the context of Saudi Arabia, government financial institutions, such as the SIDF, provide loans to manufacturing firms regardless of their ownership structure. The mixed results imply that the impact of government ownership on leverage depends on the definition of leverage.

5.2.6 Relationship Banking

A dummy variable was used to represent relationship banking. This variable takes the value 1, if members of the firm's board are also in the board of the banks, and takes a value of zero in all other cases. The results in Table 5.6 show that, when leverage is defined as total liabilities-to-total assets (TLTA), firms that have a positive relationship with their banks have higher leverage than those that do not have such a relationship with their banks. The results for the pooled sample and the pooled sample with White-corrected standard errors show that firms with a good relationship with their banks are, on average, 12% more leveraged than their counterparts, and the results are significant at the 1% level. Moreover, when leverage is defined as long term debt-to-total asset (LTDTA), the results in Table 5.7 show that firms with strong relationship with their banks are, on average, 5% more leveraged than their counterparts, and the results are significant at the 1% level.

The findings support Hypothesis 7, which states that relationship banking has a positive impact on leverage. In addition, several studies have shown that

commercial banking concentration can significantly affect the capital structure decisions of a firm (Petersen and Rajan, 1995; Cetorelli and Strahan, 2006; and Gonzalez and Gonzalez, 2008). The Saudi Arabian banking sector is highly concentrated (SAMA, 2013). Thus, it can be argued that relationship banking resumes importance in this context.

Chapter 6: Analysis and Discussion

6.0 Introduction

This chapter aims to discuss the findings of the semi-structured interviews and the results of the quantitative financial analysis on capital structure and corporate strategy. The results of the semi-structured interviews mainly focus on manufacturing firms from four main sectors: petrochemicals, food, industrial investment and cement. The perspective of financial institutions is also considered in order to provide greater insight into the different factors that affect a firm's capital structure and corporate strategy. In addition, the quantitative analysis used two different independent variables as measures of leverage: long-term debt-to-total assets (LTDTA) and total liabilities-to-total assets (TLTA). There are two main types of independent variables: numerical variables that capture profitability, size and risk and dummy variables that capture family ownership, government ownership, institutional ownership and relationship banking.

With the aim of testing the theoretical framework detailed in Chapter 3, the main focus of the analysis is on the quantitative findings and the qualitative results. Semi-structured interviews support the quantitative results. The analysis used a mix of qualitative and quantitative results to provide a holistic picture of the factors that influence capital structure and corporate strategy. Therefore, where appropriate, the results of the quantitative analysis are used to further validate the findings of the semi-structured interviews.

The chapter is subdivided into three main sections. Section 6.1 analyses the findings on the determinants of capital structure. Moreover, Section 6.2 examines the results on capital structure and corporate strategy. Finally, Section 6.3 discusses the findings on capital structure and the competitive environment.

6.1 Determinants of Capital Structure

Proposition 1: Saudi Arabian manufacturing firms are more likely to be debt oriented.

Saudi Arabian firms are generally more equity oriented than firms in developed countries. Booth et al. (2001) demonstrate that the total debt ratio for their sample of developing countries is significantly lower than that of developed countries. In their sample of Saudi Arabian firms, Omet and Mashharawe (2003) report an average of 9% leverage. Beck et al. (2002) attribute the empirical observation of low leverage ratios in developing countries to the difficulties companies face in such economies in accessing external funds. In the context of Saudi Arabian manufacturing firms, government loans in the form of SIDF dominate capital structure decisions. These loans can constitute up to 75% of the capital structure of manufacturing projects. Accordingly, the proposition is that firms in the manufacturing industry would have a more debt-oriented capital structure than is empirically observed on the market level.

In the petrochemical sector, the majority of the respondents found that a typical capital structure is made up of 70% debt and 30% equity [R1PQ7; R3PQ1; R4PQ6]. Respondent 1 stated that his company's methods of financing include bank loans, *sukuk* and SIDF loans [R1PQ3]. Respondent 4 stated that rights issues are sometimes used to generate equity in addition to internally generated equity (retained earnings) [R4PQ1]. However, according to Respondent 3, the method of finance depends on the age of the project. Successful and established projects are more likely to attract bank loans than new and untested projects [R3PQ3]. Respondent 2 suggested a more conservative 1:1 debt to equity ratio [R2PQ6]. This indicates that the methods of financing available to petrochemical firms are not restricted to debt. However, the findings demonstrate the significance of debt in the capital structure formations of petrochemical firms.

In the food sector, the level of leverage is lower than that observed in other sectors. Respondent 2 stated that his company's "capital structure is typically

1:1 equity to debt with 10-15% of debt from the SIDF” [R2FQ1]. Similarly, Respondent 1 suggested a capital structure whereby a firm does not exceed 1:1 debt to equity [R1FQ6]. The respondent claimed that his firm’s sources of finance include “SIDF soft loans, commercial loans, classical short term line, letters of credit (LC) and letters of guarantee (LG), as well as some funding from suppliers” [R1FQ3]. The respondent stated that his company typically uses the Islamic version of these loans [R1FQ3]. Both respondents in this sector reported using short-, long-, and medium-term bank loans that are *Shari’a* compliant [R1FQ3; R2FQ2; R2FQ3]. The results demonstrate that manufacturing firms in the food sector carry more conservative leverage ratios than those in the petrochemical sector. However, debt still constitutes a significant part of the capital structures of manufacturing firms in this sector.

In the industrial investment sector, Respondent 1 underlined that his company relied mainly on equity and SIDF as their main sources of capital [R1IIQ1]. The company’s main sources of debt financing are overdraft facilities, including SIDF and other bank loans. [R1IIQ2]. However, once the SIDF loans were repaid, they were not sought again [R1IIQ1]. Respondent 1 claimed that, although it was not optimal, his company was currently entirely equity oriented [R1IIQ6]. This result indicates that debt is not necessarily a permanent component of capital structure. Instead, it is used to finance projects only when needed. In contrast, Respondent 2 claimed that typical capital structure “ranges between 60:40 and 65:35 debt to equity” [R2IIQ1]. All respondents asserted that they have used SIDF as a source of debt financing, and half of the respondents affirmed they have used commercial bank loans [R1IIQ1; R2IIQ2]. The results indicate that the use of debt is significant in the industrial investment sector, particularly for funding new projects.

In the cement industry, the interview results show that the majority of firms have a debt level that is at least 50% of their total capital [R2CQ2; R4CQ1; R5CQ2]. Respondent 5 opined that a typical capital structure for a manufacturing project would be made up of 50-75% of debt and 25-50% of equity, depending on the availability of SIDF loans [R5CQ6]. However, there are exceptions to the high

debt-to-equity ratio. Respondent 3 stated that his company has a capital structure that is made up of 94% equity and 6% debt [R3CQ1]. The Respondent stated that his company had significant liquidity and did not need to resort to debt for financing [R3CQ2]. This suggests that firms in the cement sector follow pecking order theory in their choice of financing for their projects. The main sources of debt financing are commercial bank loans, letters of credits, short and medium term loans and SIDF loans. *Sukuk* has also been popularised recently [R1CQ3; R2CQ3; R3CQ3; R5CQ3]. Therefore, the results indicate that debt is a significant component of the capital structures of manufacturing firms in the cement sector, when retained earnings insufficiently cover a firm's financing needs.

The results from the perspective of financial institutions indicate that debt financing dominates equity financing and that a typical ratio of 2:1 (debt: equity) is common [R1BQ1; R2BQ1]. Respondent 2 suggested that, because the Saudi market is not yet mature, "plain vanilla" bank loans are dominant in the capital market, with very little bond and other capital market issuance [R2BQ1]. Moreover, the results show that the main sources of debt financing include SIDF loans, *sukuk*, short- and long-term overdrafts and syndicated loans [R1BQ2; R2BQ1; R3BQ2]. Creditors, hence, assert that it is common for manufacturing firms to carry high levels of debt.

Accordingly, the general view is that the capital structure of firms in the manufacturing industry is (with a few exceptions) significantly propelled by debt financing. Further, the results of the quantitative analysis shown in Table 5.5 indicate a mean leverage of 14% and 37% for LTDTA and TLTA respectively. In their sample of Saudi firms, Al-Ajmi et al. (2009) report lower leverage ratios of 10% and 28% for LTDTA and TLTA respectively. The findings support the proposition that manufacturing firms are more debt oriented than firms in other industries. The majority of respondents in all sectors state that their respective companies have either used, or are currently using, SIDF finance for their projects. The interview results show that the companies in the food sector report the lowest use of SIDF loans. For other sectors, such as the petrochemical and

cement sectors, SIDF loans account for 50% of the entire capital structure of the companies. Cheap SIDF loans imply that the benefits of debt outweigh the costs. Hence, firms are more likely to use debt products than external equity in raising funds for their projects. There are, however, some exceptions. Respondent 1 in the industrial investment sector, as well as Respondent 3 in the cement sector, claimed that their companies are equity-oriented, with minimal to no debt [R1IIQ1; R3CQ1]. The equity orientation of these firms is attributed to the personal preference for equity of the respective shareholders of the firms. In addition, according to pecking order theory, the preference is for firms to finance their projects through retained earnings and then debt (Myers and Majluf, 1984). High levels of retained earnings replace the need for debt and help explain the equity orientation observed in the exceptional cases.

Proposition 2: The cost of servicing debt is insignificant to the capital structure decision.

One of the most important determinants of capital structure is the cost of debt. Market timing theory suggests that managers actively time the markets when deciding on their capital structure, examining both debt and equity markets and choosing whichever market seems more favourable (Baker and Wurgler, 2002). If the cost of debt were low, firms would choose to carry more debt, and vice versa. Nevertheless, as outlined in Chapter 2, low interest commercial loans, as well as government loans in the form of SIDF, which characterise the Saudi capital market, imply that the cost of debt is less important in this context than in other jurisdictions. Hence, the interview respondents were questioned on whether their capital structures depend on the cost of servicing debt.

The results for the petrochemical sector showed that the majority of the respondents claimed that the cost of debt has an influence on a firm's leverage [R1PQ8; R3PQ7; R4PQ9]. Respondents 1 and 3 suggested that the cost of servicing debt is important, as is tenor, growth and refinancing ability [R1PQ8; R3PQ7]. Respondent 4 claimed that his firm tries to optimise the return on its investments but also pays close attention to the costs of debt financing. However, Respondent 2 argued that the cost of debt is not important [R2PQ9].

The respondent claimed that the underlying risk of the asset is what influences capital structure [R2PQ9]. If the assets have high risk, then banks are less prepared to offer significant loans. This implies that, even with the availability of low cost financing options (such as SIDF), the cost of servicing debt remains an important consideration.

In the food sector, both respondents suggested that the cost of servicing debt is not a significant factor in determining leverage or capital structure [R1FQ9; R2FQ7]. Respondent 2 claimed that, because his firm has had no problem in servicing its debts, the cost of debt is not an influential factor in the level of debt the company assumes [R2FQ7]. This implies that the cost of debt is not detrimental to firms' capital structure decisions in the food sector. This result can be attributed to the fact that such firms generate enough profits to service their debts.

The results for the industrial investment sector are mixed. While Respondent 1 did not believe that the costs of servicing debt were significant in influencing the company's leverage position [R1IIQ9], Respondent 2 stated, "interest cost of capital is an inevitable driver of capital structure" [R2IIQ9]. This can be attributed to the fact that Respondent 1's firm is profitable enough to finance its projects through retained earnings and does not require additional debt financing. Respondent 2, however, is a manager of a unique business with no direct competitors [R2IIQ7]. This implies that the cost of capital assumes importance when manufacturing projects are new and untested.

In the cement sector, the majority of respondents argued that the service cost of debt is a key variable that influences the capital structure decisions of firms [R1CQ8; R2CQ7; R3CQ9; R4CQ9; R5CQ9]. According to Respondent 4, his firm takes on more debt when the financial charges are low and credit terms are flexible [R4CQ9]. However, Respondent 2 stated that low interest rates and high profit margins imply that interest costs take on a less significant role in deciding the amount of leverage the firm assumes [R2CQ7]. Hence, the cost of debt financing is an important factor that determines the leverage of firms in the

cement sector, despite the low cost of debt and the high profitability of firms operating in this sector.

The results from the perspective of financial institutions suggest that the cost of debt is not very important [R1BQ6; R2BQ5]. Respondent 1 stated that the level of debt depends on the period of the loan and the company's growth prospects [R1BQ6], while Respondent 3 claimed that it depends on many factors, including the nature of the firms' assets, which is a crucial factor only from the lender's point of view [R3BQ7]. Respondent 2 argued that the cost of debt "still remains cheaper than the cost of equity" [R2BQ5]. The respondent claimed that companies' time their loan decisions on current market rates. As interest rates fall, the amount of debt assumed increases, and vice versa. The result shows some support for market timing theory. However, none of the respondents from the manufacturing firms interviewed contended that capital structure decisions are based on timing equity and debt markets. Accordingly, market timing might be relevant for firms that operate in other industries in Saudi Arabia.

The results of the interviews support the importance of the cost of servicing debt in the context of Saudi Arabian manufacturing firms, especially for new and untested projects. Even with the existence of high profits and considerably cheap financing available through government SIDF loans and commercial banks, the results reject the proposition of the insignificance of the cost of servicing debt to the capital structure decisions of Saudi manufacturing firms.

Proposition 3: Zakat is a significant consideration for the capital structure of Saudi manufacturing firms.

The analysis on the determinants of capital structure begins by examining the effect of taxation on capital structure. The tax structure of the Saudi Arabian market outlined in Chapter 3 suggests that local companies are obliged to pay 2.5% tax on idle wealth in the form of *zakat*. Respondents were, hence, asked if they take *zakat* and taxation into consideration when deciding on their respective firms' capital structure.

The interview results show that all of the respondents in the petrochemical industry consider *zakat* when deciding their debt levels [R1PQ5; R2PQ5; R3PQ5; R4PQ5]. Respondent 4 argued that the “taxation of foreign partners and *zakat* have an impact on the capital structure decision” [R4PQ5]. The firm assesses the total capital structure and tries to optimise return on investment. Thus; tax and *zakat* do have an influence on capital structure decisions [R4PQ5]. Moreover, Respondent 2 argued that, because *zakat* is paid on long-term debt only, the DZIT has started to audit firms to make sure that they do not circumvent the payment of *zakat* by making sure that their short-term loans are “really short-term” [R2PQ5]. The results indicate that *zakat* considerations are prevalent in the petrochemical sector.

In the food sector, the results are mixed. Respondent 1 considered *zakat* as one of determinants of the capital structure. The respondent stated that his “company tries to fund fixed assets mainly through equity (70%), and the remaining (30%) using debt... otherwise, [the firm] ends up paying more *zakat*” [R1FQ5]. This result is in line with Ozkan (2001) and Gaud et al. (2005), who stress the importance of tax optimisation in influencing capital structure decisions. However, Respondent 2 stated that *zakat* is not important because of the company’s high profitability [R2FQ4]. This indicates that some firms pay more attention to *zakat* than others in this sector.

Similarly, the findings were split in the industrial investment sector. Respondent 1 suggested that *zakat* is not an important factor, as the need for extra funding outweighs the incremental cost of *zakat* [R1IIQ5]. However, Respondent 2 claimed that *zakat* is, in fact, an important consideration [R2IIQ5].

Ultimately, the majority of the companies in the cement industry stated that *zakat* is not an important factor when deciding on the company’s capital structure [R1CQ5; R2CQ5; R5CQ5]. Respondents 1 and 2 attributed this result to the fact that *zakat* only represents 2.5% of the cost of debt, which is insignificant. However, Respondent 3 stated that *zakat* is one consideration, but other factors are more important, such as the level of retained earnings and reserves [R3CQ5]. Respondent 4 was the only exception in this sector that

attested to the significance of *zakat* [R4CQ5]. The results indicate that, given the negligible amount of *zakat*, it is not an important consideration for the majority of cement companies.

The perspective of financial institutions indicates that, even though *zakat* is a factor that is considered in leverage decisions [R3BQ4], some companies pay more attention to it than others [R1BQ4]. Nevertheless, Respondent 2 contended that *zakat* is not important and, therefore, has no effect on determining the company's leverage position [R2BQ3].

The interview results on the importance of *zakat* in determining the capital structure decisions of Saudi manufacturing firms are mixed. The results point to the fact that some firms avoid issuing long-term debt (that is *zakat* payable) or reduce their leverage to avoid paying more *zakat*. Debt can increase the company's *zakat* liability. Accordingly, profitable firms finance their projects through retained earnings in order to reduce their *zakat* liability. The results shown in Tables 5.6 and 5.7 in Chapter 5 show that profitability is negatively related to leverage. The results for the pooled sample with White-corrected standard errors show that firms with higher profitability have lower leverage on both measures of leverage, and these results are significant at the 1% level. Hence, manufacturing companies benefit from reducing their *zakat* liability by financing their projects through retained earnings. These results are in line with the findings of Al-Ajmi et al. (2009), who demonstrate the significance of *zakat* in determining the capital structures of Saudi firms.

Proposition 4: There exists an industry-specific target optimal structure.

One of the key considerations for capital structure decisions is industry structure. Empirical studies confirm the importance of industry effects in shaping the capital structure of a firm (Lev, 1969; Van der Wijst et al., 1993). Graham and Harvey (2001) provide empirical evidence to suggest that managers have target leverage ratios in mind when taking capital structure decisions. Therefore, in accordance with Graham and Harvey (2001), respondents were

questioned on whether they believe that there exists an optimal capital structure.

The interview results for the petrochemical sector show that the optimal capital structure is driven by the use of cheap debt and the nature of the project. The majority of the respondents in the petrochemical industry made reference to an optimal capital structure, which includes a minimum equity level of 25% [R1PQ7; R2PQ7; R3PQ1; R4PQ7]. The results show that the majority of the respondents in the sample have a capital structure that consists of not more than 30% equity capital, and debt of up to 70% is common in this industry [R1PQ7; R2PQ7; R3PQ1; R4PQ7]. However, Respondent 2 argued that a target of 1:1 debt to equity ratio is ideal, for “below this is not optimal, and above it is too risky” [R2PQ6]. It is also important to note that capital structure decisions are driven by a firm’s need to finance its projects. Respondent 4 argued that his company has had a capital structure of “25% equity to 75% debt [in the past], but nowadays [the company] uses 30% equity and 70% debt” [R4PQ7]. Respondent 4 stated that his preference is “to have the least amount of equity” [R4PQ6]. The respondent stressed that the level of equity depends on the projects in question. Respondent 4 further maintained that “some projects were required to have 50% equity, and others require 100% equity. However, the norm in the industry is an equity level of between 25% and 30%” [R4PQ7].

In the food sector, the optimal capital structure also depends on the size of the project. Respondent 1 claimed “A debt-to-equity of 50:50 is quite common. However, for larger projects, a ratio of 70:30—debt to equity—is expected [R1FQ7]”. Moreover, both respondents in the food sector asserted that the key determinants of debt are the level of earnings before interest and tax (EBIT) that the company generates and the existence of a target leverage ratio [R1FQ6; R2FQ5]. Hence, as was evident in the petrochemical sector, the debt level has some bearing on the target capital structure. However, only Respondent 2 in the industrial investment sector stated that an optimum capital structure in this sector is not relevant, since the business has no direct competitors [R2IIQ7]. Moreover, Respondent 1 suggested that low leverage is

common, due to high Research and Development intensity in this sector [R1IIQ7].

The majority of the respondents in the cement industry had mixed opinions on optimum capital structure. Respondent 2 stated that the level of debt does not typically exceed 50% of shareholder equity [R2CQ6]. Respondent 4 contended that “a good reference would be the structure frequently suggested/required by the lenders, i.e., 60/40 (debt/equity)” [R4CQ7]. However, Respondent 3 suggested that a ratio of 60% equity and 40% debt is usually optimal in the industry [R3CQ7]. Respondent 5 argued that the optimal capital structure depends on the availability of SIDF loans and “the credit worthiness and standing of the sponsors” [R5CQ7].

Generally, the results show that there is evidence to suggest that there exists a target optimal capital structure in the manufacturing industry, which is consistent with the proposition. However, this optimal capital structure largely depends on the nature of the project and the level of equity required by lenders. The capital structure formation is generally viewed to be project-specific. The evidence of the existence of an optimal capital structure supports the findings of Graham and Harvey (2001), who demonstrate that managers have target leverage ratios in mind when deciding on their capital structure.

Proposition 5: The nature of the assets in the Saudi manufacturing industry has a positive impact on leverage.

The nature of assets can affect the capital structure decisions of a firm (Rajan and Zingales, 1995). Supporting this notion, Balakrishnan and Fox (1993) argue that capital structure is not confined by an industry average, as firm-specific needs are more significant. Rajan and Zingales (1995) indicate that a firm’s leverage increases with its level of fixed assets. While these studies support the semi-structured interview evidence that capital structure is project-specific, manufacturing firms generally possess significant tangible assets that can, in fact, be used as collateral (as opposed to firm-specific intangible assets).

Respondents were questioned about the effect of the nature of their assets on their capital structure decisions.

Respondents 2 and 4 in the petrochemical sector stated that the nature of the assets in their respective companies' significantly determines their, level of leverage [R2PQ8; R4PQ8]. Respondent 2 stated that firms in the manufacturing industry are more likely to have higher leverage than in other industries such as the service industry [R2PQ8]. In addition, Respondent 4 pointed to the difference between industries with tangible assets and those with intangible assets as a key driver to the determinant of leverage [R4PQ8]. The respondent stated that his company operates in an industry that is capital intensive and can, hence, access more debt than industries with significant intangible assets [R4PQ8]. The results, therefore, support the findings of Rajan and Zingales (1995).

In the food sector, both respondents claimed that the nature of assets positively impacts their respective companies' leverage [R1FQ8; R2FQ6]. Respondent 1 stated that the nature of assets has an impact on the level of leverage [R1FQ8]. Specifically, Respondent 1 stated that, in the industrial investment sector, even though a firm's expansion and future acquisition policy affects the level of leverage, at the present time, most of its assets are financed with equity. Hence, the nature of the assets has no impact on leverage [R1IIQ8]. Accordingly, although the firm currently possess significant tangible assets, projects are funded through retained earnings. This is in accordance with pecking order theory. However, Respondent 2 stated that the nature of the assets does affect the level of leverage. The respondent argued that the nature of assets in the industrial investment business entails the provision of highly automated processes and operations, which requires significant financing [R2IIQ8]. This shows that capital-intensive projects require higher leverage.

The majority of the respondents³⁷ in the cement industry stated that the nature of their assets has a significant impact on the level of leverage [R3CQ8;

³⁷ Respondent 2 did not address the question.

R4CQ8; R5CQ8]. Respondent 4 claimed “in heavy industries, the acquisition of assets (machineries and other equipment) requires a considerable amount of funds. In situations where funds for equity are not enough for investment purposes, the need for debt finance is a must, and therefore capital structure is affected accordingly” [R4CQ8]. Respondent 5 argued that the cement industry is capital intensive and, thus, huge capital injection is necessary; this capital can come from SIDF and commercial loans [R5CQ8]. Respondent 3 contended that the size of the capital expenditure in the cement industry affects the composition of the firms’ capital structure [R3CQ8]. Hence, the capital intensive nature of cement projects and the high levels of fixed assets help explain the debt orientations of these firms relative to those reported on the market level by Al-Ajmi et al. (2009).

From the financial institution perspective³⁸, Respondent 3 highlighted the fact that the presence of tangible assets can serve as collateral to lenders that will reduce their exposure in the event of default [R3BQ6]. Firms with high R&D and intangibles tend to have lower leverage, as there are not sufficient assets to serve as collateral [R3BQ6]. This further affirms the findings of Rajan and Zingales (1995), who suggest that creditors are more willing to fund firms in industries with high levels of tangible assets.

Therefore, the results are in line with the proposition that the nature of the manufacturing industry is positively related to leverage. This positive relationship is demonstrated through two main channels. The first is the capital-intensive nature of the manufacturing industry, which entails that significantly more funds are needed to fund the acquisition of assets. The second is the fact that the presence of such tangible assets reduces the risk to lenders, as these assets can be used as collateral, which in turn facilitates a firm’s’ access to finance. The presence of significant tangible assets could explain the higher levels of debt observed in this industry.

Hypothesis 1: ROA has a negative impact on leverage.

³⁸ Only Respondent 3 addressed the question.

Pecking-order theory argues that profitable firms depend more on internal financing in order to reduce information asymmetries and avoid costly external financing (Myers and Majluf, 1984). The theory predicts a negative relationship between profitability and leverage. The most common measure for profitability is the return on assets (Al-Ajmi et al., 2009).

The results shown in Tables 5.6 and 5.7 in Chapter 5 show that profitability is negatively related to leverage. The results for the pooled sample with White-corrected standard errors show that firms with higher profitability have lower leverage on both measures of leverage. These results are significant at the 1% level and are consistent with the hypothesis that profitability has a negative impact on size. This is in line with the findings of Fama and French (2002), who argue that firms that follow pecking order theory are more inclined to use internal funding than external funding. The result is also consistent with the findings of Rajan and Zingales (1995), who find a negative relationship between profitability and leverage, and Booth et al. (2001), who report that profitable firms in developing countries carry less debt. Moreover, studies on the Saudi Arabian market report similar results. Al-Ajmi et al. (2009) also show that there is a negative relationship between profitability and leverage. Similarly, Omet and Mashharawe (2003) report a negative relationship between profitability and leverage. In addition, while Al-Sakran (2001) reports mixed results on the relationship between profitability and leverage on the market level, his results on the industrial sector show a negative relationship between profitability and leverage. Hence, the results are consistent with the empirical findings and the prediction of pecking order theory.

Hypothesis 2. Natural logarithm of total assets has a positive impact on leverage.

Another important determinant of capital structure is size. Pecking order theory suggests that large firms exhibit lower information asymmetry, making equity more favourable than debt (Kashifi-Pour et al., 2010). However, Rajan and Zingales (1995) argue that large firms increase their leverage, since their

expected bankruptcy costs are smaller. Therefore, the proposition is that firms that are large in size are more likely to carry more debt.

The findings of the financial analysis are mixed. The results in Table 5.6 in Chapter 5 show that, for the pooled sample and the pooled sample with White-corrected standard errors show that the leverage (TLTA) for larger firms is lower by approximately 1% compared to those of smaller firms, and these results are significant at the 1% level. This finding is not consistent with the proposition that size is positively related to leverage. The result is also similar to that reported by Kashefi-Pour et al. (2010), who show that, when information asymmetry exists, larger firms are likely to issue more equity than small firms. It is also consistent with the findings of Heshmati (2001), who argues that listed companies enjoy easier access to the equity market than smaller companies, due to lower fixed costs.

Using the firms' long-term debt-to-total asset (LTDTA) as the dependent variable, the results in Table 5.7 show that the relationship between size and leverage is insignificant. These results are consistent with the findings of Al-Sakran (2001), who reports mixed results on the market level. They are, additionally, inconsistent with the positive relationship between leverage and size observed in the industrial sector. Moreover, both Omet and Massharawe (2003) and Al-Ajmi et al. (2009) demonstrate a positive relationship between size and leverage, which is inconsistent with the quantitative results.

Hypothesis 3: Beta has a negative impact on leverage.

Business risk is one of the most important determinants of capital structure (Huang and Song, 2006). Respondent 2 from the petrochemical sector stressed the importance of business risk as a determinant of capital structure. The relationship between risk and leverage is not clear-cut. According to pecking order theory, the future earnings of firms with higher business risk are difficult to predict and, accordingly, the cost of debt increases for such firms (Minton and Schrand, 1999). Lenders are wary of lending to such firms because they have a

higher probability of default. Business risk (Beta) is included in the regression to account for the relationship between business risk and leverage.

The results shown in Tables 5.6 and 5.7 in Chapter 5 demonstrate a positive and significant relationship between risk and leverage. The results for the pooled sample with White-corrected standard errors show that leverage (TLTA) is 6% higher for riskier firms and 8% higher on the second measure of leverage (LTDTA). The results are significant at the 1% level. The result is inconsistent with the proposition that firms with higher business risk carry less debt. Nevertheless, the result is consistent with empirical observations. Both Jordan et al. (1998) and Huang and Song (2006) find a positive relationship between risk and leverage. However, the result is inconsistent with the findings of Al-Ajmi et al. (2009), who report a negative relationship between risk and leverage in the Saudi market. The inconsistency can be attributed to two different factors. This study considers Beta as a measure of business risk, whereas the study of Al-Ajmi et al. (2009) use the standard deviation of earnings scaled by total assets as a measure of risk. Thus, Al-Ajmi et al. (2009) use a measure of risk that reflects both systematic and unsystematic risk. Moreover, Brander and Lewis (1986) argue that the limited liability of equity may cause managers to overinvest in risky projects. Highly leveraged firms overinvest in risky projects because shareholders can transfer the costs of unsuccessful projects to debt holders and gain the benefits of such projects if they are successful (Jensen and Meckling, 1976). It is both relevant and important to examine bankruptcy laws in Saudi Arabia in order to understand the order of pay-offs to shareholders and debt holders and analyse the conflicts that may arise between financial stakeholders.

6.2 Capital Structure and Stakeholders

Proposition 6: In the absence of strict bankruptcy laws, highly leveraged firms would overinvest in risky projects.

Equity holder/debt holder conflicts arise when managers, acting in the interest of shareholders, prioritise the interests of those shareholders over the interests

of debt holders. There are two relevant theoretical predictions in this context. Myers (1977) argues that a firm would underinvest in positive NPV projects if the pay-off of these projects solely benefits debt holders. The second prediction is that, due to the limited liability of equity, managers would overinvest in risky projects, transferring the costs of unsuccessful projects to debt holders, and keeping the gains of successful projects (Jensen and Meckling, 1976; Brander and Lewis, 1986). Hence, the investments of the firm would depend on the pay-off structure in the event of bankruptcy. It is therefore relevant to analyse how respondents of manufacturing firms view bankruptcy laws in Saudi Arabia, and whether these laws have implications on the pay-offs of financial stakeholders and capital structure decisions.

The results of the interviews from the petrochemical sector show that the majority of respondents³⁹ find that bankruptcy laws do not affect their capital structure decisions [R1PQ9; R2PQ10; R4PQ10]. Respondent 4 stated that, if the company were in a position in which leverage would bring it closer to bankruptcy, then this might have an impact. Generally, however, bankruptcy laws have no impact on capital structure [R4PQ10]. Hence, there is little evidence to support the significance of Saudi bankruptcy laws in influencing capital structure and investment decisions.

In contrast, the results from the food sector are mixed. Respondent 1 claimed that bankruptcy laws affect his firm's capital structure and, in preparation for this, his company pays close attention to the solvency ratio [R1FQ10]. This ratio indicates the company's ability to survive in the long-term. Respondent 2 claimed that bankruptcy laws are of no significance [R2FQ8].

Similarly, the findings for the industrial investment industry are mixed, with Respondent 1 stating that bankruptcy laws do have an impact on the company's capital structure, due to a high Research and Development (R&D) intensity [R1IIQ10]. Respondent 2 maintained that they do not have any impact

³⁹ Respondent 3 did not address the question.

on capital structure [R2IIQ10]. The findings indicate that firms with high R&D intensity are more concerned about bankruptcy than others.

In the cement industry, the majority of respondents⁴⁰ claimed that bankruptcy laws do not have an effect on capital structure [R1CQ9; R4CQ10; R5CQ10]. Specifically, Respondent 1 opined that bankruptcy laws do not have any impact on the company's capital structure [R1CQ9]. Respondent 4 contended that "a strict bankruptcy law is always a deterrent [to the company] to opt for a higher level of leverage in the capital structure" [R4CQ10]. Thus, the lack of clear and strict bankruptcy laws in the Kingdom encourages firms to carry more debt.

Nevertheless, the response from the perspective of financial institutions indicates that the bankruptcy laws in Saudi Arabia are insignificant and not very clear [R3BQ8]. Respondent 1 asserted that Saudi Arabia's "bankruptcy laws do not protect a firm that is bankrupt, unlike the US" [R1BQ7]. Moreover, the pay-off structure differs from other jurisdictions. Respondent 1 stated that employees are paid first, "which goes beyond limited liability, then trade payables, then debt holders. If a firm has assigned securities, which are pledged to the bank, then [those securities] have priority" [R1BQ7].

Accordingly, the general perception is that bankruptcy laws in Saudi Arabia lack clarity and are rarely taken into consideration. The absence of strict bankruptcy laws entails higher levels of leverage. Moreover, in the previous section, it was established that the findings shown in Tables 5.6 and 5.7 in Chapter 5 reflect a positive relationship between leverage and risk. The pay-off structure outlined by Respondent 1 from financial institutions suggests that, if there are no securities pledged to the bank, pay-offs to managers (as employees) are prioritised and go beyond limited liability. Hence, the prediction of Brander and Lewis (1986) that leverage causes overinvestment in risky assets is only partially supported in this context, as it assumes the limited liability of equity and that managers act in the interest of shareholders. The results are also in line

⁴⁰ Respondent 2 did not address the question, and Respondent 3 simply stated that his company adheres to CMA rules with regards to bankruptcy.

with the findings of Huang and Song (2006), who find that firms with high levels of leverage tend to engage in riskier investments.

Proposition 7: Saudi Arabian manufacturing firms are more likely to be Shari'a compliant.

Shari'a compliance has significant implications on the capital structures of Saudi Arabian firms (Mirakhor and Zaidi, 2007). It is important to note that there is no regulatory barrier to the use of conventional (non-*Shari'a*-compliant) loans. Commercial banks in the Kingdom can provide firms with both *Shari'a*-compliant and conventional loans. Thus, it is the preference of the firm that governs the significance of *Shari'a* compliance. *Shari'a* compliance implies that there is a strict cap (33%) on the level of debt that firms can obtain from conventional loans. When the 33% conventional debt ceiling is violated, firms risk being excluded from being *Shari'a*-compliant (Al-Ajmi et al., 2009). However, when *Shari'a* compliance is enforced, firms generally rely on internally generated funds and maintain spare borrowing capacities (Al-Ajmi et al., 2009). Moreover, Mirakhor and Zaidi (2007) argue that the profit sharing concept of *Shari'a* compliant contracts promotes greater stability in financial markets and helps in mitigating agency problems by aligning the interests of the financial stakeholders of the firm.

In assessing whether companies are *Shari'a* compliant with regards to their loans, the majority of the respondents in the petrochemical sector claim that they are mostly *Shari'a*-compliant [R1PQ4; R2PQ4; R4PQ4]. The general message from the respondents was that they do not have to be *Shari'a* compliant, but they try their best to be [R1PQ4; R4PQ4]. However, Respondent 3 stated that the loans obtained by his company are not necessarily *Shari'a* compliant, and that the issue of compliance “depends on shareholders' philosophy and views” [R3PQ4]. Accordingly, the results indicate that *Shari'a* compliance is not a necessity in this sector and largely depends on the preferences of the shareholders of the firm.

All respondents in the food sector claimed that their respective companies are *Shari'a* compliant [R1FQ4; R2FQ3]. According to Respondent 1, *Shari'a* compliance is a part of “the company’s strategy. Lately, [the company has] been using *Shari'a* compliant debt products wherever they are available” [R1FQ4]. The results imply that *Shari'a* compliance is preferred in this sector.

The results in the industrial investment sector show that loans must be *Shari'a* compliant [R1IIQ4; R2IIQ4]. Respondent 1 stated that “any loans [the company] decides to take must be *Shari'a* compliant” [R1IIQ4], while Respondent 2 stated that *Shari'a* compliance “depends on the top management’s culture. In our case loans are complying with *Shari'a* law” [R2IIQ4]. Accordingly, the results for the industrial investment sector illustrate that *Shari'a* compliance is, in fact, an important consideration.

Moreover, the majority of respondents in the cement sector stated that their loans are in compliance with *Shari'a* [R1CQ4; R2CQ4; R3CQ4; R4CQ4]. The preference for loans to be *Shari'a* compliant seems to be the industry norm in the cement sector. Respondent 2 proclaimed that, while it is important that loans are in compliance with *Shari'a* laws, the satisfaction of shareholders typically motivates this decision [R4CQ4]. Respondent 1 stated that his “company’s sources of debt finance have to be 100% *Shari'a* compliant” [R1CQ4]. Respondent 4 argued that “in Saudi Arabia, project finance is being dealt with through *murabaha* agreements that comply with *Shari'a* law” [R4CQ4]. However, Respondent 5 maintained that “the cost of loans is one main consideration [and] it does not have to be *Shari'a* compliant” [R5CQ4]. Nevertheless, Respondent 5 also stated that his company “increasingly prefers *Shari'a*-compliant loans” to conventional ones [R5CQ4]. Therefore, *Shari'a* compliance is prevalent in this sector.

The interview results from the perspective of financial institutions show that all of the respondents indicated that loans must be *Shari'a*-compliant. However, the respondents made a distinction on the importance of *Shari'a* compliance between public and private companies, as well as small and large companies. Respondent 2 stated that *Shari'a* compliance is generally seen in public

companies [R2BQ2]. Moreover, according to Respondent 3, *Shari'a* compliance is particularly important for listed companies, especially those companies that appeal to a large number of investors [R3BQ3]. However, the respondent suggested that *Shari'a* compliance is less significant for larger companies [R3BQ3]. The Islamic environment that characterises the Saudi economy, thus, implies that *Shari'a* compliance is emphasised and made public by companies that wish to attract local investors. Moreover, Respondent 1 stated that, because most companies have Islamic balance sheets, loans tend to be *Shari'a* compliant [R1BQ3].

Therefore, the interview results serve as overwhelming evidence of the importance of *Shari'a* compliance for companies. *Shari'a* compliance is not compulsory, but companies do comply in order to attract more investors. The results indicate that *Shari'a* compliance is predominant in public companies that tend to publicise the fact that they are compliant in order to attract more investors. However, it is important to note that *Shari'a* compliance is primarily based on the preferences of shareholders, and, for large companies, it is viewed as less significant. The nature of *Shari'a* compliant contracts aligns the interest of shareholders and debt holders (Mirakhor and Zaidi, 2007). Such loans may provide further incentive to use debt as a disciplining device.

Proposition 8: Debt is used as a tool for disciplining management.

Agency theorists argue that conflicts may arise between managers and equity holders when managers use a firm's free-cash flows for opportunistic purposes (Jensen and Meckling, 1976). Managers may, thus, overinvest in negative NPV or risky projects for self-serving purposes—such as perks, power and empire building (Jensen, 1986). Debt can serve as a disciplining device that discourages managers from overinvesting a firm's free cash flows, since managers have to cover their debt obligations and are monitored by financial institutions (Jensen, 1986; Hart and Moore, 1995). Since *Shari'a* compliant contracts dominate the credit market, as has been previously indicated, respondents were questioned on whether the disciplining function of debt motivates their capital structure decisions.

All of the respondents in the petrochemical and food sectors claimed that debt is used as a disciplining tool for management [R1PQ10; R2PQ11; R3PQ8; R4PQ11; R1FQ11; R2FQ9]. However, for firms in the industrial investment sector, Respondent 2 stated that debt is not used as a discipline tool for management [R2IIQ11]. Respondent 1 countered that the availability of SIDF implies strict discipline. Therefore, debt *is* used as a disciplining tool [R1IIQ11]. If there is continuous monitoring by government lending institutions, such as the SIDF, then it could be argued that the conditions imposed with the provision of the SIDF loans prevent firms from wasting future free cash flows.

Nevertheless, the interview results for the cement sector show that the majority of the respondents claimed that they do not use debt as a disciplining tool [R1CQ10; R2CQ8; R3CQ11]. Respondent 2 stated that debt is used, among other things, to maintain customer loyalty through lines of credit, and not to discipline managers [R2CQ8]. However, some of the respondents indicate that debt is sometimes used to discipline managers. Respondent 4 stated that “management should be alert at all times to avoid falling in default, and this requires a strict discipline in cash management” [R4CQ11]. The problem with this explanation is that the relationship between debt and its ability to discipline management seems rather vague. If the company is struggling, it may well fall into default even if cash is efficiently managed and not wasted. The doctrine of discipline regarding free cash flow is that companies take on debt to avoid wasting excess cash. This is the crux of the issue.

All respondents from the financial institutions agree that debt is used as a disciplinary tool for managers [R1BQ8; R2BQ6; R3BQ9]. Respondent 1 asserted that “sometimes shareholders require management to abide by certain accounting principles. Financial commitments definitely have disciplinary reactions” [R1BQ8]. This result is in line with the findings of Healy and Palepu (2001), who emphasize the importance of accounting standards and disclosure rules in enhancing the credibility of the firm with respect to its lenders and protecting its investors.

Accordingly, the findings of the interviews regarding whether debt is used as a disciplinary tool show that the majority of respondents claimed to have used debt in this way. However, it is important to note that the monitoring and disciplining effect of debt is an inherent benefit, and not necessarily the primary reason for seeking external funding. Moreover, the quantitative findings show that profitable firms would carry less debt. If debt is used principally and effectively for disciplining managers, the firm's cash flows are not wasted. Therefore, firms would follow the pecking order in using their free-cash flows for investment and would rely less on debt for funding (Chang, 1999). This could explain the quantitative finding that profitable Saudi manufacturing firms carry less debt. The findings are also consistent with the agency theory prediction of the use of debt as a disciplining device (Jensen and Meckling, 1976; Jensen, 1986).

Proposition 9: The shareholders of a firm significantly influence its capital structure.

The ownership of structure of a firm can have significant implications on its capital structure decisions (Rajan and Zingales, 1998; Booth et al., 2001). In the context of Saudi Arabian manufacturing firms, it has been established in the previous sections that shareholders can influence capital structure decisions through their appetite for debt and their preference for *Shari'a* compliance. The influence of shareholders was further emphasised when respondents were specifically asked about the manner in which shareholders influence capital structure decisions.

The findings of the interviews for the petrochemical sector on the influence of shareholders on capital structure show that the majority of respondents agree that shareholders have an influence on capital structure. Respondents 1 and 3 argued that their influence is limited [R1PQ11; R3PQ9]. Respondent 2 argued that shareholders would prefer for his company to take on more debt [R2PQ12]. This demonstrates the 'debt-happy' culture of this particular company's shareholders. Respondent 4 opined that reputable shareholders increase the credibility of the company, which could facilitate its access to finance and could

have a significant influence on the amount of equity that is assigned to the firm's investment projects [R4PQ12]; thus, shareholders "definitely have a say in the capital structure decision" [R4PQ12]. Hence, shareholders' influence on capital structure decisions is prevalent in the petrochemical sector.

In the food industry, Respondent 1 argued that his company seeks "to maximise shareholder value" [R1FQ12]. However, Respondent 2 stated that shareholders have an indirect effect on the firm's leverage, through its dividend policy [R2FQ10]. Managers, hence, have to balance the amount of dividends paid back to a company's shareholders with retained earnings that are used for reinvestment, so as not to hinder the firm's growth prospects.

For companies in the industrial investment sector, the findings demonstrate that shareholders have an influence on capital structure. Respondent 1 contended that shareholders' requests for more rights and bonus issues "may not be economically sound but [are] sometimes necessary" [R1IIQ12]. Respondent 2 argued that shareholders' ability to contribute more equity when needed significantly influences capital structure decisions [R2IIQ12].

The result for the cement industry shows that, for majority of the respondents, shareholders, through their dividend policy, have an influence on the level of debts of the companies [R2CQ10; R3CQ12; R4CQ12]. An increase in the dividend pay-out implies a reduction in the retained earnings. This will force companies to either increase debt or equity to fund their investments. However, Respondents 1 and 5 argued that shareholders have no impact on capital structure decisions [R1CQ11, R5CQ12].

The results from the perspective of financial institutions indicate that shareholders influence the leverage levels of companies [R1BQ9; R2BQ7]. However, the results depend on the type of companies. Respondent 1 argued that certain shareholders do not prefer debt, whereas others can be more "debt happy" [R1BQ9]. Moreover, the respondent asserted that "shareholders with good reputation facilitate access to finance" [R1BQ9]. Respondent 3 stated that shareholders have no influence on the capital structure of listed companies, and

that they are only effective for private companies [R3BQ10]. Accordingly, lenders emphasise the importance of shareholders in influencing firms' capital structures.

Hence, the findings of the interviews demonstrate that shareholders significantly affect capital structure decisions. The extent of their influence depends on the nature of the firm. The results are in line with the findings of Rajan and Zingales (1998) and Booth et al. (2001), who find that major shareholders significantly influence capital structure decisions. It is, thus, relevant to quantify the effect of different shareholders in order to provide greater insight about the influences of different shareholders on capital structure decisions.

Hypothesis 4: Family ownership has a positive impact on leverage.

The existence of large family ownership blocks in firms can influence capital structure decisions. Rajan and Zingales (1998) argue that large ownership blocks help mitigate agency problems when owners actively manage the firm. Therefore, large family ownership blocks can replace debt as a disciplining device, if family owners actively monitor the firm. The second channel is through the fact that family owners prefer to carry more debt, as equity would dilute their ownership stake and control of the firm.

In order to assess this empirically, dummy variables were used to represent family ownership. The results in Tables 5.6 and 5.7 show that firms that have large family ownership blocks carry more debt than those that do not. The results for the pooled sample with White-corrected standard errors show that firms with family ownership carry 5% more debt than those that do not have family ownership on both measures of leverage, and these results are significant at the 1% level. The result is, hence, consistent with the proposition that family-owned firms would carry more debt. The results can be attributed to the fact that family-owned firms prefer debt in order to avoid diluting their equity stakes and reducing their control of the firm. The results are also in line with empirical studies that demonstrate a positive relationship between family ownership and leverage (Bianco and Nicodano, 2006; King and Santor, 2008;

Mehran, 1992). However, the finding contradicts the results reported by Al-Ajmi et al. (2009), who report a negative relationship between family ownership and leverage. Accordingly, the family ownership of a firm can help explain corporate attitudes towards debt and significantly influences capital structure decisions.

Hypothesis 5: Institutional ownership has a negative impact on leverage.

Institutional ownership blocks affect capital structure decisions through two main channels. First, large institutional ownership blocks can help mitigate agency problems. Chen et al. (2007) demonstrate that institutional investors actively monitor a firm's activities. Thus, institutional ownership can act as a substitute for debt in reducing agency problems. Secondly, Michaely and Vincent (2012) demonstrate that institutional owners devote considerable resources to collecting information, which reduces informational asymmetries. This, in turn, reduces the cost of equity. Both channels imply that institutional ownership leads to lower leverage. In order to assess this empirically, dummy variables were used to represent family ownership. The results in Tables 5.6 and 5.7 show that firms that have large institutional ownership blocks carry more debt. The results for the pooled sample with White-corrected standard errors show that firms with institutional ownership carry 13% more debt, when leverage is measured as total liabilities to total assets, and 9% more debt, when leverage is measured as long-term debt to total assets. These results are highly significant at the 1% level.

The results reject the proposition of a negative relationship between institutional ownership and leverage. The positive relationship can be attributed to the fact that institutional investors do not replace the monitoring and disciplining function of debt. Another possible explanation is that institutional investors do not sufficiently reduce information asymmetries in this context, and hence, in accordance with pecking order theory, the cost of equity would remain high. The results are consistent with the findings of empirical studies that demonstrate that firms with institutional owners would have higher leverage (Berger et al., 1997; Chen and Steiner, 1999). More specific to the Saudi market, the result is

consistent with the findings of Al-Ajmi et al. (2009), who find a positive relationship between institutional investors and leverage.

Proposition 10: Government Owned firms are likely to carry more debt.

Hypothesis 6: Government ownership has a positive impact on leverage.

Governments could have significant equity holdings in Saudi manufacturing firms. Allen et al. (2005) argue that governments tend to prioritise government loans to SOEs. Moreover, the backing of the government increases the credibility of the firm, which would imply greater access to external finance. Therefore, given that Saudi manufacturing firms utilise government loans in the form of SIDF loans in their capital structure—coupled with the benefit of higher credibility and lower risk of default—the prediction is that firms with large government ownership blocks would carry more debt. This prediction is tested in two ways. First, semi-structured interview results were analysed in order to provide insight into the perspectives of managers and financial institutions on the effect of government ownership on capital structure. Quantitative financial analysis, in the form of a dummy variable for government ownership was then examined to complement the interview results.

The interview results for the petrochemical sector indicate that the majority of respondents took the view that government ownership has no effect on capital structure, as government financial institutions are regarded as separate entities [R1PQ12; R2PQ13; R4PQ13]. However, Respondent 3 opined that government ownership “facilitates access to finance” [R3PQ10]. Moreover, all respondents from the food sector and the industrial investment sector⁴¹ claimed that government ownership is unrelated to access to finance [R1FQ13; R2FQ11; R1IIQ13]. The majority of respondents from the cement sector⁴² also claimed that government ownership is unrelated to access to finance [R1CQ12; R3CQ13; R5CQ13]. Respondent 5 stated that “even SIDF, the government

⁴¹ Respondent 2 from the industrial investment sector talked about the effect of the government as a lender and not a shareholder.

⁴² Respondent 2 from the cement sector talked about the effect of the government as a lender and not a shareholder.

financing institution, pays no consideration to the government being a shareholder” [R5CQ13]. However, Respondent 4 opined that it is “easier to obtain loans when the government is [both] lender and shareholder” [R4CQ13].

Accordingly, the interview results indicate that the general opinion is that the relationship between government ownership and leverage is spurious. To validate this point further, the empirical results outlined in Table 5.7 of Chapter 5 illustrate an insignificant relationship between government ownership and leverage, when measured as TLTA. The result implies that government ownership has no effect on leverage. This is in line with the majority of responses reported in the semi-structured interviews. Nevertheless, when leverage is measured as LTDTA, the results outlined in Table 5.10 indicate that there is a positive relationship between government ownership and leverage. The result is consistent with the positive relationship between government ownership and leverage reported by Al-Sakran (2001) on the market level and is inconsistent with the negative result reported for the industrial sector. The result is also inconsistent with the findings of Al-Ajmi et al., (2009) who demonstrate a negative relationship between government ownership and leverage. Since the qualitative findings do not support the quantitative results on a positive relationship between government ownership and leverage, the proposition cannot be accepted. Accordingly, government equity participation does not relate to a firm’s capital structure decisions, and hence, should not be considered.

Proposition 11: Saudi manufacturing firms are more likely to carry more debt when debt is easily accessible or available.

After considering the different implications of equity holders on capital structure, it is important to consider the manner in which debt holders influence capital structure decisions. The analysis of the effect of debt holders on capital structure begins by considering the extent to which debt is available for manufacturing firms in Saudi Arabia. Several authors argue that firms would rely on internally generated funds, rather than debt, if external credit was costly or difficult to access (Ferri and Jones, 1979; Beck et al., 2002; Cassar and

Holmes, 2003). Hence, managers were questioned on whether they have difficulty accessing debt.

The findings from the semi-structured interviews show that, for the petrochemical sector, the majority of the respondents claim that the availability of credit has no influence on leverage [R1PQ13; R3PQ11; R4PQ14]. According to Respondent 1 “It is relatively easy to access credit... [The firm has] never defaulted [and its] business is strong [and it enjoys] a strong history and excellent reputation” [R1PQ13]. However, Respondent 2 argued for a positive relationship between the level of leverage and the availability of credit, as the company needs “to keep some unutilised, especially with high working capital” [R2PQ14]. Respondent 3 asserted that leverage depends on the business cycle of the economy [R3PQ11]. He mentioned that his company faced difficulty accessing credit in the past but that it currently has no such problem [R3PQ11]. Thus, the results indicate that the capital structure of manufacturing firms in the petrochemical sector does not depend on the availability of credit.

Similarly, in the food sector, both respondents claim that debt is readily available [R1FQ14; R2FQ12]. Respondent 1 stated that the availability of credit has no bearing on the level of debt that the company assumes, except when the risk is shared with the bank. The respondent contended that his company has always enjoyed “substantial [credit] facility lines with banks” and, therefore, finance can be readily obtained for its projects [R1FQ14]. Hence, firms in the food sector do not face difficulties in accessing credit.

However, for firms in the industrial investment sector, the results are mixed. While Respondent 1 claimed that his company faces “no problem with the availability of credit” [R1IQ14], Respondent 2 argued that “there are some financial covenants that may restrict the appetite for borrowing”, even when credit is available [R2IQ14].

In the cement sector, the majority of the respondents believed that the availability of credit affects their firms’ leverage to a certain extent [R1CQ13; R4CQ14 R5CQ14]. However, Respondent 3 maintained that “the strong

financial position of the company is appropriate for easy access to funding” [R3CQ14]. Similarly, Respondent 2 claimed that leverage is not dependent upon the availability of credit [R2CQ11].

Respondents from financial institutions⁴³ provided mixed views on the significance of the availability of credit. Respondent 3 stated that the availability of credit sometimes influences leverage and points to the attitude of banks following the financial crisis. He claimed that banks “decided to turn 180 degrees and became much more strict [*sic*]” in providing loans to companies. However, Respondent 1 argued against this, stating “as a bank you prefer to be involved with a successful businesses”, implying that the availability of credit is contingent on the success of the business [R1BQ10]. The success and profitability of Saudi manufacturing firms suggests that the availability of credit is less of a constraint in this particular sector.

Hence, the results indicate that the majority of Saudi manufacturing firms face no barriers to accessing credit. Hence, the proposition is accepted. It is also relevant to note that firms that are underleveraged did not mention their inability to access debt as a justification for lower leverage. In fact, such firms, as argued by Respondent 1 from the industrial investment industry, have substantial “excess cash” that is utilised to fund their operations [R1IIQ7]. Some respondents asserted that funds are available, but financial covenants and the length of processing make them unattractive [R1IIQ7; R2IIQ14]. Moreover, the findings show the significance of the availability of credit on capital structure to be more pronounced in the cement sector.

Proposition 12: Saudi manufacturing firms are more likely to have access to international funding.

The results of the previous section demonstrate that credit is available in the local market and should be easily accessible to local manufacturing firms. However, the multinational nature of some of the manufacturing firms interviewed means that credit may not be restricted to the local market. The

⁴³ Respondent 2 did not address the question.

expectation is that, in general, Saudi manufacturing firms are more likely to have some of their debt from international sources. To validate this point further, respondents were asked whether they could obtain loans from international financial institutions to fund their operations.

Firms in the petrochemical sector have access to both local and international finance. All respondents pointed to their use of international debt in their capital structure [R1PQ14; R2PQ15; R3PQ12; R4PQ15]. Respondent 1 stated that his company uses “both regional and international finance [and] about 60% of [the firm’s] loans are international” [R1PQ14]. However, the use of external finance also depends on the location of the company’s current project [R1PQ14]. Respondent 2 asserted that, for projects in international countries, the source of finance is external debt [R2PQ15]. Further, when the company has foreign partners located overseas, the probability of relying on external finance increases [R2PQ15]. Respondent 3 stated that his firm’s use of external finance is conditional on international partners and engineering, procurement and construction (EPC) contractors [R3PQ12]. Accordingly, the use of international debt is predominant in this sector.

The results for the food sector show that firms in this sector do not rely on external finance to conduct their business. Respondent 2 noted that, although external financing can be used, the firm prefers to rely on local financing [R2FQ13]. Respondent 1 argued that it is not economically viable to use external financing and that his company “used to obtain financing from external banks but stopped due to additional cost (withholding tax), [as external banks are] less competitive than the local market” [R1FQ15]. Therefore, the interview results from the food sector indicate that, provided that manufacturing occurs internally, companies that seek international financing would expose themselves to exchange rate and other risks, in addition to the high costs of debt. Accordingly, international finance is not economically feasible in this context.

The results from the industrial investment sector regarding the use of external finance are mixed. Respondent 1 claimed that his company “would prefer local

finance” [R1IIQ15]. However, Respondent 2 argued against this, stating that his company uses external finance, along with its foreign partners, but the exchange rate risk remains a concern [R2IIQ15]. Hence, the results indicate that finance can be obtained from international sources, but the preference is for local funding.

The results for the cement sector show that most respondents⁴⁴ do not use external finance for their project [R2CQ12; R3CQ15; R4CQ15; R5CQ15]. According to Respondent 3, the reasons for not seeking international finance are related to the fact that negotiations for international funds tend to be time-consuming. Also, the conditions of the loans are cumbersome and can adversely affect the timely implementation of the project [R3CQ15]. Hence, international loans are not economically feasible [R5CQ15]. Respondent 4 attributed this result to the nature of guarantees required and other restrictions by the Saudi Arabian Monetary Agency (SAMA) [R4CQ15]. Accordingly, the use of international debt is less prevalent in the cement sector.

The result from the perspective of financial institutions suggests that external financing from other countries is rarely used. Respondent 1 stated “external finance is used to a less[er] extent” [R1BQ11]. Respondent 2 argued that “external finance is appropriate only for specialised projects” and is otherwise expensive and unwise [R2BQ8]. In addition, Respondent 3 maintained that “the use of external finance is very limited and that only a small segment of the market uses external finance” [R3BQ13].

Accordingly, in general, the results indicate that the majority of Saudi manufacturing firms have access to finance from international sources.

Therefore, the proposition is accepted. However, the availability of international finance depends on whether the companies have international partners or projects. There are several considerations—such as negotiation periods, rules and SAMA regulations—with which a firm must comply in order to finance its

⁴⁴ Respondent 1 stated that there is no regulatory barrier to the use of external finance. The respondent made no mention of external finance being used by his company.

projects from international sources. More importantly, international finance can be uneconomical, and costs associated with exchange rate risk can weigh heavily on borrowers. Thus, on average, credit is available to Saudi manufacturing firms both locally and internationally, with local finance being the preferred option.

Proposition 13: Saudi manufacturing firms with strong banking relations are likely to carry more debt.

Hypothesis 7: Relationship banking has a positive impact on leverage.

Commercial banking concentration can significantly affect a firm's capital structure decisions (Petersen and Rajan, 1995; Cetorelli and Strahan, 2006; and Gonzalez and Gonzalez, 2008). The Saudi Arabian banking sector is highly concentrated (SAMA, 2013), and it can be argued that relationship banking attains greater importance in this context, as underlined by Peterson and Rajan (1995). In such markets, relationship banking has a positive impact on leverage (Fan et al., 2010). This prediction was tested in two ways. First, semi-structured interview results were analysed in order to provide insight into the perspectives of managers and financial institutions on the effect of relationship banking on capital structure. Quantitative financial analysis, in the form of a dummy variable for relationship banking, was then examined to complement the interview results.

The results show that all of the respondents in the petrochemical sector agreed that their relationship with banks has a positive effect on leverage [R1PQ15; R2PQ16; R3PQ13; R4PQ16]. However, Respondent 2 emphasised that the relationship is institutional and not necessarily personal [R2PQ16]. According to Respondent 3, this relationship "facilitates it in terms of level of importance, attention and exposure". However, it does not change the terms and conditions of the loan [R3PQ13]. Respondent 4 argued that a firm's capital structure depends on the performance, reputation and quality of the managers [R4PQ16]. The respondent stated "sometimes banks don't lend to a project but rather to the people that manage the project" [R4PQ16]. Accordingly, relationship banking is a significant strategic determinant of capital structure in this sector.

Both respondents in the food sector stated that their relationship with their banks helps facilitate their access to bank loans. Respondent 1 argued that relationships with banks are crucial in obtaining funds from banks [R1FQ16]. However, Respondent 2 pointed out that, regardless of this relationship, other factors—such as a company’s ratings and track records—are essential to secure loans from banks [R2FQ14].

For companies in the industrial investment sector, the influence of relationship banking on the level of leverage is mixed. Respondent 2 stated that good relationship with banks increase the speed with which a firm is able to get finance from the banks [R2IIQ16]. However, Respondent 1 suggested that the relationship with banks is irrelevant, as his company has “no need to tap into commercial bank finance at the moment” [R1IIQ16]. Accordingly, profitable firms that generate enough liquidity to finance their projects through retained earnings follow the pecking order and do not necessarily need to have close relationships with banks.

In the cement industry, the findings show that the majority of respondents state that relationship banking has an influence on capital structure [R2CQ13; R4CQ16; R5CQ16]. Respondents 2, 4 and 5 claim that the relationship between the firm and the bank facilitates access to credit [R2CQ13; R4CQ16; R5CQ16]. However, Respondents 1 and 3 believe that the relationship between the firm and the bank has no bearing on leverage, because leverage and the ability to access funds depend on the company’s financial position, reputation and the company’s credit rating [R1CQ15; R3CQ16]. Accordingly, relationship banking is particularly important for facilitating access to credit in this sector.

The results from the financial institutions show that all of the respondents indicated that the relationship between firms and banks increases the possibility of securing loans but does not necessarily guarantee that the loan is granted [R1BQ12; R2BQ9; R3BQ14]. Respondent 2 argued “relationships matter but banks do severe due diligence, especially after 2008” [R2BQ9]. However, Respondent 3 stated that, although relationship banking gives you quick access, banks still have to conduct due diligence, and while the relationship

does not guarantee that the company will secure the loan, it might help in “easing the conditions” of the loan [R3BQ14]. Thus, the results support the findings of Boot (2000), who demonstrates that firms with strong banking relationships have lower information asymmetry and easier access to finance.

Hence, the results of the semi-structured interview indicate that companies that enjoy strong relationships with banks have greater access to finance and, therefore, carry more debt. To investigate this empirically, a dummy variable was used to represent relationship banking. This variable took the value 1 if members of the firm’s board were also on the board of the banks, and zero otherwise. The results in Table 5.6 show that, when leverage is defined as total liabilities-to-total assets (TLTA), firms that have strong relationship with their banks have higher leverage than those that do not have strong relationships with their banks. The results for the pooled sample with White-corrected standard errors showed that firms with strong relationship with their banks are, on average, 12% more leveraged than their counterparts with weaker relationships with their banks, and the results are significant at the 1% level. Moreover, when leverage is defined as long-term debt-to-total asset (LTDTA), the results in Table 5.7 show that firms with strong relationships with their banks are, on average, 5% more leveraged than their counterparts, and the results are significant at the 1% level. Thus, the hypothesis is accepted.

Both the interview results and the quantitative financial analysis point to the fact that relationship banking is a significant determinant of capital structure; therefore, the proposition is accepted. The result can be attributed to the fact that strong banking relationships reduce information asymmetries between a firm and its creditors. Thus, managers of Saudi manufacturing firms ought to maintain close relationships with their banks in order to obtain greater access to finance. The result is consistent with the findings of Boot (2000) and Gonzales and Gonzales (2008), who report a positive relationship between relationship banking and leverage.

Proposition 14: Saudi manufacturing firms that have access to government loans are more likely to carry more debt.

Another channel through which Saudi manufacturing firms can obtain external funds is through government loans. The SIDF provides manufacturing firms with low interest loans of up to 75% of capital paid over 20 years as discussed in Chapter 3. These loans are arguably the most important mode of financing for Saudi Manufacturing firms. The SIDF loan increases the leverage of the company that receives the loan, and this amount can vary depending on the area in which the company operates. Galdino and Micco (2004) argue that government intervention through the provision of loans and other assistance helps promote growth and increases leverage, especially for industries that have significant tangible assets that can be used as collateral, like the manufacturing industry. Hence, the prediction is that Saudi manufacturing firms would take advantage of cheap government loans in financing their operations and, therefore, carry more debt.

The interview results on capital structure formation and the influence of government on capital structure show that all respondents for the petrochemical and food sector claimed to have received SIDF loans, regardless of the amount, which increases their respective companies' leverage [R1PQ3; R2PQ1; R3PQ2; R4PQ2; R1FQ3; R2FQ1]. In the industrial investment sector, Respondent 2 claimed that government loans are the most important factor that influences the capital structure of the firm [R2IIQ17]. Similarly, the majority of respondents in the cement industry agreed that the presence of government loans in the form of SIDF positively influences their leverage [R3CQ17; R4CQ17; R5CQ17]. Respondent 5 suggested that capital structure depends on the availability of SIDF loans [R5CQ6]. There are, hence, two possible scenarios:

Table 6.1: Respondent 5 from cement sector - capital structure scenarios

	In case SIDF loan is available (Scenario one)	In case SIDF loan is not available (Scenario two)
Equity	25 %	50 %
Commercial loan	25 %	50 %
SIDF soft loan	50%	--
Total	100 %	100 %

Table 6.1 implies that the presence of SIDF loans increases leverage by 25%, as only 25% of capital can be pledged as equity [R5CQ6]. However, Respondent 1 from the cement sector stated that his company only uses SIDF loans when there is a need to finance a project, and that these loans do not necessarily have a permanent role in his firm's capital structure [R1CQ16].

The results, from the perspective of the financial institutions, show that government support in the form of SIDF loans has an impact on a firm's capital structure and leverage positions [R1BQ13; R3BQ15]. Respondent 1 claimed that "government involvement makes leverage easier from a commercial banking point of view" [R1BQ13]. This can be attributed to the fact that SIDF loans have strict covenants, which reduces the need for further due diligence by commercial banks.

Thus, the results of the interviews indicate that SIDF loans play a crucial role in the determination of companies' leverage positions. The availability of SIDF loans positively impacts a firm's leverage, and, hence, the proposition is accepted. In the absence of SIDF, manufacturing firms tend to have a 1:1 debt to equity ratio. However, when SIDF loans are available, debt can account for up to 75% of capital structure. The availability of SIDF loans for manufacturing projects helps explain the aforementioned debt orientation in the capital structure of manufacturing firms.

Proposition 15: Government subsidies significantly influence the capital structure decision of Saudi manufacturing firms.

In the context of Saudi Arabia, land and fuel subsidies play a major role in the manufacturing sector, particularly in the petrochemical and cement sectors (Mahdi, 2011a; Mahdi, 2011b; Peel, 2013). The availability of government subsidies reduces the costs for a firm and thus reduces the need for external funding. Therefore, respondents were questioned on the manner in which government support affects their leverage.

The interview results for the petrochemical industry are mixed. Respondents 1 and 2 claimed that subsidies are significant to capital structure decisions

[R1PQ16; R2PQ17]. Respondents 3 and 4 made no reference to subsidies and only mentioned government support in terms of financing [R3PQ14; R4PQ17]. In the food industry, the results were also mixed. Respondent 1 claimed that government financial support through SIDF is important but made no reference to subsidies [R1FQ17]. However, Respondent 2 suggested that “subsidies mean more control” and, hence, his preference would be to have no subsidies [R2FQ15].

The results from the industrial investment sector are mixed. Respondent 1 claimed that “government subsidies have some influence through industrial lands” [R1IIQ17]. However, Respondent 2 referred to government support, in terms of financing (SIDF), to be the main influential factor [R2IIQ17].

In the cement sector, the majority of respondents addressed government support in the form of SIDF loans and made little reference to subsidies [R1CQ16; R4CQ17; R5CQ17]. Respondent 3 claimed that government support in general is an important factor to capital structure decisions [R3CQ17]. However, Respondent 2 emphasised that government subsidies are not only essential in influencing the company’s need for finance, but also in affecting a firm’s prospects for expansion [R2CQ14]. The respondent stressed the importance of fuel subsidies to the cement industry as the main influential factor [R2CQ14]. Moreover, the results from the perspective of financial institutions show that respondents refer to SIDF loans as the main factor, with little reference to government support in terms of subsidies [R1BQ13, R3BQ15].

The findings indicate that subsidies are less important than financial government support in the form of SIDF. Hence, the proposition is rejected. Subsidies increase profits and competitive advantage of individual manufacturing firms while reducing their need for external finance. However, subsidies, in the context of Saudi manufacturing firms, serve as an added advantage, and firms view government support through SIDF as the main influence on their capital structure decisions. Subsidies are not observed to be sufficient in eradicating a firm’s need for external finance. Instead, they reduce some of the costs imposed on the firm and help increase the competitive

advantage of local firms. The results are inconsistent with the findings of Mitra and Webster (2008), who indicate that government subsidies could have an influence on a firm's capital structure decisions.

Proposition 16: Suppliers are more likely to influence the capital structure of Saudi manufacturing firms.

Suppliers can influence capital structure decisions by bargaining for larger shares of a firm's surplus earnings. Several studies demonstrate that firms can use debt to reduce the bargaining power of suppliers (Dasgupta and Sengupta, 1993; Brown et al., 2009; Kale and Shahrur, 2007). By issuing debt, a firm commits to paying out a proportion of its surpluses to lenders and is able to limit the amount of surpluses that suppliers can extract through their bargaining power. To test this theory, respondents were asked about the manner in which suppliers influence their capital structure decisions.

The majority of respondents claimed that suppliers do not have a significant influence on capital structure decisions for firms in the petrochemical, food and industrial investment industries [R1PQ17; R2PQ18; R4PQ18; R1FQ18; R2FQ16; R1IIQ18; R2IIQ18]. Respondent 3 from the petrochemical sector claimed that the effect is a "one time" effect on capital expenditure [R3PQ15]. However, even though the majority of the respondents in the cement industry suggested that suppliers have no impact on the capital structure of companies [R1CQ17; R2CQ15; R3CQ18; R5CQ18], Respondent 4 argued that the payment terms offered by suppliers could impact a firm's capital structure [R4CQ18]. In addition, Respondent 5 stated that suppliers have an impact on capital structure if they are involved in the financing of capital projects; otherwise, they have no impact on leverage [R5CQ18].

The interview results from the perspective of the financial institutions indicated that suppliers may have an influence on the capital structure of firms through lines of credit [R1BQ14; R3BQ16]. However, if no lines of credit were extended, suppliers would not have any influence on a firm's capital structure [R1BQ14]. The influence depends on the extension of lines of credit. Accordingly, suppliers

would only influence the capital structures of Saudi manufacturing firms if they were financial stakeholders.

The findings indicate that, on average, suppliers do not have an influence on the capital structure of a firm; thus, the proposition is rejected. The little evidence that points to the significance of suppliers emphasises their role as a financial stakeholder through lines of credit [R3PQ15; R5CQ18]. However, none of the respondents made reference to the bargaining power of suppliers. The results, therefore, do not support the arguments of studies that relate supplier influence to capital structure (Brown et al., 2009; Kale and Shahrur, 2007). These findings can be attributed to the lack of supplier bargaining power in the Saudi manufacturing industry.

Proposition 17: The quality of the products of Saudi manufacturing firms is compromised during periods of economic downturn.

Proposition 18: Customers are more likely to influence the capital structure of manufacturing firms.

Customers of highly leveraged firms could influence their capital structure decisions. Titman (1984) contends that customers are unwilling to deal with firms that are highly leveraged, as they are more prone to bankruptcy than their conservatively leveraged peers. Customers take into account the direct switching costs (of finding alternative products) and implicit costs (of compromised quality or reliability) and bargain with highly leveraged firms to reduce their prices (Cornell and Shapiro, 1987). Moreover, Hillier et al. (2008) assert that, during periods of financial distress, customers may receive inferior products. Therefore, respondents were asked about the extent to which their product quality is compromised during periods of economic downturn. Additionally, the respondents were questioned about the manner in which customers affect their capital structure decisions.

When assessing the effect of capital structure decisions on the quality of the products, especially during periods of economic distress, most respondents in the petrochemical sector state that their capital structure decisions have no

impact on product quality [R1PQ18; R2PQ19; R4PQ19]. Respondent 2 asserted that “the quality of the product is never compromised” [R2PQ19]. Similarly, Respondent 4 claimed that the firm does not compromise on product quality. The respondent went on to argue that, when the market is weak, product quality is essential because competition is higher [R4PQ19]. In fact, in a buyer’s market, lower quality will negatively affect sales. Sometimes companies look at cost saving methods, or delay the introduction of luxurious products, rather than compromise the quality of the product [R4PQ19]. However, Respondent 3 countered that “many products are affected by market conditions” [R2PQ20]. Nevertheless, the majority of the respondents in the petrochemical suggest that customers do not have any impact on the companies’ capital structure [R1PQ19; R2PQ20; R4PQ20]. However, Respondent 3 disagreed, as customers do have an impact on leverage through lines of credit [R3PQ17]. Accordingly, customers would only influence capital structure if they were extended lines of credit.

The results from the food sector show mixed evidence regarding the compromise of quality during periods of economic downturn. Respondent 1 in the food sector stated that during market downturns “price adjustments take place in order to remain competitive and maintain market share”; therefore, “innovation in the product itself” takes place [R1FQ19]. A firm is more likely to cut costs or cut down on production levels, and the quality and size of packaging might be compromised in order to retain profit margins [R1FQ19]. Respondent 2 claimed that quality is not compromised [R2FQ17]. Nevertheless, the interview results from the food sector indicate that customers have no influence on capital structure [R1FQ20; R2FQ18]. The results indicate that, even if the quality of the product was compromised, customers would not have enough bargaining power to influence a Saudi manufacturing firm’s capital structure decision in the food sector.

Furthermore, both respondents from the industrial investment sector insisted that quality is not compromised during periods of economic downturn [R1IIQ19; R2IIQ19]. Respondent 1 in the industrial investment sector emphasised the

importance of maintaining quality and suggested searching for cheaper suppliers as a way of adjusting to economic downturns [R1IIQ19]. With regards to customer influence, the respondent claimed that customers can influence leverage through lines of credit [R1IIQ20], but Respondent 2 argued that customers have no influence on leverage [R2IIQ20].

Similarly, the majority of the respondents in the cement industry considered that capital structure decisions have no impact on the quality of the product⁴⁵ [R1CQ18; R2CQ16; R3CQ19; R5CQ19]. Respondents 3 and 5 argued that there is a need to maintain the quality of the product in order to meet market standards, irrespective of the constraints or financing decisions [R3CQ19; R5CQ19]. Moreover, the majority of the respondents in the cement industry claimed that customers have no impact on leverage [R1CQ19; R2CQ17; R3CQ20; R5CQ20]. However, Respondent 4 claimed that customers do affect leverage through lines of credit [R4CQ20].

Nevertheless, the results from the perspective of financial institutions show that the majority of the respondents argued that customers could influence the companies' capital structure and leverage [R1BQ15; R2BQ11; R3BQ17]. Respondents 1 and 2 referred to the quality of the customer as an influential factor [R1BQ15; R2BQ11]. Respondent 1 stated that, if the government is a major customer, then it could have an impact on the company's capital structure, as some government institutions are often late on payments [R1BQ15]. In this case, the company will have to resort to debt in order to finance its operations if cash inflows are late [R1BQ15]. Respondent 3 indicated that customers affect leverage through lines of credit [R3BQ17].

The overall finding suggests that customers do not have an impact on the firm's leverage. Hence, the proposition is rejected. Hillier et al. (2008) argue that a firm's leverage has a negative impact on its product quality, making customers reluctant to deal with such firms. Yet the evidence suggests that firms in the

⁴⁵ Respondent 4 provided a connection between high debt levels and their impact on cash flow available for operations, which includes marketing and advertising; the respondent, therefore, did not address the question.

manufacturing industry do not compromise on the quality of their product, irrespective of the market conditions. Accordingly, customers have no reason to bargain for price concessions during periods of economic downturn.

Proposition 19: Employees are less likely to have an influence on the capital structure of Saudi manufacturing firms.

A firm's capital structure decision can affect its employees through several channels. Highly leveraged firms are more likely to lay off employees in the event of financial distress (Hillier et al., 2007). In turn, employees of highly leveraged firms bargain for better contracts in order to compensate for the implicit costs of financial distress (Sarig, 1998). Hence, there is a positive relationship between leverage and labour costs. These costs can be sufficient in discouraging a firm's leverage (Berk et al., 2010). Perotti and Spier (1993) argue that a firm can respond to the bargaining power of trade and labour unions by increasing its leverage, which reduces its surpluses and protects the firm from the threat of unions. Firms have to trade off the benefits of debt with the additional labour costs imposed from employees bargaining for higher wages. It is, however, important to note that labour unions do not exist in the context of the Saudi Arabian market. Thus, the bargaining power of employees is less pronounced.

The results of the interviews for the manufacturing industries—petrochemical, food, industrial and cement—show that employees in Saudi Arabia do not have any impact on their company's capital structure [R1PQ20; R2PQ21; R3PQ18; R4PQ21; R1FQ21; R2FQ19; R1IIQ21; R2IIQ21; R1CQ20; R2CQ18; R3CQ21; R5CQ21]. Only Respondent 4 from the cement industry claimed that employees have an indirect influence, through their stock option plans [R4CQ21]. Therefore, the Respondent claimed that "a lower level of equity might be decided upon in consideration of potential issuance of new shares to employees" [R4CQ21]. This statement is consistent with the findings of empirical studies that demonstrate that leverage is positively related to managerial compensation (Sarig, 1998; Berkovitch et al., 2000). Hence,

employees would only affect the capital structure decision of a firm if they were to have a financial stake in it.

The perspective of financial institutions shows similar results to those observed from the respondents from firms in the manufacturing industry [R1BQ16, R2BQ12, R3BQ18]. However, Respondent 3 argued that only key employees impact the firms' leverage, due to the decisions that they make [R3BQ18].

The results of the interviews show that, in the context of Saudi Arabian manufacturing firms, employees have little influence on capital structure decisions unless they are in a managerial position. Moreover, none of the respondents made reference to the bargaining power of employees. Thus, the proposition is accepted. Accordingly, employees do not have enough bargaining power to influence the capital structure of Saudi manufacturing firms, as labour unions in Saudi Arabia are virtually non-existent.

6.3 Capital Structure and Competitive Environment

The competitive environment in which a firm operates could influence capital structure decisions. It relates to how firms adjust their capital structure in response to a rival firm's competitive behaviour (Gertner et al., 1988). Highly leveraged firms are more exposed to market volatility and predatory behaviour of rival firms with conservative capital structures (Chevalier, 1995). Capital structure decisions also relate to competitive aggressiveness. Managers who recognise that a rival firm's increase in leverage induces greater competitive aggressiveness would respond by increasing their own firm's leverage in order to combat competition (Istaitieh and Rodriguez-Fernandez, 2006). Capital structure decisions can, accordingly, signal value and the financial position of a firm both to credit markets and competitors alike (Istaitieh and Rodriguez-Fernandez, 2006). Hence, this section investigates whether capital structure is related to the competitive environment in the Saudi manufacturing industry.

Proposition 20: Leverage exposes Saudi manufacturing firms to market volatility and predation in periods of economic downturn.

Market timing theory relates to the behaviour of firms in response to changes in the business cycle. Istitieh and Rodriguez-Fernandez (2006) posit that financially strong (unleveraged) firms can time the market and take advantage of economic downturns to aggressively position and price their products to drive their weaker (leveraged) competitors out of the market. To investigate this issue, respondents were asked whether their capital structure exposes their companies to market volatility.

The results from the petrochemical sector were split. Respondent 1 stated that “our level of debt does not affect the company’s exposure to market volatility” [R1PQ24]. According to Respondent 2, the reason why the capital structure of his company does not expose it to market volatility is based on the fact that the company buys on contract and the effect of movements in the market is neutralised because of this forward agreement in place [R2PQ25]. This is in line with the argument of Istitieh and Rodriguez-Fernandez (2006), who posit that the prior negotiation of contracts helps reduce a firm’s exposure to market volatility and predation during periods of economic downturn. However, Respondents 3 and 4 argued that leverage exposed their respective firms to market volatility [R3PQ22; R4PQ25]. According to Respondent 3, “leverage (short-term or medium-term) could be harmful to the project if the economy is in a downturn” [R3PQ22]. Respondent 4 stated that his firm’s leverage position is determined by considering the cyclical nature of its products [R4PQ25]. Hence, Respondent 4 recognised that, because of his company’s product volatility, its leverage position is kept comparatively low [R4PQ25]. This indicates that the higher the volatility in the market for the product, the lower the expected leverage of the company.

The results are mixed in the food sector. Respondent 1 from the food sector stated that market volatility affects the capital structure of public companies that seek external finance and invest in the stock market [R1FQ25]. If equity is insufficient, market volatility affects a firm’s ability to raise funds [R1FQ25]. This again implies that there exists a negative relationship between market volatility

and leverage. Respondent 2 stated that the effect of volatility on leverage is small because of the 1:1 debt and equity ratio adopted by the firm. [R2FQ23]

In the industrial investment sector, all of the respondents confirmed that market volatility has an impact on the firms' leverage and capital structure positions [R1IIQ25]. Respondent 1 linked market volatility to the company's profits and capital structure decisions [R1IIQ25; R2IIQ25]. As profits decrease because of the volatility experienced in the market, a company's retained earnings will also fall [R1IIQ25]. Therefore, to finance future projects, there will be less reliance on retained earnings and more on debt, which in turn increases the firm's future leverage. Moreover, according to Respondent 2, "product prices, demand, and input prices volatility exposes companies with weak capital structure (i.e., those with high debt-to-equity ratio) to financial and operational risk" [R2IIQ25].

The results from the respondents in the cement sector⁴⁶ show that the majority of respondents claim that leverage has an effect on their company's exposure to market volatility [R3CQ25; R4CQ25; R5CQ24]. Respondent 4 claimed that "higher debt levels would expose the company to higher risk in situation of market volatility" [R4CQ25]. Respondent 5 expressed a similar opinion [R5CQ24]. However, Respondent 1 claimed that capital structure does not affect a firm's exposure to market volatility [R1CQ24]. Similarly, Respondent 3 stated that, although there is an effect, it is less significant [R3CQ25].

The results from the perspective of financial institutions show that the majority of the respondents believe that leverage does affect a company's exposure to market volatility. This is especially the case when companies are over-leveraged [R1BQ20; R3BQ22]. Hence, companies adopt conservative leverage ratios during periods of market volatility. Respondent 2 claimed that some companies time the market in order to take advantage of low interest rates during periods of economic downturns when deciding on their capital structures [R2BQ5].

⁴⁶ Respondent 2 did not address the question.

Therefore, the results show that, on average, capital structure exposes companies to market volatility. Thus, the proposition is accepted. In addition, the results are also in line with the quantitative findings shown in Tables 5.6 and 5.7 that indicate that leverage and risk are positively related. The results indicate that, during periods of economic downturn, Saudi manufacturing firms adjust their capital structures to more conservative leverage levels. Respondents from manufacturing firms with conservative leverage positions opine that they are less exposed to market volatility. Nevertheless, none of the respondents implied that they are exposed to the predatory behaviour of rival firms during periods of economic downturns, which is inconsistent with the argument put forth by Istitieh and Rodriguez-Fernandez (2006). The only reference to market timing in order to take advantage of low interest rates was made by Respondent 2, from the perspective of financial institutions. This observation indicates that, while market timing may not apply in the context of the manufacturing industry, it could be the case that creditors observe this behaviour in other Saudi industries.

Proposition 22: Competitors influence the capital structure and investment strategy of Saudi manufacturing firms.

Competition can have significant influences on a firm's capital structure and investment strategy. Kovenock and Phillips (1997) argue that firms adjust their capital structure in response to the leverage decisions of rival firms. The authors posit that firms that observe an increase in the leverage of rival firms react by increasing their investments to protect their market share. The authors suggest a positive relationship between the increase in leverage of a firm and its rival's investments. Hence, given the evidence that Saudi manufacturing firms are exposed to market volatility, Respondents were specifically questioned on the impact of competitors on their capital structures and whether this had any implications on their investment strategies.

When assessing the effect of competition on the capital structures of Saudi manufacturing companies, the majority of respondents from the petrochemical sector stated that competition has no impact on leverage [R1PQ21; R2PQ22;

R3PQ19; R4PQ22]. However, Respondent 1 claimed that his company only looks at competition as a “benchmark for performance” [R1PQ21]. Respondent 2 suggested that the effect is more pronounced in other industries, such as the power industry [R2PQ22]. This indicates that managers of Saudi manufacturing firms in the petrochemical industry do not take into account the capital structure decisions of their rivals.

Similarly, the results for the food industry show that competition has no influence on the level of leverage of the firm [R1FQ22; R2FQ20]. Respondent 2 claimed that his company looks at rival strategies and that “no mimicking” occurs in terms of capital structure [R1FQ22]. Therefore, manufacturing firms in this sector do not adjust their leverage position according to their rivals.

The results for the industrial investment sector also indicate that competition has no impact on leverage [R1IIQ22; R2IIQ22]. Respondent 2 claimed that competition can have a positive impact on leverage if competition is high, since firms are more likely to borrow and increase their investments in order to gain market share [R2IIQ22]. This implies a positive relationship between leverage and the investments of rival firms, which is in line with the findings of Kovenock and Phillips (1997), Chevalier (1995) and Chevalier and Scharfstein (1995, 1996). However, the respondent stated that, because competition is minimal in his sector at present, this factor has no impact on debt levels [R2IIQ23]. This implies that, when competition is low, it has little influence on capital structure decisions.

The findings of the respondents from the cement industry show that the majority of the respondents claimed that competition has no effect on capital structure [R1CQ21; R2CQ19; R3CQ22; R4CQ22]. However, Respondent 5 stated that there is a positive relationship between competition and the level of debt, when companies want to maintain equal or superior quality of the goods/services they provide, relative to their competitors [R5CQ22]. In this case, firms increase their debt in order to maintain their competitive position.

Furthermore, the results from the perspective of financial institutions show that the majority of the respondents believe that there is evidence of firms mimicking their rival's capital structures [R1BQ18; R2BQ14; R3BQ20]. If successful competitors have high debt, other firms will take on more debt [R1BQ18]. This result is consistent with the findings of Van der Wijst et al. (1993), who demonstrate that firms in the same industry have similar debt levels.

The results show little support for the effect of competition in influencing capital structure and investment strategy. Thus, the proposition is rejected. Moreover, while one respondent⁴⁷ opined that there is a positive relationship between a firm's investment and a rival firm's leverage, the majority of respondents claimed that competition is of no significance to a firm's capital structure and investment strategy. The findings in this thesis indicate that Saudi manufacturing firms are financially strong, face no barriers to accessing credit and enjoy strong banking relationships, which enable them to obtain loan commitments to combat competition. Maksimovic (1990) supports this notion in arguing that firms that could obtain favourable loan commitments are more capable of combating competition. Hence, competition has little influence on capital structure in this context.

Proposition 20: Debt induces greater competitive aggressiveness.

Another channel whereby the competitive environment relates to capital structure is the competitive aggressiveness of firms. If debt induces greater or lesser competitive aggressiveness, managers ought to consider the capital structure decisions of their rivals. Thus, respondents were questioned on the manner in which capital structure affects the competitive aggressiveness of Saudi manufacturing firms.

When assessing the impact of leverage on the level of competitive aggressiveness, the findings from the respondents in the petrochemical sector are mixed. Respondents 2 and 3 stated that leverage has no impact on the level of aggressiveness in the context of the manufacturing industry [R2PQ29;

⁴⁷ Respondent 2 from the industrial investment sector claims that the more competition there is in the industry, the more likely that firms are to borrow more to invest in order to gain market share.

R3PQ26]. However, Respondent 1 did maintain that “leverage does have a strong effect in some cases” [R1PQ28]. Respondent 4 concurred, stating that “higher debt might lead to higher aggressiveness but, at the same time, you have to take into account the cost of servicing that debt” [R4PQ29].

Similarly, results from the food sector are mixed. Respondent 1 claimed that leverage positively affects the company’s level of competitive aggressiveness [R1FQ29]. However, Respondent 2 stated that it has very little effect on aggressiveness [R2FQ26]. The respondents from the industrial investment sector stated that the level of leverage has no impact on the competitive aggressiveness [R1IIQ29; R2IIQ29].

The results from the cement sector show mixed results⁴⁸. Respondents 1 and 3 argued that leverage has no impact on the level of their competitive aggressiveness [R1CQ28; R3CQ29]. Instead, it depends on the volume of demand [R3CQ29]. Nevertheless, Respondent 2 stated that extending credit terms to distributors helps the firm in competing more aggressively [R2CQ24]. Respondent 4 argued that leverage does have an impact on competitive aggressiveness, albeit a negative one: as leverage increases, the level of competitive aggressiveness falls, due to the requirement to make systematic debt service payments to bank, which might leave the firm with less cash flow [R4CQ29].

The results from the perspective of financial institutions provide some evidence that leverage will induce greater competitive aggressiveness. Respondent 1 argued “that leverage may cause over aggressiveness especially if cash flows are really dwindling. High leverage can cause some companies to do the wrong things under pressure” [R1BQ23]. Similarly, Respondent 2 claimed that leverage induces the firm to cut prices and create discounts in order to service its debt [R2BQ17]. Respondent 3 provided an argument that high leverage can only affect the level of competitive aggressiveness, depending on past

⁴⁸ Respondent 5 provided a vague answer to the question. In effect, the respondent lamented the profitability of the cement industry and the relative ease with which financing can be obtained, suggesting that, as a result, leverage is very high in this industry. On the issue of whether this leverage affects the level of aggressiveness, the respondent could not provide an answer.

performance [R3BQ25]. Firms with a good track record are likely to survive “bad times” regardless of their high leverage [R3BQ25].

Therefore, the general result is that capital structure has no implications on competitive aggressiveness in the context of Saudi manufacturing firms. Thus, the proposition is rejected. However, few respondents believed that debt induces greater competitive aggressiveness [R1PQ28; R4PQ29; R1FQ29; R2CQ24], and only one respondent from the cement sector suggested that it would reduce competitive aggressiveness [R4CQ29]. The results are consistent with the findings of Campello (2003), who argues that competitive dynamics are irrelevant for firms that operate in high-debt industries. The result provides further justification for the evidence reported in this thesis that the majority of managers of Saudi manufacturing firms do not consider competitors when deciding on their capital structures. This can be attributed to the fact that most managers do not recognise the implications of debt on competitive aggressiveness and, thus, do not find competition to be relevant to capital structure decisions.

Proposition 23: Disclosure rules would affect the capital structure and competitive advantage of Saudi manufacturing firms

Pecking order theory states that adverse selection problems arise from information asymmetry between the financial stakeholders/managers of the firm, who know a firm’s true value, and outside investors, who do not. This results in the market mispricing a firm’s claims (Klein et al., 2002). Stringent disclosure rules have significant implications in mitigating agency costs and reducing information asymmetry (Healy and Palepu, 2001). In the context of Saudi Arabia, listed firms abide by the disclosure rules of SOCPA, which are less stringent than the IFRS (Iqbal, 2012). The publication of information to outside investors through financial reports is a requirement for publicly listed companies. However, private companies are not required to disclose their financial reports to the public as long as they provide the Department of Zakat and Income Tax (DZIT) with proof that they have paid their *zakat* liabilities

(KPMG, 2012). Accordingly, it can be argued that the Saudi Market suffers from significant information asymmetry.

In the semi-structured interviews, respondents were asked about the extent to which information transparency affects their capital structure and competitive advantage. The general finding for the petrochemical sector is that the market in Saudi Arabia is not as transparent as in developed markets. The majority of respondents, therefore, stated that information transparency does not affect capital structure [R1PQ25; R2PQ26; R3PQ23]. According to Respondent 2, “the level of reporting required under CMA rules is not anywhere near what is required in developed markets”. Hence, “[the firm does] not need go into details in [its] financial report” [R2PQ27]. Public announcements are generic and non-specific when it comes to pricing strategies and market penetration. However, Respondent 4 claimed that information transparency has an impact on capital structure, as information about a company’s debt levels are disclosed to the public [R4PQ26]. Accordingly, the results indicate that the majority of managers in this sector believe that the level of transparency required in Saudi Arabia through SOCPA rules is insufficient in signalling to the market a firm’s true value and financial position.

In the food sector, the majority of the respondents stated that, even though transparency is important, it is not significant to capital structure decisions [R1FQ26; R2FQ24]. However, companies refuse to disclose details because they fear that such disclosures will present important information to their competitors, which will weaken their competitive advantage. Therefore, respondents in the food sector argued that transparency might hinder their competitive strategy, and, as a result, only the bare essentials are disclosed to the market. Respondent 1 stated that his company “[has] to be transparent but [does] not want to communicate too much and weaken [its] position” [R1FQ26]. Respondent 2 further stated that his firm “[does] not disclose details of breakdown of sales and [tries] to group sensitive items” [R2FQ24]. Accordingly, firms try to disclose as little information as possible to avoid compromising their competitive position.

Furthermore, the results from the industrial investment sector⁴⁹ show that higher levels of transparency could influence competitive advantage and, to some extent, a company's capital structure [R2IIQ26]. Respondent 1 stated that his company complies with the disclosure rules of the CMA but felt that some information should not be disclosed [R1IIQ26; R1IIQ27]. The Respondent, hence, argued that his company's "information is grouped in order for shareholders to get the right idea without hindering competition... also information about strategy and direction of company are sometimes required which negatively influence the company's competitive advantage" [R1IIQ27]. Respondent 2 stated that, if information disclosure were not limited, it could hinder a company's competitive advantage and impact its capital structure [R2IIQ26]. Therefore, the current disclosure rules do not impact the competitive position of firms in the industrial investment sector, as most information is grouped.

In the cement industry, the majority of the respondents believe that information transparency could impact competitive advantage, and, to a lesser extent, their capital structure [R3CQ26; R4CQ26; R5CQ25]. Respondents 1, 2⁵⁰ and 3 pointed to the fact that companies need to abide by CMA and government disclosure rules [R1CQ25; R2CQ22; R3CQ27]. However, these respondents made it clear that important information must always be withheld from the market place to prevent competitors from taking advantage of it [R1CQ25; R2CQ22; R3CQ27]. Respondent 4 focused on the effect that transparency of non-public information, like a firm's R&D, would have on its strategy and competitiveness [R4CQ27]. The respondent stated that transparency could help to determine the right capital structure for a company through accurate cash projections [R4CQ26]. Respondent 5 emphasised the significance of transparency between the company and its creditors in impacting capital structure. According to the respondent, "banks do not believe in the customer

⁴⁹ Respondent 1 failed to address the issue, directly or otherwise, of how transparency affects capital structure.

⁵⁰ Respondent 2 rightly mentioned the need to follow CMA rules. However, the respondent failed to address the issue, directly or otherwise, of how transparency affects capital structure and competitive advantage.

withholding information. The banks have to be fully satisfied of the economic viability of the project before they can agree to fund the project” [R5CQ26]. From this angle, it is evident that the higher transparency reduces information asymmetry between a firm and its creditors and could influence the capital structure of a firm. Nevertheless, Respondent 1 claimed that current disclosure rules imply that information transparency has no effect on capital structure [R1CQ25].

From the point of view of financial institutions⁵¹, the results are mixed. Respondent 2 suggested that information transparency to lenders is absolutely crucial in order for lenders to accurately project the amount of funding a firm needs in the future [R2BQ15]. For banks to advance funds to businesses they have to be certain that there is a high probability that their funds will be repaid on time, together with the amount borrowed. Thus, they require more information about a company’s capital structure and corporate strategy. Since lenders are not competitors to these companies, the disclosure of information to financial institutions will not affect competitive advantage. It may, however, facilitate its access to funds. Nevertheless, Respondent 1 claimed that, although transparency is important, it is “not as detrimental as management style” in influencing capital structure [R1BQ21].

The results indicate that higher levels of transparency than those currently required could affect a firm’s capital structure. Therefore, the proposition is accepted. Saudi manufacturing firms refuse to disclose detailed information that would hinder their competitive advantage. Nevertheless, transparency to creditors is required at all times. The results indicate that current disclosure rules are insufficient in revealing to competitors the value and financial position of the firm. Hence, there is significant information asymmetry in this market. The results are consistent with the findings of Klein et al. (2002), who argue that, in the presence of high information asymmetry, markets are unable to accurately predict the value of a firm. Accordingly, information about firms’ capital

⁵¹ Respondent 3 did not mention the effect on capital structure.

structures could be used as a proxy for their value and financial position in this context.

Proposition 24: Saudi manufacturing firms use debt as a signalling tool.

The capital structures of financially strong incumbent firms can be used as an effective deterrent to market entry (Poitevin, 1989; Istitieh and Rodriguez-Fernandez, 2006). When information asymmetry is high, the signalling function of debt assumes importance (Klein et al., 2002). Thus, respondents were questioned on whether debt is used as a signalling tool to rival firms. The majority of the respondents in the petrochemical sector argued that debt is indeed used as a signalling tool [R1PQ27; R3PQ25; R4PQ28]. Respondent 1 claimed that it is used as a signalling tool for joint ventures and competitors [R1PQ27]. Respondent 3 stated that the signalling is mainly intended for the market and other stakeholders [R3PQ25]. Respondent 4 emphasised the competitive edge that debt gives to the company, relative to its competitors, and indicated that the firm is in a better position than its competitors [R4PQ28]. However, Respondent 2 stated that debt is not used as a signalling tool [R2PQ28]. The findings, overall, indicate that debt is used as a signalling tool for manufacturing firms in the petrochemical sector.

The interview results for the food sector indicate that debt is not used as a signalling tool [R1FQ28; R2FQ25]. However, the results for the industrial investment sector are split. Respondent 1 argued that debt is not used as a signalling tool [R1IIQ28], whereas Respondent 2 stated that his firm utilises debt to send signals to the market and to monitor financial covenants [R2IIQ28]. Hence, debt is not used to signal a manufacturing firm's financial position to its rivals in this sector.

Nevertheless, the majority of firms in the cement industry say that debt is not used as a signalling tool [R1CQ27; R2CQ23; R5CQ27]. However, Respondent 3 claimed that a debt level that currently stands at 6% of total capital signals the firm's ability to access additional finance when needed [R3CQ28]. Accordingly, the respondent contended that conservative leverage positions signal to rivals a

firm's ability to combat competition. The use of debt as a signalling tool for Respondent 4 is linked with the company's cash management ability. The respondent asserted that a default on a debt payment would signal to the market that the company is unable to manage its operations and meet its scheduled interest payments, which would adversely affect its competitive position [R4CQ28].

The results from the perspective of financial institutions show that the majority of the respondents did not see debt as a signalling tool [R2BQ16; R3BQ24]. In fact, Respondent 2 stated that shareholders usually prefer low debt. However, Respondent 1 asserted that debt can be used by firms to signal their prestige and reputation to others [R1BQ22]. Firms increase their reputation by being customers of certain banks. Losing such banking relationships would send negative signals to both creditors and competitors.

In general, the results indicate that the majority of respondents do not use debt as a signalling tool. Therefore, the proposition is rejected. Daves and Tucker (1993) demonstrate that more signalling occurs when market competition is high. However, the evidence shows that the signalling function of debt is more prominent among firms in the petrochemical sectors, and less so for firms in the industrial investment and cement sectors. The recognition of the signalling function of debt by the respondents is consistent with the findings of Gertner et al. (1988), who argue that firms can use their capital structure to signal their financial position to both capital markets and competitors.

Chapter 7: Conclusion

7.0 Introduction

The thesis investigated the relationship between capital structure and corporate strategy in the context of Saudi Arabian manufacturing firms. It examined the effect of the determinants of capital structure and the implications of corporate and competitive strategies on capital structure. This thesis focuses on the manufacturing industry, due to the significant government support that is provided for the industry and its significance in contributing to the Saudi Arabian GDP.

The thesis answers the following research question:

To what extent does corporate strategy influence capital structure decisions of Saudi Arabian manufacturing firms?

In addressing the research question, the thesis utilised a mixed methodology approach. A sample of 43 listed manufacturing companies was used over a five-year period from the third quarter of 2007 to the second quarter of 2012. Using a pooled OLS regression, the quantitative analysis assessed the determinant of leverage using two different dependent variables (long-term debt-to-total assets and total debt-to-total assets). The dependent variables included numerical variables that proxy for profitability, size and risk, along with dummy variables that proxy for ownership structure and relationship banking. The qualitative approach consisted of semi-structured interviews with senior managers, and this represented a significant part of the data analysis. The qualitative findings support the quantitative analysis.

7.1 Key Findings

The key findings of the thesis are listed under three main categories: determinants of capital structure, capital structure and stakeholders and capital structure and competitive environment. The general results indicated that classical corporate finance determinants of leverage better explain the capital

structure decision of Saudi Arabian manufacturing firms. Strategic motivations for leverage were found to be less prevalent in this context.

7.1.1 Determinants of Capital Structure

The findings indicated that Saudi Arabian manufacturing firms were found to be more debt-oriented than was previously reported on the market level by Al-Ajmi et al. (2009). However, the results illustrated that the cost of servicing debt remained a significant factor that influences the capital structure decisions of Saudi manufacturing firms, despite the availability of cheap government financing. The unique tax structure that characterises the Saudi market was reported to be significant to capital structure decisions. While the interview results reporting that *zakat* is important in determining capital structure decisions were mixed, the quantitative results supported the fact that some firms avoid issuing long-term debt (which is *zakat* payable) or reduce their leverage to avoid paying more *zakat*. The evidence reported on the effect of profitability on leverage demonstrated that more profitable firms carry lower leverage. This evidence can be attributed to the influence of taxation and lends support to Saudi manufacturing firms following pecking order theory in financing their projects, primarily through retained earnings. In this sense, the high profitability of Saudi manufacturing firms could help explain why some firms choose to be debt-oriented.

Industry effects were reported to be significant. The evidence illustrated the fact that many managers have a target optimal capital structure in mind when deciding on their financing, which largely depends on the availability of SIDF loans. The high level of tangible assets lends further explanation for the debt orientation of these firms.

The effect of size in determining capital structure was mixed. Specifically, it was found to be inversely related to leverage only when leverage was measured as total liabilities to total assets (TLTA). The mixed results could be attributed to the fact that the sample of manufacturing firms consists of primarily large firms. Small and medium enterprises are not listed in the Saudi stock market

(Tadawul) and are, hence, untested. In addition, this thesis indicated that there is a positive relationship between risk and leverage.

7.1.2 Capital Structure and Stakeholders

The findings of the thesis have demonstrated that bankruptcy laws are unclear in Saudi Arabia. This implies that highly leveraged firms are more likely to overinvest in risky projects. The quantitative results supported this contention. The evidence could be attributed to the pay-off structure put in place in the event of bankruptcy in Saudi Arabia, which favours employees (including managers) beyond limited liability. *Shari'a* compliance was reported to be the preference for most firms. This can be attributed to the Islamic culture that characterises the Saudi market and to publicly listed manufacturing firms' intentions to attract a larger audience of investors. In addition, manufacturing firms in Saudi Arabia were reported to use debt as a disciplining tool for management. This lends support to agency theories of capital structure. It can also be explained with reference to the added benefit of *Shari'a* compliant contracts in reducing agency costs.

Shareholders were found to be important in influencing the capital structure decisions of firms. Their personal preferences and reputations were reported to be significant to capital structure decisions. Both family-owned firms and institutionally owned firms are likely to carry more debt. Yet, government ownership was found to be insignificant in determining the firms' leverage. This can be attributed to the fact that family owners risk diluting their equity holdings and control by issuing equity. The positive results on institutional ownership could be linked to the fact that institutional ownership may not necessarily replace the monitoring effect of debt. Moreover, it could be attributed to the fact that institutional investors do not sufficiently reduce information asymmetry in the market but could reduce information asymmetry with lenders. Hence, the cost of debt is reduced.

The availability of credit is found to be insignificant in influencing the capital structure decisions of Saudi manufacturing firms. This indicates that

manufacturing firms do not face any problems accessing external funds. However, even though such firms have access to both local and international funding, firms, as the evidence suggested, prefer local finance. This could be attributed to the cheaper financing options available in the local market, along with the exchange risk, delays and regulatory problems associated with international financing. This is supported by the positive results reported on the relationship between the availability of government loans and leverage. More importantly, the findings demonstrated that Saudi manufacturing firms with strong banking relations are likely to carry more debt. This can be attributed to the lower information asymmetry these companies face against their creditors. Finally, non-financial stakeholders (customers, employees and suppliers) and government subsidies were reported to have little influence on the capital structure decisions of Saudi manufacturing firms. The evidence indicated that non-financial stakeholders have little bargaining power in this context. Furthermore, the government plays a more crucial role, as an equity and/or debt holder, in this industry.

7.1.3 Capital Structure and Competitive Environment

The evidence illustrated that competitors are less likely to influence the capital structure decision of Saudi manufacturing firms. The findings demonstrated that even though leverage exposes firms to market volatility during periods of economic downturns, there was no evidence to support the predatory practices of rival firms in those periods. This can be attributed to the fact the majority of respondents do not recognise the implications of capital structure decisions on competitive aggressiveness. Furthermore, close banking relationships and high profits imply that these firms are financially strong and are able to combat competition. The findings demonstrated that, while greater transparency would affect the capital structure decisions and competitive advantages of these firms, less stringent disclosure rules would enable managers to group sensitive items in order not to compromise their competitive position. Finally, the results illustrated that the majority of managers do not recognise or use capital structure decisions to signal their financial position to rival firms.

7.2 Contribution to Academic Literature

This thesis contributes to the academic world by presenting a general conceptual theoretical framework for testing the relationship between capital structure and corporate strategy, which takes into account the determinants of capital structure. This framework could be extended to challenge the degree to which corporate strategies affect capital structure decisions in other jurisdictions. The thesis also presents a developed framework that considers the characteristics of the Saudi Arabian manufacturing industry. This framework could be extended to other industries with similar characteristics in Saudi Arabia and to other countries in the Gulf Cooperation Council (GCC).

The thesis contributes to the literature on the determinants of capital structure by indicating that *zakat* and profitability are negatively related to capital structure, while the nature of assets, risk, family and institutional ownership, and relationship banking are positively related to leverage in the context of Saudi Arabian manufacturing firms. Trade-off, Pecking order and agency theories of capital structure are adapted and tested in the Saudi manufacturing industry context. The findings of the thesis support trade-off theories by demonstrating that managers have a target optimal capital structure. The evidence reported in this thesis demonstrated that Saudi manufacturing firms follow the pecking order in financing their activities. The results also support agency theories in illustrating that debt is used as a disciplining device in this context. Nevertheless, there was little evidence to support market timing and stakeholder theories of capital structure.

7.3 Contribution to Managers

The thesis showed managers the possible strategic considerations of their capital structure decisions. The evidence demonstrated the importance of strong banking relationships and the availability of government loans as important strategic considerations for capital structure. There are several implications for both managers and financial institutions from these findings. First, managers ought to maintain close relationships with banks in order to

facilitate future access to funding. Secondly, due diligence by financial institutions must take place in order to ensure that decisions to grant loans are backed by a thorough analysis of their fundamentals and cash flow generating processes, not just based on banking relationships.

The findings indicated that government SIDF loans play a crucial role in the determination of companies' leverage positions. This thesis argues, accordingly, that managers should take advantage of these loans whenever they are available. The results of the thesis also illustrate that debt can be used as a disciplining device. Therefore, firms should consider the inherent strategic benefits of financing decisions in reducing agency cost and disciplining management, especially when loans are *Shari'a* compliant.

Moreover, while there is little evidence to support the stakeholder theory of capital structure, the Ministry of Labour is in the process of establishing new laws that will enable employees to join labour unions under the General Union of Saudi Workers (Arabnews, 2013). The introduction of labour unions could strengthen the bargaining power of employees, and, hence, may have future significant implications on capital structure decisions. Therefore, managers ought to consider the implications of labour unions in influencing their future capital structure decisions.

While the results of the thesis demonstrated little support for the influence of competition on capital structure and investment strategies, one respondent⁵² opined that there is a positive relationship between his firm's investment and his rival firm's leverage. Moreover, some respondents indicated that debt induces greater competitive aggressiveness [R1PQ28; R4PQ29; R1FQ29; R2CQ24], and only one respondent from the cement sector suggested that it would reduce competitive aggressiveness [R4CQ29]. The recognition of the relationship between capital structures and competitive aggressiveness suggests that managers should pay more attention to the competitive implications of the capital structure decision of rival firms. Disclosure rules in Saudi Arabia are

⁵² Respondent 2, from the industrial investment sector, claimed that the more competition there is in an industry, the more likely it is that firms will borrow more in order to increase their existent market share.

reported to be less stringent than those of the IFRS, implying higher information asymmetry in this market. The findings indicated that, despite the presence of information asymmetry, debt is not generally used as a signalling tool. However, there was some evidence to support the use of debt in order to convey signals to both capital and product markets about firms' financial and competitive positions. Such signals, therefore, ought to be considered and used by managers. Accordingly, managers could adjust their investment and competitive strategies based on the capital structure decisions of their rivals.

7.4 Contribution to Policy Makers

The evidence reported in the thesis points to a call for clearer bankruptcy laws in Saudi Arabia. More defined bankruptcy laws would help protect firms' shareholders and lenders. The findings of the thesis also imply that policy makers ought to consider implementing more stringent disclosure rules in order to reduce information asymmetry in the market and to protect lenders and inexperienced investors.

7.3 Limitations and Recommendations for Future Research

Unlike other developed countries, transparency in the Saudi market is limited, thus data accessibility is restricted. Non-listed firms' financial reports are not publicly available. Moreover, the non-availability of primary data is a limitation for the thesis, as further information could help explain the determinants of capital structure. More specifically, the unavailability of detailed quarterly financial reporting made it difficult to test competitive strategy quantitatively. Likewise, some determinants of capital structure used in other studies were difficult to include. In addition, an appropriate trade-off was made between the sample size and the length of the data period. A longer period would have benefited the thesis by spanning a longer historical period. However, it would have also led to the exclusion of more manufacturing firms from the data.

Further research conducted in this area may benefit from and make use of the specific theoretical framework proposed in Chapter 3 to test the theoretical prediction of a relationship between capital structure and competitive strategy in

the context of other industries within the Saudi market. Extending this study to other jurisdictions, specifically those in the GCC area with attributes similar to those of the manufacturing firms in Saudi Arabia, with greater data availability, would lead to more robust results, especially in testing factors that relate to the competitive environment quantitatively. Moreover, the inclusion of other determinants of capital structure would provide a better view of the determinants of capital structure in this context.

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Appendix 1

List of sample manufacturing firms used in quantitative analysis:

1. 2020 SAFCO
2. 2290 YANSAB
3. 3050 SOUTHERN CEMENT
4. 2140 AL-AHSA
5. 2030 SARCO
6. 2010 SABIC
7. 2110 CABLES
8. 3030 SAUDI CEMENT
9. 2230 SAUDI CHEMICAL
10. 2130 SAUDI INDUSTRIAL
11. 2250 SIIG
12. 2190 SISCO
13. 2070 PHARMACEUTICAL
14. 2270 SADAFCO
15. 2050 SAVOLA
16. 3090 TABUK CEMENT
17. 3020 YAMAMAH CEMENT
18. 3060 YANBU CEMENT
19. 2150 GLASS
20. 2080 GAS AND INDUST.
21. 2090 GYPSUM
22. 2040 CERAMIC
23. 2240 ZAMIL
24. 2060 INDUSTRIALIZATION
25. 2220 MAADANIYAH
26. 3040 QASSIM CEMENT
27. 2260 SAHARA
28. 2120 SAUDI ADVANCED
29. 2160 AMIANTIT
30. 2280 ALMARAI
31. 2170 ALUJAIN
32. 3010 ARABIAN CEMENT
33. 2200 PIPES
34. 3080 EASTERN CEMENT
35. 2180 FIPCO

- 36. 2100 FOOD
- 37. 2210 NAMA
- 38. 2300 SPM
- 39. 2310 SIPCHEM
- 40. 2320 ALBAPTAIN
- 41. 2340 ALABDULLATIF
- 42. 2330 APPC

Appendix 2

Research Ethics

Participant Information Sheet

1. Title of Research: Capital Structure and Competitive strategy: The Case of Saudi Arabian Manufacturing Industry

2. Researcher: Amr Attar

3. Contact Email: amr.attar@brunel.ac.uk

4. Purpose of the research: To explore the link between capital structure and competitive strategy in the Saudi Arabian manufacturing sector. To what extent does your company's capital structure influence your competitive strategy?

5. What is involved: Structured interviews in which you, as a senior manager (CEOs, CFOs or Board Member), will be asked about your respective company's capital structure and corporate strategy. The interviews are 30-60mins in length in which approx. 20-30 questions are asked about the company's capital structure, the different stakeholders that influence the capital structure decision, the extent to which capital structure influences competitive strategy and the different macroeconomic and company specific parameters influence the company's competitive strategy. The interview will be conducted at your respective offices or at a location of your convenience in Jeddah or Riyadh, Saudi Arabia.

6. Voluntary nature of participation and confidentiality. I hereby confirm that all participation is voluntary and confidential. I also confirm that no recording will be done during interviews. Participant's information will remain anonymous for the purpose of this research. Notes of your responses will be made during the interview and then transformed into transcripts. The transcripts will highlight your response and will also remain anonymous.

Appendix 3

Respondent 1

Position: CRO

Financial Institution

Date: 10/01/2012

Methods of financing.

Working capital financing. Companies look for finance for trade (importing). Financing of the capital expenditure, expansion, set up. Companies typically do a market study then approach the SIDF, then go to the banks to augment the financial position, and also bridge financing. The SIDF process might take a year or two, if the company has strong credentials, it might get loans through commercial banks that bridges its loans from the SIDF. Financing of sales for petrochemicals, pre-shipment finance, and inventory finance are other methods typically used. Investment arms of banking are encouraging Sukuk. Advance payments given by the government is typically 20/30%. Due to heavy advance payments, you tend to find balance sheets showing over leverage. Cement companies are usually financed 2:1 (debt to equity) with strong cash flows. [R1BQ1]

Types of debt products available to the firm.

Short term long term overdrafts, syndicated loans, LC financing. [R1BQ2]

Shari'a compliance.

Most companies have an Islamic balance sheet and therefore the loans tend to be sharia compliant. [R1BQ3]

Significance of zakat.

Some companies do pay more attention than others. [R1BQ4]

Determinants of level of debt.

There are restrictions by banks not to over leverage. Usually commercial banks put a cap on leverage. The SIDF is used for any new venture, the minimum Equity must be 25% of the total balance sheet. What usually determines it is the sensitisation of cash flow, i.e. how much debt you can take is how much debt you can support. [R1BQ5]

Dependence upon the cost of servicing debt.

Opportunity and cost. Depends on the tenor, and growth prospects. The cost of finance isn't detrimental. [R1BQ6]

Influence of bankruptcy laws.

Bankruptcy laws do not protect a firm that is bankrupt unlike the US. First paid is staff, which goes beyond limited liability. Then trade payables, then debt holders. If a firm has assigned securities, which are pledged to the bank, then they have priority. [R1BQ7]

Debt as disciplining tool.

Sometimes shareholders require management to abide by certain accounting principles. Financial commitments definitely have disciplinary reactions. [R1BQ8]

Influence of shareholders.

Culturally, certain shareholders do not prefer to have debt and so minimise how much a company resorts to debts. Others are more "debt-happy". You tend to find that culture affects it depending on the composition of the board. Shareholders with good reputation facilitate access to finance. [R1BQ9]

Dependence upon the availability of credit.

As a bank you have to manage your ratios. Deployment of credit takes into account the selection process. As a bank you prefer to be involved with successful businesses in their areas. Stay away from certain sectors (e.g. jewellery), which are not as successful as they used to be. [R1BQ10]

International finance.

To a less and less extent. [R1BQ11]

Relationship banking.

Reputational issues do matter a lot. Access to banks will be easier but banks still have to do their homework anyway. [R1BQ12]

Government support (loans and subsidies).

Government involvement makes the finance decision easier because there is always a credible entity at the end of the business. Makes leverage easier from a commercial banking point of view. [R1BQ13]

Influence of suppliers.

Some suppliers offer lines of credit; others don't so the nature of the supplier is important. [R1BQ14]

Influence of customers.

If the government is a major customer it could influence the capital structure of the firm. For example, some ministries are late on payments and therefore the company would seek finance. If the customer is adequately influential then you have to deal with them and they can force your capital structure. [R1BQ15]

Influence of employees.

Traders- if incentives are skewed towards revenue only, the incentive will be to sell as much as possible and therefore carry high debt. But they generally have no influence [R1BQ16]

Product market structure and capital structure.

Without having a due consideration for that the prospects for growth would be very limited. Companies have to identify the source of capital before engaging in a project. [R1BQ17]

Influence of competition.

Some companies follow the examples of others. Latecomers tend to mimic existing and successful companies. [R1BQ18]

Other stakeholders.

Banks. [R1BQ19]

Exposure to market volatility.

There's a much higher regulatory impact on the banks so expect adherence to Basel principle and so on, which determines how much capital is set aside. So companies are very much exposed to market volatility. They would rather lose a customer than change a bank's rules. [R1BQ20]

Information transparency

Information transparency is very limited. Companies that are not listed do not have to abide by CMA rules. It is, however, becoming more prominent. Banks insist on information transparency. Financial transparency is not as detrimental as management style (how much receivables or who your customers are). [R1BQ21]

Debt as a signalling tool.

Definitely. Some firms mention that they are customers of X Y and Z banks as a form of prestige and reputation. A firm manages its reputation through debt. Losing a relationship with a bank is a big deal. [R1BQ22]

Competitive aggressiveness

Leverage may cause over aggressiveness especially if cash flows are really dwindling. High leverage can cause some companies to do the wrong things under pressure. On the positive side, leverage imposes a certain level of discipline. [R1BQ23]

Appendix 4

Respondent 2

Position: CEO

Financial Institution

Date: 14/01/2012

Methods of financing

The Saudi market is not as mature as western markets. You see a lot of plain vanilla bilateral with banks with very little bond or capital market issuances. As the market matures more companies will realise the benefit from diversifying. They start looking for fixed income investments, would consider banks and Sukuk. Many companies get cheap rates and don't see why they should go for a premium on bonds and sukuk. Banks can lend up to 25% of total equity, but this will be reduced to 10% over the next years. [R2BQ1]

Shari'a compliance

Publicly traded companies more so. [R2BQ2]

Significance of *zakat*.

No. [R2BQ3]

Determinants of level of debt.

The sector. Safer, blue chip sectors can access more debt. Pharmaceuticals could have large leverage ratio especially when dealing with the government. Some supplier requests payment before delivery to the vendor. [R2BQ4]

Dependence upon the cost of servicing debt.

It still remains cheaper than cost of equity. The decision might be tactical at times, as companies wait till the interest rate goes down. [R2BQ5]

Debt as disciplining tool.

Yes. There is a fine line between what's socially correct to what companies want. [R2BQ6]

Influence of shareholders.

They are considered to be the most important influence. [R2BQ7]

International finance.

Can but not wise. If you go external it's usually more expensive. There is a plethora of liquidity in the market. Only go external for specialised project finance. A local bank will be interested in participating if a large external financier has been doing it for a number of years. Any funds however used to finance an affiliate outside must get approval. [R2BQ8]

Relationship banking.

Relationships matter but banks do severe due diligence especially after 2008. [R2BQ9]

Influence of suppliers.

Some influence. [R2BQ10]

Influence of customers.

Discounts or payments (LCs). Quality of customers (government). [R2BQ11]

Influence of employees.

No significant effect in this market. [R2BQ12]

Product market and capital structure.

Yes. The premium is passed on to customer. We've seen this here. Leasing companies borrowing from banks and then passing on premium to customers.

The standard norm is decide on the cost 25% E, 50% SIDF, Commercial banks. [R2BQ13]

Influence of competition.

Industries move the same way. [R2BQ14]

Information transparency.

There is a general trend of being more transparent to bankers. The more transparent a company is with their banker, the more clear bankers will know what to give you for the upcoming years. The last thing a bank wants to hear is surprises. This sends shockwaves across the industry. [R2BQ15]

Debt as signalling tool.

No. Shareholders look for low debt. [R2BQ16]

Competitive aggressiveness.

If they are public companies, they will probably create discount to get in the cash and pay off the debt. [R2BQ17]

Appendix 5

Respondent 3

Position: CEO (ex-SIDF)

Financial Consultancy

Date: 11/01/2012

Methods of financing.

Equity serves to a certain limit. Commercial banks and SIDF specifically finances industrial projects. Not every sector would be accepted to get this financing. SAF (Saudi agricultural fund) is specific to the agricultural sector for example. Ministry of finance set programs for hotels, hospitals etc.. [R3BQ1]

Types of debt products available to the firm.

Short term and long term overdrafts, syndicated loans, LC financing. [R3BQ2]

Shari'a compliance.

For listed Saudi companies this is a major factor, especially for companies that are appealing to mass investors. For bigger companies it is less important. Companies tend to publicise when they are shari'a compliant. [R3BQ3]

Significance of zakat.

Zakat is a consideration. There is a special way of calculating zakat and it can be optimised. [R3BQ4]

Determinants of level of debt.

The risk associated with its business and sector it operates on. If it's a cash generating sector then there is a higher capacity of debt. The strategy of the company, the appetite of financial market and the type of business are all important factors in determining the level of debt. [R3BQ5]

Nature of assets.

Industrial sector, machinery and fixed assets this gives you tangible things for the lenders, which partly covers your lender's risk. So it really matters. For high R&D companies it's usually harder to get finance. [R3BQ6]

Dependence upon the cost of servicing debt.

It depends on the type of lending rational. It also depends on the assets. From a lender's point of view it's a crucial factor. [R3BQ7]

Influence of bankruptcy laws.

Bankruptcy laws in Saudi are not very clear. [R3BQ8]

Debt as disciplining tool.

Yes. Also to gauge their performance. [R3BQ9]

Influence of shareholders.

For listed companies, no, but for a private company, yes. There are some shareholders that are culturally against borrowing (beyond a certain level). Some require the company to be 100% Shari'a compliant. This makes accessibility to funds uneasy. This was especially the case 10-15 years ago, when Islamic financing wasn't as available as it is now. In listed companies, shareholders that are not controlling shareholders have little say. All listed companies are now required to switch to Shari'a compliant. [R3BQ10]

Government ownership.

Yes. If you are a company owned by the government you can walk through the system much easier. You can use the government arm. The risk taken is a government risk. This puts pressure on the lenders and makes them hesitant to resist. However, the ownership must be a sizeable to put that kind of pressure. [R3BQ11]

Dependence upon availability of credit.

Sometimes yes, especially in periods of downturns. In Saudi Arabia it has an impact in periods like 2008 where banks were loose in their risk evaluation. They decided to turn 180 degrees and become much more strict. [R3BQ12]

International finance.

Very limited. Can get through outside contractors. Export banks for example. However, only a small segment of the market can go for that. Banks do. [R3BQ13]

Relationship banking.

Yes it does, provided you have a case. If you have a good relationship it gives you a quick access but doesn't grant you the financing. You will still have to go through the process. However, it might help in easing the conditions. [R3BQ14]

Government support (loans and subsidies).

SIDF loans go up to 50%. Nowadays, the SIDF can lend up to 75% of capital in undeveloped regions, which has a major impact. Therefore, firms only need to come up with 25% in equity. [R3BQ15]

Influence of suppliers.

Through lines of credit. [R3BQ16]

Influence of customers.

If you are in the manufacturing industry and you need to give your customers a credit line you need to have the capacity to carry on this working capital requirement. [R3BQ17]

Influence of employees.

The employee has to be in a key position to make this impact. Examples of such employees are: a general manager, a CFO, or a member of the board. [R3BQ18]

Product market and capital structure.

Definitely. Listed companies, especially, try to be efficient in their resources. This gives shareholders better results. Some companies use it as a tool and utilise it expansions, supplier relationships and management. We have a tendency to worry about debt because banks have an upper hand. [R3BQ19]

Influence of competition.

If you are a listed company, you want your ratios to look better than competitors by efficient use of resources. Therefore it does to a certain extent. [R3BQ20]

Other stakeholders.

Lenders in this case are stakeholders when they impose covenants. [R3BQ21]

Exposure to market volatility.

The effect is doubled if the company is highly leveraged and the market is volatile. If you lack the management to safely go through it, over-leverage has a very negative impact. Cases of this were apparent in 2008. [R3BQ22]

Information transparency.

With CMA regulation asking for more disclosure and transparency, certain mandatory requirements could strip you in front of the competition. It continues to be a thin line between being transparent and giving away too much. Some companies will disclose, and some will just accept the fine. [R3BQ23]

Debt as a signalling tool.

It's not really used as a signalling tool in this market. [R3BQ24]

Competitive aggressiveness.

When you are highly leveraged, your risk factor becomes very alarming to you as a board or management. It depends on performance and history. We have seen highly leveraged companies survive "bad times" especially with a good track record. Aggressiveness would depend on past performance. [R3BQ25]

Appendix 6

Respondent 1

Position: Financial Manager

Sector: Petrochemical

Date: 21/11/2011

Capital structure formation.

The company was 100 per cent government owned. In 1980s, 30% of the company went IPO. This was a government decision in order to promote population participation in the company. [R1PQ1]

Methods of financing.

We use both the capital market and the product finance market [R1PQ2]

Types of debt products available to the firm.

Commercial banks, sukuk, SIDF loans etc... [R1PQ3]

Shari'a compliance.

Our loans don't necessarily have to be sharia compliant, but we try our best. [R1PQ4]

Significance of zakat

Zakaat is an important element that is taken into consideration. Our intention is to comply with legal and tax regulation but try to optimise tax through leverage and other means. [R1PQ5]

Determinants of level of debt.

We look at the cost and tenor, growth and other factors. [R1PQ6]

Optimum capital structure.

Usually 70 debt 30 equity. [R1PQ7]

Depend upon the cost of servicing debt.

Yes, we do look at the cost but also consider tenor growth. [R1PQ8]

Influence of bankruptcy laws.

Bankruptcy laws have no effect. [R1PQ9]

Debt as disciplining tool.

We use debt as disciplining tool. [R1PQ10]

Influence of shareholders.

Major shareholders are represented in the board. They therefore have some influence but that influence is limited. [R1PQ11]

Government ownership.

They are two separate entities. [R1PQ12]

Dependence upon the availability of credit.

For our company, it is relatively easy to access credit. We have never defaulted. Our business is strong, and we enjoy a strong history and excellent reputation. [R1PQ13]

International finance.

We use both regional and international finance. Around 60 % of our loans are international. [R1PQ14]

Relationship banking.

Relationship with banks have strong influence in facilitating access to finance. [R1PQ15]

Government support (loans and subsidies).

Government loans and subsidies provide significant support to our capital structure. [R1PQ16]

Influence of suppliers.

They do not influence the capital structure decision. [R1PQ17]

Effect of downturns on quality.

It has no effect on quality. [R1PQ18]

Influence of customers.

They do not influence the capital structure decision. [R1PQ19]

Influence of employees.

They do not influence the capital structure decision. [R1PQ20]

Influence of competition.

There is little influence from our competitors; however, we do use competitors as benchmark for performance purposes. [R1PQ21]

Influence of companies with similar products.

We do not mimic the capital structure of companies with similar products. The effect is insignificant. [R1PQ22]

Other stakeholders.

Mainly commercial banks. [R1PQ23]

Exposure to market volatility.

Our level of debt doesn't affect exposure to market volatility. [R1PQ24]

Information transparency.

Information transparency is important but doesn't affect the capital structure decision. [R1PQ25]

Disclosure.

We have strict disclosure policies that help achieve this balance. [R1PQ26]

Debt as signalling tool.

Use debt as signalling tool for joint ventures and competitors [R1PQ27]

Competitive aggressiveness.

Leverage does have a strong effect in some cases. [R1PQ28]

Appendix 7

Respondent 2

Position: Financial Manager

Sector: Petrochemical

Date: 29/12/2011

Capital structure formation.

Started in the 1970s with the help of SIDF. We rely Mainly working capital facility currently. Sales are around \$2bn, working capital in excess of 1\$bn. Monitoring through current ratio. In 2008, we had a case of inventory overstocking. The discipline of maintaining a minimum period of working capital is an important factor in capital management. [R2PQ1]

Methods of financing.

Mostly murabaha or tawarruq. Some markets do not have shari'a compliant options for financing. However, we tend to use shari'a compliant options if and when they are available. [R2PQ2]

Types of debt products available to the firm.

Murabaha, tawarruq, and ijara structures (in peterochemicals). [R2PQ3]

Shari'a compliance.

Mostly shari'a compliant. [R2PQ4]

Significance of zakat.

Yes. You pay zakat on long-term debt, but on short-term debt, zakat is paid only if it's rolled over. Nowadays, they are making audits that make sure that short-term debt is really short term. If it is continued for long term basis it is considered as capital. [R2PQ5]

Determinants of level of debt.

1:1 debt to equity, below this is not optimum. Above it is too risky. However, this might not be applicable in the case of industrials. 1:1 compared to fixed assets is only due to large working capital. Working capital is gaged by current ratio. However, capital structure of fixed assets could be gaged to debt to equity.
[R2PQ6]

Optimum capital structure.

Use 25% from commercial banks, 25% equity, and the rest from the SIDF.
[R2PQ7]

Nature of assets.

Manufacturing firms have considerable tangible assets and are more likely to obtain finance than other industries such as real estate and services. [R2PQ8]

Dependence upon the cost of servicing debt.

Not really. It depends on the industry and sector. Banks would accept giving you a high percentage of debt in the power industry for example. But in real estate projects, banks would only give you a maximum of 50%. It's mostly the underlying risk of the asset that is financed that influences the capital structure.
[R2PQ9]

Influence of bankruptcy laws.

No effect. [R2PQ10]

Debt as disciplining tool.

Debt is used as a tool for disciplining management. [R2PQ11]

Influence of shareholders.

Of course! Our shareholders prefer it if the company takes on some debt.
[R2PQ12]

Government ownership.

No effect. [R2PQ13]

Dependence upon the availability of credit.

Need to keep some unutilised especially with high working capital. [R2PQ14]

International Finance.

For projects in international countries, we use external debt. [R2PQ15]

Relationship banking.

It's more of an institutional relationship rather than a personal relationship. Board members would contribute but the relationship is mainly institutional. [R2PQ16]

Government support.

SIDF covenants usually influence that decision. Lands are usually the most common subsidy. [R2PQ17]

Influence of suppliers.

No effect. [R2PQ18]

Effect of downturns on quality.

The quality of the product is never compromised. [R2PQ19]

Influence of customers.

No effect. [R2PQ20]

Influence of employees.

No. Executives might have some influence if performance (ROE) determines their compensation. [R2PQ21]

Influence of competition.

Only to some extent. In power industry this can be critical. But the norms of the market that banks usually determine is what they follow. [R2PQ22]

Influence of companies with similar products.

We serve the market in a very repetitive contract base. [R2PQ23]

Other stakeholders.

Banks. [R2PQ24]

Exposure to market volatility.

The more volatility products are subject to, the riskier and therefore the less leverage you are allowed. In our case we buy to contract and not to stock therefore the risk is mitigated through these contracts. Therefore, even in 2008 when commodity prices dropped we were not affected as much because we bought to contract. The exposure is there but it doesn't affect our leverage capacity because of the structure of the business. [R2PQ25]

Information transparency

No influence. [R2PQ26]

Disclosure

The level of reporting required under CMA rules is not in anywhere near what is required in developed markets. Therefore, we do not need to go into details in our financial reports. Announcements are generic and non-specific when it comes to pricing strategies and market penetration. [R2PQ27]

Debt as a signalling tool.

No, we do not use debt as a signalling tool. [R2PQ28]

Competitive aggressiveness.

No. It depends on the industry. The banks usually determine leverage. Our company provides products to contractors, so to them it has little influence. [R2PQ29]

Appendix 8

Respondent 3

Position: Board Member

Sector: Petrochemical

Date: 12/01/2012

Capital structure formation.

Started with Debt financing from day 1. Our commitments are fixed in terms of machinery and equipment. Typically use 70:30 debt to equity. [R3PQ1]

Methods of financing.

Long term. SIDF, Commercial and Commercial syndicated depending on the size of the loan. [R3PQ2]

Types of debt products available to the firm.

Depends on the age of the project. If it's a green field, there are limited debt products available. However, if the project is already established then things change tremendously and more debt products are available including Sukuk. [R3PQ3]

Shari'a compliance.

No but largely depends on shareholders philosophy and views and if they have the intention of going public (IPO) or privately placed to attract a larger investor audience. [R3PQ4]

Significance of zakat.

Yes. [R3PQ5]

Determinants of level of debt.

Depends on the size of the plant, the structure of the company (joint stock/publicly listed) strategic partners (off takers of product or tech provider), and government involvement. [R3PQ6]

Dependence upon the cost of servicing debt.

Yes but also look at tenor, refinancing ability. [R3PQ7]

Debt as disciplining tool.

Use it as a challenge to management or a condition. [R3PQ8]

Influence of shareholders.

There is minimal involvement by shareholders in industrial projects. [R3PQ9]

Government ownership.

Facilitates access to finance. [R3PQ10]

Dependence upon the availability of credit.

No. But it depends on the cycle of the economy. In the past we've been affected but we are currently enjoying a healthy and liquid environment. [R3PQ11]

International finance.

Yes. International Finance Company. Export banks. Provided there are international investment partners and EPC contractors. [R3PQ12]

Relationship banking.

Facilitates it in terms of level of importance, attention and exposure. However, their relationships have no effect on terms and conditions. If there was no involvement of government, and tech provider and the company was completely independent then shareholder personal guarantees can significantly influence the bank's decision. [R3PQ13]

Government support (loans and subsidies).

There are many semi government institutions (such as PIF, Pensions, SIDF, Sanabil, Export program, Ministry of finance) that provide pure financial support in the case of this company and leverage from the banking industry (backed by government support). [R3PQ14]

Influence of suppliers.

Yes. However, it is considered a “one time” effect on capital expenditure. [R3PQ15]

Effect of downturns on quality.

Many products affected by market conditions. [R3PQ16]

Influence of customers.

Yes in terms of payment terms. LCs. This also affects cash flow and liquidity requirements. As such, they affect operating expenditure. [R3PQ17]

Influence of employees.

No effect. [R3PQ18]

Influence of competition.

It is industry practice rather than competition that influences the debt decision. [R3PQ19]

Influence of companies with similar products.

Precedence creates industry norm. [R3PQ20]

Other stakeholders.

JV partners, technology providers and lenders. [R3PQ21]

Exposure to market volatility.

Whenever the terms of leverage (short term or medium term) could be harmful to the project if the economy faces problems. [R3PQ22]

Information transparency.

It has no effect. [R3PQ23]

Disclosure.

Do not share information publicly but only with regulators. [R3PQ24]

Debt as a signalling tool.

It is sometimes used as a signalling tool to the market and stakeholders and shareholders. [R3PQ25]

Competitive aggressiveness.

It has no affect in the industrials sector, but in the real estate arm it has a large affect. [R3PQ26]

Appendix 9

Respondent 4

Position: CEO

Sector: Petrochemical

Date: 09/01/2012

Capital structure formation.

In the beginning the companies position was weaker than it is and it was much more difficult to find investors. It was first a private listed company at the time. Depended mainly on equity as a main source of capital structure due to absence of track record. The company no longer faces such problems. We now have access to liquidity in the market through rights issue and debt market and became more of a mature company. [R4PQ1]

Methods of financing.

Commercial banks, SIDF, PIF. Internationally use export credit agencies, which give guarantees to commercial banks. Use right issues to collect equity. Project finance deals, working capital loans, and multipurpose loans. [R4PQ2]

Types of debt products available to the firm.

Have done direct lending from banks, right issues, and are looking into doing Sukuk. [R4PQ3]

Shari'a compliance.

Doesn't have to be but we try our best. Try to stick to local, shari'a compliant banks. [R4PQ4]

Significance of zakat.

Taxation of foreign partner and zakat have an impact on the capital structure decision. We look at total capital structure and return on investment and look at optimisation of return. Tax and Zakat have some effect on the optimisation on that return. [R4PQ5]

Determinants of level of debt.

Typically, want to have the least amount of equity. Decision is based both on the market and banks. Knowing the market we have gone between 25% equity to 75% debt and 30% equity to 70%. [R4PQ6]

Optimum capital structure.

We have done 25% Equity to 75% Debt but nowadays use 30% Equity to 70% Debt. Some projects were required to have 50% Equity. Some projects are done with 100% equity. However, 25 to 30 percent equity is the norm. The SIDF loan has a limit of 600 million riyals, so we take whatever we get from the SIDF and then take whatever we can to complete it from commercial banks. [R4PQ7]

Nature of assets.

If it is a new product that hasn't been tested in the market has an impact on financing. If the technology is proven and the product is established the capital structure decision will not be affected. Therefore, from the asset point of view, we have capital intensive plans, therefore we can access more debt. Other industries with more intangibles have less access. [R4PQ8]

Dependence upon the cost of servicing debt.

Of course! We try to optimise return on investment and must reach a balance between debt and equity to optimise this return. [R4PQ9]

Influence of bankruptcy laws.

If you are in a situation where more leverage brings you closer to bankruptcy then definitely affected. However, we did not reach that point. [R4PQ10]

Debt as a disciplining tool.

The main objective is getting a better advantage. We tap into SIDF and others who are known for good due diligence which will give us a better position. So to a certain extent we do. [R4PQ11]

Influence of shareholders.

If the company is owned by well-known shareholders, it will affect the credibility of the company. In terms of starting a new project, shareholders affect the amount of equity that is assigned to the project. They also have influence in rights issues, ipo etc.. Most of major shareholder are represented in the board. Definitely have a say in capital structure decision. [R4PQ12]

Government ownership.

No effect. [R4PQ13]

Dependence upon the availability of credit.

Not really. We have no problem with payables or receivables. [R4PQ14]

International finance.

We do, especially for international projects. [R4PQ15]

Relationship banking.

It really depends on the performance of the company. Sometimes banks don't lend to a project but rather to the people that manage the project. So it has an impact based on the performance and reputation of the company and the individuals in the company. [R4PQ16]

Government support (loans and subsidies).

Government support is a major influence on the financing structure. SIDF gives 50% of every project as a loan has a very important impact on the capital structure decision. Normally don't like to call them subsidies, we also provide a good income and jobs, so they support the industry rather than subsidies it. [R4PQ17]

Influence of suppliers.

Pricing the raw materials into the projects, reliability of suppliers is also a consideration. However, we didn't reach the stage where credit is a major influence on our capital structure decision. [R4PQ18]

Effect of downturns on quality.

Do not touch product quality. When the market is weak, product quality is essential because competition is higher. It is the last thing to compromise. In fact, when it's a buyer's market, lower quality will negatively affect your sale. Sometimes companies tighten their belts buy looking at cost saving methods. In Saudi, do not touch employment. Instead look at better ways of doing things. Delay luxurious programs for example. As such, we don't reach the limit of compromising quality. [R4PQ19]

Influence of customers.

Location of customers, if a product has to be shipped to a far location, there can be an influence overall. If you are competing with producers who have preferable relationships with certain customers, customers will have an impact on how this market can be penetrated and ultimately have an impact on the capital structure decision. However, the effect is not significant. [R4PQ20]

Influence of employees.

Depends on whether project is capital or labour intensive. If capital intensive, employees will have limited affect. If it is labour intensive, the structure might be affected. However, in our case there is no significant effect. [R4PQ21]

Influence of competition.

It will have an impact on the viability of the product. If a market is strongly controlled, the financing structure will be affected. If there is less competition, could demand less equity and higher debt. However, we do not really compare, but look at the general norm in the market for the product. We do not go to specific companies and compare. We can tap into the market more than other competitors because of better track record. [R4PQ22]

Influence of companies with similar products.

In the development of the project, start with feasibility study which benchmarks the project with other similar entities. The effect on capital structure will only be affected if a company is able to obtain better financing, and as such poses a threat as a competitor because they are in a better financial decision. [R4PQ23]

Other stakeholders.

Rules and regulation. [R4PQ24]

Exposure to market volatility.

If this causes a problem of paying to the banks, then definitely. This would be taken into consideration in starting up a project. There could be conditions in the financing agreement to cover these conditions. The 2008 crisis was a bad event; it was a huge dip but didn't last for long. The nature of our product is cyclical (3-4yrs) which is taken into consideration. Therefore in 2008 we had access to liquidity ahead of times, and a right issue that was planned ahead of the crisis, which gave us a favourable position. Banks on the other hand were cautious and access to credit was limited, must be linked to an asset. [R4PQ25]

Information transparency.

We abide by CMA laws and therefore must announce everything we are doing and so it becomes public immediately. We must also disclose how much debt is acquired each year, so to some extent the capital structure is affected. [R4PQ26]

Disclosure.

There is certain information that might affect your competitiveness and so anything that has to be announced must be reviewed and carefully announced. We adapt a certain disclosure policy and try to abide by CMA and other regulators but must balance it in such a way that does affect the shareholders, must not jeopardise the return on investment. Never reveal cost of production for example. Grouping is one method used for competition not to get exact figures. [R4PQ27]

Debt as signalling tool.

Definitely. It gives you a better competitive advantage. This affects reliability and shows that you are in a better position than your competitors. Always show that we have muscle when needed. [R4PQ28]

Competitive aggressiveness.

Leverage affects the aggressiveness in the product market. There are two sides of this. Higher debt might lead to higher aggressiveness, but at the same time you have to take into account the cost of servicing that debt. Of course, must make a good return to cover the cost of servicing that debt and therefore become more aggressive. [R4PQ29]

Appendix 10

Respondent 1

Position: Financial Manager

Sector: Food

Date: 06/12/2011

Capital structure formation.

Initially, the company started with small capital, small processing factory worth 40 million riyals. Gradually went through difficult time in early 80s, lost almost half of capital, changed marketing strategy and product mix, new product. Captured market share and started gaining market share up to 70%. Restructured and became a holding. Started growing in other complimentary sectors, packaging line to service its edible oil business. Grew to provide services to third parties. Funding was on subsidiary level and parent company. Maximising shareholder value orientation was the prime aim. We started as a listed company from day one. We had access to capital market funding. We depended on initial equity and some funding from banks. Buyouts were a mix of equity and debt. Used right issue in funding acquisition, which put us on the map as a major company in this industry. [R1FQ1]

Methods of financing.

Equity, right issue, debt. Recapitalising retained earning. Commercial debt mainly. [R1FQ2]

Types of debt products available to the firm.

SIDF soft loans, commercial loans, classical short term line, letter of credit (LC) and letters of guarantee (LG), as well as some funding from suppliers. We tend to use Islamic version of it, Murabaha and reverse murabaha (tawarruq) are the most popular ones. [R1FQ3]

Shari'a compliance.

It's on the company's strategy. Lately, we have been using shari'a compliant debt products wherever they are available. [R1FQ4]

Significance of zakat.

Yes. We try to fund fixed assets through equity (70%), the rest through debt. Otherwise, end up paying more zakat. Zakat is calculated on two fronts, either on equity or net profit. Therefore try to pay zakat on net profit. [R1FQ5]

Determinants of level of debt.

Do not exceed gearing ratio (interest bearing debt to equity 1:1) 1.5 to 1 leverage ratio (D/E). [R1FQ6]

Optimum capital structure.

50% SIDF. For a holding company it is around 50:50 debt to equity. For bigger projects there's more debt, thus around 70:30 debt to equity. [R1FQ7]

Nature of assets.

Yes. The nature of assets affects capital structure. [R1FQ8]

Dependence upon the cost of servicing debt.

Equity is the most expensive source of financing, debt is always cheaper. The structuring of our balance sheet is on maximising shareholder value, and covenants. Cost of servicing debt isn't very significant. [R1FQ9]

Influence of bankruptcy laws.

Yes. We look at solvency ratios. [R1FQ10]

Debt as disciplining tool.

Yes, but rarely. [R1FQ11]

Influence of shareholders.

We aim to maximise shareholder value. [R1FQ12]

Government ownership.

The ownership by the general investment fund, but the financiers were SIDF. Not really related. [R1FQ13]

Dependence upon the availability of credit.

We always had substantial facility lines with banks. Project financing where the risk is shared was a bit difficult. [R1FQ14]

International finance.

Used to obtain financing from external banks but stopped due to additional cost (withholding tax) which is less competitive than the local market. [R1FQ15]

Relationship banking.

This helped a lot in easing raising funds. In the third world, this plays a significant influence and gives credibility and assurances that cannot be ignored. However, we have an established track record, which vouches for us. In addition, our mix of board members used to help and gave credibility to the firm. [R1FQ16]

Government support (loans and subsidies).

This makes a big difference in areas where this can be accessed. SIDF funds 50% of projects. 25% to 30% E and 20 to 25% is from commercial banks. The rest is financed by SIDF. As such, when SIDF funds are available they play a major role in the capital structure decision. [R1FQ17]

Influence of suppliers.

No effect. [R1FQ18]

Effect of downturns on quality.

Price adjustments used to take place in order to remain competitive in order to maintain its market share. Innovation in products itself used to take place. In distressed times used to cut cost, even in production level. Used to reintroduce product in terms of size of package, quality of packaging, but also retain margin. So yes. [R1FQ19]

Influence of customers.

No effect. [R1FQ20]

Influence of employees.

No effect. [R1FQ21]

Influence of competition.

No influence. Look at strategy but no mimicking. Banks fund parent company, and parent company divides those funds to subsidiaries. [R1FQ22]

Influence of companies with similar products.

No influence. [R1FQ23]

Other stakeholders.

Banks mainly. [R1FQ24]

Exposure to market volatility.

Yes. Especially if invested in stock market. If you are a player in the stock market, the level of allocation that is put in the market is at high risk. So if equity is not enough, market volatility affects you. [R1FQ25]

Information transparency.

It has little influence. Have to be transparent but do not want to communicate too much and weaken your position. [R1FQ26]

Disclosure.

We do not reveal information that would weaken our position. [R1FQ27]

Debt as a signalling tool.

Not in this context. [R1FQ28]

Competitive aggressiveness.

Definitely, leverage affects our aggressiveness in the product market. We can be more aggressive. [R1FQ29]

Appendix 11

Respondent 2

Position: Board Member

Sector: Food

Date: 02/02/2012

Capital structure formation.

Our capital structure is typically 1:1 equity to debt with 10 to 15% of debt from the SIDF. [R2FQ1]

What methods of financing.

Short term and Medium term loans. We are now starting to issue sukuk (5 years). 80% of our facilities are 5-year facilities. [R2FQ2]

Shari'a compliance.

Our loans must be shari'a compliant. [R2FQ3]

Significance of zakat.

No. This is because our ROA and profitability is large. Loans used for working capital are Zakat paying, however, in the case of our company; we are not affected due to high profitability. [R2FQ4]

Determinants of level of debt.

We do not want to exceed 3 times EBITA. [R2FQ5]

Nature of assets.

It affects it to some extent. [R2FQ6]

Dependence upon the cost of servicing debt.

No. We haven't had problems with servicing our debt or access to finance. [R2FQ7]

Influence of bankruptcy laws.

No influence. [R2FQ8]

Debt as a disciplining tool.

In a way we do. It is one of our key performance indicators. We also look at ROE. [R2FQ9]

Influence of shareholders.

Shareholders want to recoup some of the returns but do not wish to take more than is required for the company to grow (40% of profits as dividends).

[R2FQ10]

Government ownership.

Not related. [R2FQ11]

Dependence upon the availability of credit?

No. [R2FQ12]

International finance.

We can but we don't. [R2FQ13]

Relationship banking.

Some influence. We deal almost with all banks and try to get the best rates. Our company's rating is considered to be "AAA". [R2FQ14]

Government support (loans and subsidies).

Government loans form only 10% of our financing, so their effect is very small. Subsidies mean more control so we wish there weren't any subsidies. [R2FQ15]

Influence of suppliers.

Suppliers have very little influence. [R2FQ16]

Effect of downturns on quality.

There is no effect on product quality. [R2FQ17]

Influence of customers.

Customers have very little influence. [R2FQ18]

Influence of employees.

The effect of employees is very insignificant. [R2FQ19]

Influence of competition.

The effect of competition is not significant. [R2FQ20]

Influence of companies with similar products.

Very little mimicking happens. [R2FQ21]

Other stakeholders.

Banks. [R2FQ22]

Exposure to market volatility.

The effect is small because our 1:1 debt to equity ratio is considered to be relatively safe. [R2FQ23]

Information transparency.

The effect is small. We do not disclose details of breakdown of Sales. Today, our company is considered to be the most transparent compared to our competitors. We d give more details but also try to group sensitive items. We aim to be the most transparent in the market. [R2FQ24]

Debt as a signalling tool.

We do not use debt as a signalling tool. [R2FQ25]

Competitive aggressiveness.

Leverage decision has very little effect. [R2FQ26]

Appendix 12

Respondent 1

Position: Financial Manager

Sector: Industrial Investment

Date: 28/12/2011

Capital structure formation.

The company was established in the 1980s and relied mainly on equity + SIDF. The SIDF fund fully repaid and not sought after again. Capital generated internally was enough. In the 80s and 90s, we depended on government sales. We had a problem with collection of receivables; however, everything was paid off at once at the end of 90s, which made the company have a sudden excess of cash. This was mostly used in investment in the petrochemical sector in order to diversify the business. The capital employed in the core business is around 1/3 of total capital. The rest is investment available for sales. The decision to go IPO at the time was a government requirement. [R1IIQ1]

Methods of financing.

SIDF (in the beginning), but we also rely on overdrafts. [R1IIQ2]

Types of debt products available to the firm.

Overdrafts. Revolving credit used short term. Never used to finance long-term assets. [R1IIQ3]

Shari'a compliance.

Any loans we decide to take must be sharia compliant. [R1IIQ4]

Significance of zakat.

No. Take into account the need for company of extra financing rather than the incremental factor of Zakat. [R1IIQ5]

Determinants of level of debt.

We mostly use equity due to availability of cash. Anticipated acquisitions were not realised. Nevertheless, we do recognise that the current capital structure is not optimum. [R1IIQ6]

Optimum capital structure.

It is common to have a low leverage ratio especially due to high R&D activities. Most companies in this industry have either had or currently have loans from SIDF. They also have excess cash. When a company has access to capital markets, the SIDF loan becomes no longer attractive due to the requirements and length of processing. [R1IIQ7]

Nature of assets.

It affects it in terms of expansion or future acquisition. But currently most assets are financed by equity. [R1IIQ8]

Dependence upon the cost of servicing debt.

No influence. [R1IIQ9]

Influence of bankruptcy laws.

Yes definitely, especially due to high R&D intensity. [R1IIQ10]

Debt as disciplining tool.

Consider if for future projects, but we do use the SIDF due to its strict discipline. [R1IIQ11]

Influence of shareholders.

Definitely. Shareholders have a significant influence. They want bonus shares, rights issues. This may not always be economically sound but sometimes necessary. [R1IIQ12]

Government ownership.

It is completely unrelated to access to loans. [R1IIQ13]

Dependence upon the availability of credit.

We face no problem with availability of credit. [R1IIQ14]

International finance.

We would prefer local finance. [R1IIQ15]

Relationship banking.

No. There is no need for to tap into commercial bank finance at the moment. [R1IIQ16]

Government support (loans and subsidies).

Government subsidies have some influence through industrial lands. [R1IIQ17]

Influence of suppliers.

They have no influence. We have fixed, long term suppliers. [R1IIQ18]

Effect of quality on downturns.

No. We must maintain quality at all times. We work with multinationals and their licensed products and have strict quality controls. We were not affected by economic downturn, but there was a search for cheaper suppliers. However, the process of switching would take almost a year. [R1IIQ19]

Influence of customers.

They indirectly influence it through lines of credit. [R1IIQ20]

Influence of employees.

They have no influence. [R1IIQ21]

Influence of competition.

The link is the lines of credit given to customers. High credit increases competition. However, the decision between equity and loans is not influenced. High account receivables could be used as a marketing strategy, which gives the client an advantage. [R1IIQ22]

Influence of companies with similar products.

They have no influence. [R1IIQ23]

Other stakeholders.

No. [R1IIQ24]

Exposure to market volatility.

Investments are available for sales (market to market). By the end of period any difference between market value and cost will be reported as realised gains or losses, which fluctuates equity. We must consider when to liquidate. But holding period returns are very high. The decision of liquidation must take into consideration the cycle of the business especially in this industry. We were invested in these businesses at par or less than par value. But definitely market cyclicalities is considered. [R11Q25]

Information transparency.

We comply with disclosure of material disclosure of the CMA. Information transparency required in acquisitions. [R11Q26]

Disclosure.

Annual reports disclose a lot of information. Some information we feel shouldn't be disclosed. We try to educate the CMA about the nature of the industry. It's difficult to achieve this balance. We try to group information in order for shareholders to get the right idea without hindering competition. Sales and Costs are especially grouped rather than detailed. Also, information about strategy and direction of company are sometimes required which negatively influence the company's competitive advantage. [R11Q27]

Debt as a signalling tool.

We do not use debt as a signalling tool. [R11Q28]

Competitive aggressiveness.

No. [R11Q29]

Appendix 13

Respondent 2

Position: CEO

Sector: Industrial Investment

Date: 08/02/2012

Capital structure formation.

Considerable changes in capital structure due to some internal and external factors. Ranges between 60:40 and 65:35 Debt to Equity [R2IIQ1]

Methods of financing.

Equity and Debts (from commercial Banks and Government development funds; namely SIDF). [R2IIQ2]

Types of debt products available to the firm.

Islamic Tawarooq Loans and soft loan from SIDF (Saudi Industrial Development Fund). [R2IIQ3]

Shari'a compliance.

Depends on the top management' culture tone. In our case loans are complying with Shari'a law. [R2IIQ4]

Significance of zakat.

Yes, as Zakat is based on the company's available funds regardless of its sources. [R2IIQ5]

Determinants of level of debt.

Externally, level of debt determined by the upper limits set by financing bodies, while internally; to large extent determined by Capital Costs; PPE, Working capital and degree of rivalry in the industry. [R2IIQ6]

Optimum capital structure.

Our business is a Greenfield business in the region initiated by our company, so company structure in this industry is not relevant. [R2IIQ7]

Nature of assets.

Nature of assets in this business entails provision of highly automated process and operation that implies the need of a huge finance, which strongly impact capital structure decision. [R2IIQ8]

Dependence upon the cost of servicing debt.

Yes, interest cost of capital is an inevitable driver of the capital structure. [R2IIQ9]

Influence of bankruptcy laws.

No effect. [R2IIQ10]

Debt as disciplining tool.

Not Applicable. [R2IIQ11]

Influence of shareholders.

The financial position of shareholders to inject finance in the company would affect capital structure to large degree. [R2IIQ12]

Government ownership.

In our case, government is heavily involved as a lender through SIDF, it conditioned certain structure to be intact to guarantee other Partners commitment and restrict further borrowings via financial covenants and cost limits. [R2IIQ13]

Dependence upon the availability of credit.

In general yes, but there are some financial covenants that may restrict the appetite to borrowing. [R2IIQ14]

International finance.

Yes as a mixed companies having foreign partner shares in equity. For asking finance from external countries or markets, the exchange risk is always in presence. [R2IIQ15]

Relationship banking.

Absolutely good and sound relations with banks have considerable impact to get quick access to finance. [R2IIQ16]

Government support (loans and subsidies).

This factor greatly affects our capital structure. Government loans/subsidies are the main determinant of our capital structure. As they represent the highest financier, they determine the adequate structure even if by way of covenants. [R2IIQ17]

Influence of suppliers.

Suppliers impact capital structure through the nature of products they provide to our company (e.g. heavy machineries, technology, etc), and through the strict governmental regulations within the industry (loss prevention, insurance, environmental hazards, etc.), but the influence is small. [R2IIQ18]

Effect of downturns on quality.

No influence. [R2IIQ19]

Influence of customers.

Not Applicable. [R2IIQ20]

Influence of employees.

Not Applicable. [R2IIQ21]

Influence of competition.

Competition impacts capital structure as the company needs the acquisition of state of art technology i.e. huge finance to compete with others within the same industry. [R2IIQ22]

Influence of companies with similar products.

Depends on the level of competition. However, in our case no local competition yet, therefore, the impact is minimal, if any. [R2IIQ23]

Other stakeholders.

Yes, public institutions that care about environmental hazards will impact capital structure through governmental regulations. [R2IIQ24]

Exposure to market volatility.

In general, yes. Products prices, demand, input prices volatility will expose the company with weak capital structure (high debt to equity ratio) to financial and operational risk. [R2IIQ25]

Information transparency.

Information transparency is critical factor in marketing strategy; however, discretionary information transparency is required to restrict access to your information by competitors, otherwise, information disclosure impact capital structure. [R2IIQ26]

Disclosure rules.

Firms should disclose information at a level not to benefit competitors in the same industry. [R2IIQ27]

Debt as signalling tool.

To a large extent to monitor financial covenants. [R2IIQ28]

Competitive aggressiveness.

No influence. [R2IIQ29]

Appendix 14

Respondent 1

Position: CFO

Sector: Cement

Date: 10/03/2012

Capital structure formation.

Company was formed more than 50 years ago. [R1CQ1]

Methods of financing.

Permanent finance is through owners 'equity. Finance theory "M&M" concept of favourable impact of low cost of debt largely doesn't apply to Saudi companies due to the very modest Zakat shield on cost of debt, and also probably due to Islamic prohibition on usury, which' s largely interpreted as any form of interest. [R1CQ2]

Types of debt products available to the firm.

Banks' short and medium term loans. [R1CQ3]

Shari'a compliance.

Our company's sources of debt finance have to be 100% Sharia compliant. [R1CQ4]

Significance of zakat.

No. Zakat shield of 2.5% of cost of debt renders it largely irrelevant. [R1CQ5]

Determinants of level of debt.

Immediate need for financing large capital projects, as well working capital needs. [R1CQ6]

Nature of assets.

No effect. [R1CQ7]

Dependence upon the cost of servicing debt.

Yes to some extent. [R1CQ8]

Influence of bankruptcy laws.

They have no effect. [R1CQ9]

Debt as disciplining tool.

We do not use it as a tool for disciplining management. [R1CQ10]

Influence of shareholders.

No effect. [R1CQ11]

Government ownership.

It has no effect. [R1CQ12]

Dependence upon the availability of credit.

Yes. [R1CQ13]

International finance.

Yes. There's no regulatory barrier to that. [R1CQ14]

Relationship banking.

Commercial banks actually chase business with our company and other cement companies due to their strong balance sheets and high profitability. Their board members have no impact. [R1CQ15]

Government support (loans and subsidies).

External debt financing, including government SIDF loans, is used only to finance capital projects when needed. Government loans don't play any permanent role in capital structure decision. [R1CQ16]

Influence of suppliers.

No effect. [R1CQ17]

Effect of downturns on quality.

No effect. [R1CQ18]

Influence of customers.

No effect. [R1CQ19]

Influence of employees.

No effect. [R1CQ20]

Influence of competition.

No effect. [R1CQ21]

Influence of companies with similar products.

No effect. [R1CQ22]

Other stakeholders.

No. [R1CQ23]

Exposure to market volatility.

No. [R1CQ24]

Information transparency.

It has no effect. [R1CQ25]

Disclosure.

Regulatory and accounting disclosure requirements have to be complied with as a matter of policy and compulsion. [R1CQ26]

Debt as a signalling tool.

We do not use it as a signalling tool. [R1CQ27]

Competitive aggressiveness.

No effect. [R1CQ28]

Appendix 15

Respondent 2

Position: Board Member

Sector: Cement

Date: 28/01/2012

Capital structure formation.

Started of 450 million riyals, and stayed that way for 20 years. 2 years ago increased capital to 900 million through bonus shares. The SIDF financed 50% of the project at 2%. Many cement/industrials companies resorted to SIDF and Bridge Financing through commercial banks. Approval of SIDF is an indication that the company is on the right track. Nowadays, require companies to become listed. Also give new entrants a push in order to deter oligopolistic concentration in the industry. [R2CQ1]

Methods of financing.

SIDF, Cash Flows. 50% SIDF, 50% Equity + Bridge financing. Nowadays with low interest rates, we try to generate expansion internally. [R2CQ2]

Types of debt products available to the firm.

SIDF, Commercial banks.. [R2CQ3]

Shari'a compliance.

We prefer to be Shari'a compliant. However, note that it is done by a lot of companies to satisfy shareholders. R4CQ4

Significance of zakat.

In the past, but now no. Do not really make a difference especially as it's only 2.5%. However, if try to optimise zakat and shareholder revenue. [R2CQ5]

Determinants of level of debt.

We currently have zero debt. Had 250 million last year and paid before maturity. But usually not more than 50% of shareholder equity. [R2CQ6]

Dependence upon the cost of servicing debt.

Yes. But currently used the company's reserves to pay off debt and raise capital. With low interest rates, the cost of servicing debt is less critical. With high profit margins (45%), we can service all debts from profits. [R2CQ7]

Debt as disciplining tool.

We use it to maintain customers through lines of credit. Show flexibility and get loyalty from them. But don't use it much as a tool for discipline. [R2CQ8]

Government ownership.

Yes. A lot of cement companies have the government as a shareholder. [R2CQ9]

Influence of shareholders.

In the past, yes. Especially when other competitors started to increase capital. When giving all dividends to shareholders, it would send the signal that the company has no better way of investing it and no prospects for growth and expansion, which put a lot of pressure on management. [R2CQ10]

Dependence upon the availability of credit.

No. [R2CQ11]

International finance.

We can but we don't need to. [R2CQ12]

Relationship banking.

Absolutely yes. If you have a good relationship credit is facilitated at any time. [R2CQ13]

Government support (loans and subsidies).

Currently, we are having difficulty expanding. We are not able to due to unavailability of fuel, which is usually subsidised by the government. We Cannot

operate by using fuel from the local market. You also must get government approval if you need to increase capital. [R2CQ14]

Influence of suppliers.

No effect. [R2CQ15]

Effect of downturns on quality.

Quality is affected sometimes but we try to always maintain a certain standard. The ban on exports was one of the shocks that we have been exposed to. But we service a large area and so we weren't affected as much. [R2CQ16]

Influence of customers.

Some customers have LCs. But no significant influence. [R2CQ17]

Influence of employees.

No effect. [R2CQ18]

Influence of competition.

Not at all. [R2CQ19]

Influence of companies with similar products.

Not really, but the whole sector would be affected by the trend. There is no reason to increase capital due to low prospects for expansion in the past. We tend to give dividends instead. However, recently the trend was to increase capital due to the need for growth and high demand. There is more liquidity. [R2CQ20]

Other stakeholders.

No. [R2CQ21]

Information transparency.

Abide by CMA rules, but try to stay away from mentioning the selling prices and average prices. However, although it isn't said explicitly, one can read into it through financial statements. [R2CQ22]

Debt as a signalling tool.

We do not use it as a signalling tool. [R2CQ23]

Competitive aggressiveness.

We can extend credit terms to distributors, which will help us, compete more aggressively in the product market. [R2CQ24]

Appendix 16

Respondent 3

Position: CFO

Sector: Cement

Date: 12/03/2012

Capital structure formation.

When the company was founded 50 years ago, capital structure was made up of 100% of shareholders equity. However, it is now 94% from shareholders equity and 6% from loans. [R3CQ1]

Methods of financing.

At first, the company had high liquidity, which enabled it to finance the majority's projects, but in some cases, it needed to resort to borrowing through government funds "SIDF" or commercial banks. [R3CQ2]

Types of debt products available to the firm.

There are two types of products that characterise the company's debt. If debt is used in working capital, then the company uses L/C's and L/G's, but if there are expansions, capital is sought from government loans or commercial loans. [R3CQ3]

Shari'a compliance.

Yes, I believe the source of funding and its compatibility with Sharia is very important for company. [R3CQ4]

Significance of *zakat*.

Zakat doesn't only depend on the amount of debt but there are other factors taken into account, such as fixed assets, retained earnings and reserves. Therefore it is one of many factors. [R3CQ5]

Determinants of level of debt.

It depends on the following: -

- A. *Dividends policy.*
- B. *Feasibility study and cash flows.*
- C. *Lending rate.*

[R3CQ6]

Optimum capital structure.

I think 60% equity to 40% debts is safe. [R3CQ7]

Nature of assets.

Large capital expenditures will significantly affect the composition of capital.

[R3CQ8]

Dependence upon the cost of servicing debt.

Yes, of course. [R3CQ9]

Influence of bankruptcy laws.

We adhere to the laws of the CMA with regards to bankruptcy. [R3CQ10]

Debt as disciplining tool.

We do not use it as a tool for disciplining management. [R3CQ11]

Influence of shareholders.

The company has shareholders who depend on the amount of dividends, so yes they affect the structure of capital. [R3CQ12]

Government ownership.

We are a listed company and the government doesn't have shares in our company, so there is no impact. [R3CQ13]

Dependence upon the availability of credit.

I believe that the strong financial position of the company is appropriate for easy access to funding. [R3CQ14]

International finance.

Currently, there is no need for the external financing. [R3CQ15]

Relationship banking.

I believe if there is an effect, it will be very weak due to the company's very strong financial position, which enables it to get any financing facilities it needs with competitive rates. [R3CQ16]

Government support (loans and subsidies).

I believe that the government has a great role for the company and to other companies in the same industry. [R3CQ17]

Influence of suppliers.

I think it depends on whether there are large expansions. Generally, no effect. [R3CQ18]

Effect of downturns on quality.

I believe the maintaining of the product quality is considered to be one of the priorities and has nothing to do directly with the composition of capital. [R3CQ19]

Influence of customers.

No effect. [R3CQ20]

Influence of employees.

No effect. [R3CQ21]

Influence of competition.

In my opinion, it has nothing to do with competition, but depends on the needs for expansion and any developments in the economy, which result in increases in demand for the company's product. [R3CQ22]

Influence of companies with similar products.

I believe that the structure of capital depends on the extent of need for funding to strengthen the capital expansions and the each individual company's

dividend policy, so there may be some differences in the capital structure of companies with similar products. [R3CQ23]

Other stakeholders.

No. [R3CQ24]

Exposure to market volatility.

Certainly there is, but the nature of the impact of the cement industry makes the fluctuations in the market less significant. [R3CQ25]

Information transparency.

It impacts it greatly. [R3CQ26]

Disclosure rules.

The balance is achieved through adhering to CMA and government disclosure rules. However, it is difficult to maintain that balance especially in the Cement Industry and with limited number of companies in this industry. [R3CQ27]

Debt as a signalling tool.

The amount of debt is currently only 6% , so we can signal that we have the ability to access to additional funding when needed. [R3CQ28]

Competitive aggressiveness.

In my opinion doesn't have a direct impact. Competitiveness depends on the volume of demand from region to other. [R3CQ29]

Appendix 17

Respondent 4

Position: CFO

Sector: Cement

Date: 02/12/2011

Capital structure formation.

Company started with equity finance, at that point of time no debt financing arrangement was entered into as the financial model was not yet finalized, and priority was to legally incorporate the company. Capital structure presently is 3 to 1 Debt to Equity 3 to 1. [R4CQ1]

Methods of financing.

The company decided to finance its cement project by means of Equity, debts and Shareholders loans. [R4CQ2]

Types of debt products available to the firm.

Many types of credit facilities are available such as Letters of credit Medium and short-term loans, Surety bonds, etc...[R4CQ3]

Shari'a compliance.

In Saudi Arabia, project finance is being dealt with through Murabaha Agreements that comply with Sharia law. [R4CQ4]

Significance of zakat.

Yes. Zakat can be a determinant factor in taking on debts, since zakat is assessed on the "Net worth" of the company. [R4CQ5]

Determinants of level of debt.

The level of debts is determined by: project cost, shareholders financing potential, the availability of loans from Governmental funds (SIDF) and commercial Banks, the cost of financial charges related to the level of debts and

the nature of financial covenants and other terms imposed by the lenders. [R4CQ6]

Optimum capital structure.

A good reference would be the structure frequently suggested/ required by the lenders i.e., 60/40 (Debt/Equity). In general optimum structure is the one where cost of debt is lower than the cost of equity and with the level of debt that does represent high risk of default and bankruptcy. [R4CQ7]

Nature of assets.

In some cases, especially in heavy industries the acquisition of Assets (Machineries and other equipment) requires considerable amount of funds. And in situation where funds for equity are not enough for investment purposes, the need for Debt finance is a must therefore capital structure is affected accordingly. [R4CQ8]

Dependence upon the cost of servicing debt.

Lower financial charges and more flexible credit terms are appealing for higher level of debts in the capital structure of the firm and vice versa. [R4CQ9]

Influence of bankruptcy laws.

A strict bankruptcy law is always deterrent to opt for a higher level of leverage in the capital structure. [R4CQ10]

Debt a disciplining tool.

Management should be alert at all times to avoid falling in default and this requires a strict discipline in cash management. [R4CQ11]

Influence of shareholders.

Shareholders affect the capital structure decision to the extent that the capital structure is commensurate with their expected return on equity. [R4CQ12]

Government ownership.

In general, a concentrated ownership structure offers better guarantee to the lenders and therefore easier access to loan facilities. On the other hand it is

also easier to obtain loans when the Government is at the same time lender and shareholders. [R4CQ13]

Dependence upon the availability of credit.

It only depends to a certain extent. [R4CQ14]

International finance.

Because of the nature of guarantees required and other restrictions, by SAMA,(Saudi Arabian Monetary Agency), financing is not sought after from external countries. [R4CQ15]

Relationship banking.

Good reputation and high previous credit rating usually facilitate access to obtain credit facilities. [R4CQ16]

Government support (loans and subsidies).

Government loans are usually offered with lower financial charges than commercial Banks. In this case the capital structure can consider a higher level of debt and a lower level of equity. [R4CQ17]

Influence of suppliers.

The level of debt service and the payment of installments have a direct bearing on cash flow available for operations and should therefore take into consideration the credit terms offered by suppliers. [R4CQ18]

Effect of downturns on quality.

In period of economic distress company is in need of more cash flow available for operations. A higher level of debts is therefore not a good option in as much as it would reduce cash flow available for operations "Marketing, advertizing, softer credit terms to customers etc.. [R4CQ19]

Influence of customers.

The level of debt service and the payment of installments have a direct bearing on cash flow available for operations and on the company credit terms offered to customers. [R4CQ20]

Influence of employees.

In cases where the company adopts employee stock option plans, as incentives to its employees, there is always a potential for the employees to exercise their options and acquire new shares in the company. To that extent a lower level of equity might be decided in consideration of potential issuance of new shares to the employees. [R4CQ21]

Influence of competition.

Higher level of debts compared to competition will require more cash flow to be allocated to debt service. Therefore the level of debt and the related payment of installments should not have material effects on cash flow available for operations. [R4CQ22]

Influence of companies with similar products.

Our capital structure decision should be determined to the extent that it is in line with the benchmark of the weighted average cost of capital in the cement sector. [R4CQ23]

Other stakeholders.

From a shareholder prospect lower level of equity will procure higher rate of the ROE. However, other factors should be considered such as the risk of bankruptcy as consequences of defaults. [R4CQ24]

Exposure to market volatility.

Higher level of debts will expose the company to higher risk in situation of Market volatility (Interest rate, Libor, Bond Market..etc). [R4CQ25]

Information transparency.

Transparency is part of good cash management practice. Accurate cash projections also will help the company to determine the right capital structure however dissemination of material non public information can have negative effects on the company operations and results. [R4CQ26]

Disclosure rules.

Transparency should strictly be observed in the whole reporting system of the company. However there must be Chinese walls to protect material non public information (R&D etc...). [R4CQ27]

Debt as a signalling tool.

A situation of default in the payment of instalments to the Lenders is a signal of distress and should be a wake up call to the company to take immediate corrective measures to improve cash management and meet credit term maturities. [R4CQ28]

Competitive aggressiveness.

Higher level of leverage is in nature to reduce the level of aggressiveness in Product Market because high leverage requires systematic payments of debt service which leaves less cash flow in order for the company to opt for more aggressiveness in the product market. [R4CQ29]

Appendix 18

Respondent 5

Position: CFO

Industry: Cement

Date: 24/03/2012

Capital structure formation.

Authorized, Issued and fully paid up capital at the formation of the Company was SR. 550 million divided into 55 million shares of SR 10 each. To date, the fully paid up capital is SR. 900 million. [R5CQ1]

Methods of financing.

Bank Loans, and now sukuk are entering into the market and are getting popular particularly for large projects. In Saudi Arabia there is a Government Institution called Saudi Industrial Development Fund. (SIDF) This Institution grants soft loans of up to 50 %, subject to a maximum of SR. 400 million, of the cost of project it approves. The cost of our first production line was about SR. 1.1 billion and was financed as with SAR550mil equity, SAR350mil from commercial banks, SAR200mil from SIDF.

SIDF approved a loan of SR. 400 million for our first line, we availed only SR. 200 million as the conditions attached with the balance loan of SR. 200 million were not acceptable. [R5CQ2]

Types of debt products available to the firm.

Bank loans. Now Sukuk are entering into the market and are getting popular particularly for large projects. [R5CQ3]

Shari'a compliance.

Not really. However, cost of loan is one main consideration. It does not have to be Sharia compliant. Though our company increasingly prefers Sharia

compliant loans. For our 2nd production line the loans are Sharia compliant.
[R5CQ4]

Significance of zakat.

No. [R5CQ5]

Determinants of level of debt.

Debt and capital are two balancing factors to finance a project. There are two scenarios generally followed to finance a project. In case SIDF loans are available, it will be 25% equity, 25% from commercial banks, and 50% from SIDF. In case SIDF loans are not available, it will be 50% equity and 50% from commercial banks.

We followed scenario one for production line # 1 and scenario two for our 2nd production line. [R5CQ6]

Optimum capital structure.

Look at previous Answer (6). This, however, depends on the credit worthiness and standing of the sponsors. [R5CQ7]

Nature of assets.

Cement Industry is capital intensive. Higher capital injection becomes necessary when SIDF and commercial loan are not available. [R5CQ8]

Dependence upon the cost of servicing debt.

To certain extent, yes. [R5CQ9]

Influence of bankruptcy laws.

To safeguard the loans all financing institutions look for better asset coverage of the loans. As such, demand an adequate amount of capital injection. In case, however, of extremely profitable projects and excess cash supply in the market, I have noticed, the banks are more accommodative. [R5CQ10]

Debt as disciplining tool.

It is the Board of Directors that approves new loans based on cost /benefit Analysis. The management, therefore, has to keep a constant and careful

watch that its cash requirement are kept within the limit approved by the Board of Directors. [R5CQ11]

Influence of shareholders.

It is generally the financing available from SIDF and Banks that has direct affect on the capital structure. [R5CQ12]

Government ownership.

Ownership structure is the most important consideration for the banks to grant loan. My experience is that Government participation, as shareholder does not help in any way to an easy access to loans. Even SIDF, the Government financing Institution, pays no consideration to Government being a shareholder. [R5CQ13]

Dependence upon the availability of credit.

Yes. [R5CQ14]

International finance.

Finance from external countries or markets are available, like, export finance loans. This, however, takes long time to negotiate and comply with the long list of conditions that can adversely affect the timely implementation of the project. Sometimes they are not economical. [R5CQ15]

Relationship banking.

A lot!!! [R5CQ16]

Government support (loans and subsidies).

The availability of SIDF loans influences the capital structure decision. [R5CQ17]

Influence of suppliers.

Suppliers can exercise no influence in this regard unless they offer part financing of the project. [R5CQ18]

Effect of downturns on quality.

The quality of the product has to be maintained to meet the standard required by the market, irrespective of the constraints, financing, and capital, whatsoever. [R5CQ19]

Influence of customers.

Customers can exercise no influence in this regard. [R5CQ20]

Influence of employees.

The Senior Management does participates in the matter. However, it is the sponsor who has the final say in this regard. Senior management is responsible, to carry out the decisions and negotiate and arrange necessary financing. [R5CQ21]

To successfully compete in the market our product should be, in no way, less in quality than the competing product. We designed our plant keeping this goal in mind, which entailed some additional cost. Capital and loans were structured accordingly. [R5CQ22]

Other stakeholders.

Yes, the sponsors of the project have major role in this regard. [R5CQ23]

Exposure to market volatility.

Yes. [R5CQ24]

Information transparency.

The senior management of the company is well versed with the market situation because of its long presence in the market. It helps us a lot to take advantage of the benefits available for lower cost or excess cash availability. [R5CQ25]

Disclosure rules.

Banks do not believe in the customer withholding information. The banks have to be fully satisfied of the economic viability of the project before they can agree to fund the project. [R5CQ26]

Debt as signalling tool.

Our debt servicing is timely and under control. There is no need to use debt as a tool for whatsoever reason. [R5CQ27]

Competitive aggressiveness.

Cement industry is considered cash rich and highly profitable. Therefore, all expansion plans in the country are by easy to get financing. As such, all cement companies are highly leveraged. [R5CQ28]